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June 2026 Issue

Monthly Magazine

For UPSC | IAS | IPS & State Civil Services Aspirants



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Government's Major Diplomatic Outreach in May 2026



Why in News?

- Prime Minister Narendra Modi and External Affairs Minister S. Jaishankar are beginning a **major diplomatic outreach during May 2026.**
- India will:
 - Host several international meetings
 - Receive foreign leaders
 - Conduct visits to different regions of the world
- The outreach includes engagement with:
 - **BRICS countries**
 - **Quad countries**
 - **Africa**
 - **Europe**
 - **Asia**
 - **Indian Ocean Region**

Heads of Mission Conference

- Recently, India held the **11th Heads of Mission Conference.**
- It included India's Ambassadors and High Commissioners from across the world.
- PM Modi urged diplomats to:
 - Be more proactive
 - Improve India's global image
 - Spread positive messaging about India
 - Respond faster to developments in their host countries

Focus on Neighbourhood

- PM Modi stressed the importance of India's neighbouring countries.

- He referred to the appointment of Dinesh Trivedi as the **next High Commissioner to Dhaka.**
- He also indicated the need for more experienced officials in nearby countries.

Main Focus Areas of India's Outreach

According to the Prime Minister's social media post, discussions focused on:

- Advancing trade partnerships
- Expanding technology cooperation
- Building strategic partnerships
- Strengthening engagement with the Indian diaspora

Gap in Heads of Mission Conferences

- The conference was held almost every year in the previous decade.
- After the COVID-19 pandemic, the:
 - 10th conference was held in October 2022
 - 11th conference was held in April 2026
- **During the gap period, regional conferences were addressed by:**
 - External Affairs Minister
 - Foreign Secretary

External Affairs Minister's Caribbean Visit

- S. Jaishankar began a nine-day visit to **Caribbean countries.**
- The visit includes:
 - **Jamaica**
 - **Suriname**
 - **Trinidad and Tobago**

CARICOM Grouping

- The visit is connected to the CARICOM grouping of countries.

Visit of Vietnamese President

- Vietnamese President To Lam will visit India from May 5–7.

Areas of Discussion

- Strengthening the India-Vietnam Comprehensive Strategic Partnership
- Defence cooperation
- Trade
- Critical technologies

Indian Ocean Dialogue

- India will host the **Indian Ocean Dialogue** in Delhi on May 7–8.
- It is connected to the Indian Ocean Rim Association.

Nature of the Dialogue

- It is a Track 1.5 dialogue involving:
 - Officials
 - Academics

Main Issues Expected

- War in West Asia
- Hormuz Strait blockades

BRICS Ministers Meeting

- India will host the **BRICS Ministers Meeting** on May 14–15.

Countries Invited

- Brazil
- Russia
- China
- South Africa
- Egypt
- Ethiopia
- Iran
- United Arab Emirates
- Indonesia

Challenges in BRICS Meetings

- Previous meetings were affected by:
 - War in West Asia
 - Differences over Israel-Palestine issues
 - Gaza conflict
- Differences were especially visible between:
 - Iran
 - UAE

Prime Minister Modi's Europe Tour

- PM Modi will visit **5 European countries from May 15–20**:
 - Netherlands
 - Sweden
 - Norway
 - Italy
 - Vatican City

Nordic-India Summit

- In Oslo, PM Modi will attend the **Nordic-India Summit**.
- Leaders from:
 - Denmark
 - Finland
 - Iceland
 - Norway
 - Swedenwill participate.

India-Europe Discussions

- Discussions are taking place after:
 - European Free Trade Association agreement became operational
 - India-EU Free Trade Agreement was finalised

Areas of Discussion

- Strategic partnerships
- Defence cooperation

Global Issues Affecting Meetings

The meetings are expected to be influenced by:

- War in West Asia
- Russia-Ukraine conflict
- India's relations with the United States

Possible UAE Visit

- PM Modi is expected to stop over in the United Arab Emirates.
- It would be his first visit to the region since the start of the war in West Asia.

Other Major Diplomatic Engagements

Cyprus President's Visit

- President Nikos Christodoulides will visit Mumbai and Delhi from May 20–23.

Quad Foreign Ministers Meeting

- India will host the Quad Foreign Ministers Meeting on May 26.
- U.S. Secretary of State Marco Rubio is expected to visit India for the meeting.

India-Africa Summit

- India will host the India-Africa Summit from May 28–30.
- The summit is being held after more than a decade.

Upcoming International Summits

Later this year, India is also expected to host:

- BRICS Summit
- Quad Summit

Conclusion

- May 2026 is witnessing an extensive diplomatic outreach by India.
- Through visits, summits and international meetings, India is strengthening engagement with different regions and global groupings across the world.



CURRENT EVENTS OF INTERNATIONAL IMPORTANCE

Election of the UN Secretary-General: Process, Rules and Role



Why in News?

- The **election process for the next Secretary-General of the United Nations (UNSG)** is underway, as the current Secretary-General **António Guterres** is set to complete his second term on **31 December 2026**.
- The new Secretary-General will assume office in **January 2027**, making this a crucial phase in global diplomatic negotiations.

How is the UN Secretary-General Elected?

Constitutional Basis

- Governed by the **UN Charter (Article 97)**
- The Secretary-General is appointed by the **General Assembly**
- Based on the **recommendation of the Security Council**

Role of the Security Council and P5

- The **Security Council recommendation is decisive** in the selection process
- The **five Permanent Members (P5)**—China, France, Russia, the United Kingdom, and the United States—hold **veto power**
- Any **negative vote (veto)** by a P5 member can block a candidate

Nomination and Selection Process

1. Call for Candidates

- Initiated through a **joint letter** by the Presidents of:

- General Assembly
- Security Council

- All **193 UN Member States** are invited to nominate candidates

2. Submission of Vision

- Candidates submit:

- Curriculum Vitae (CV)
- **Vision statement** outlining priorities for the UN

- Since **2016 reforms**, candidates also participate in **public informal dialogues** with the General Assembly

- These sessions include interaction with **member states and civil society**

3. Straw Polls in the Security Council

- Conducted through **secret ballots**

- Members vote:

- Encourage
- Discourage
- No opinion

- In later rounds, ballots are color-coded to identify **P5 voting patterns**

- A single **“discourage” vote by a P5 member acts as a veto**

- Process continues until a candidate secures:

- At least **9 out of 15 votes**
- **No veto from P5 members**

4. Formal Recommendation

- Security Council adopts a **formal resolution in closed session**

- The selected candidate is officially recommended to the General Assembly

5. Appointment by General Assembly

- The General Assembly confirms the appointment

- Requires a **simple majority**

- Traditionally approved by **consensus or acclamation**

Unwritten Rules and Conventions

Regional Rotation

- The post is expected to rotate among regional groups:

- Africa

- Asia-Pacific
- Eastern Europe
- Latin America and the Caribbean
- Western Europe and Others

Term Limits

- Term duration: **5 years**
- No formal limit in the UN Charter
- Conventionally limited to **two terms**

Exclusion of P5 Nationals

- Citizens of **P5 countries are generally not considered**
- Ensures:
 - Impartial leadership
 - Balanced global representation
 - Avoidance of dominance by major powers

Role of the UN Secretary-General

Chief Administrative Officer

- Defined under **Article 97 of the UN Charter**
- Responsible for implementing decisions of:
 - General Assembly
 - Security Council
 - Economic and Social Council

Guardian of Peace and Security

- Under **Article 99**, can bring threats to international peace to the Security Council
- Acts as an **independent global voice on security issues**

Preventive Diplomacy and Good Offices

- Engages in **mediation and conflict prevention**
- Works to prevent escalation of international disputes

Appointment of Special Representatives

- Can appoint:
 - Special Envoys
 - Peace mission heads
- Plays a key role in conflict zones such as **Syria, Yemen, and Sudan**

Global Moral and Diplomatic Role

- Often described as the “**chief diplomat of the world**”
- Acts as the **moral voice of the international community**
- Advocates for:
 - Human rights
 - Climate action
 - Humanitarian protection
 - Global equity

Balancing Global Interests

- Must balance:
 - **UN Charter values**
 - Sovereign interests of 193 member states
 - Geopolitical tensions, especially among the **P5 nations**

Conclusion

The selection of the **UN Secretary-General** reflects a complex balance between **international law, geopolitical power, and global consensus-building**. As the world prepares for the 2027 transition, the process once again highlights the need for a leader capable of navigating **conflict, cooperation, and global governance challenges** in an increasingly multipolar world.

Iran Nuclear Program & Nuclear Non-Proliferation Treaty (NPT)



Why is this in the News?

The geopolitical tension around **Iran’s nuclear program** is back in focus because Iran is seen as operating in a **nuclear grey zone**.

- Iran claims its program is for **peaceful civilian nuclear energy**
- However, it has developed capabilities that keep it **close to nuclear weapon potential**
- This creates concern about:
 - A possible **nuclear arms race in West Asia**
 - Weakening of global **non-proliferation rules**

So, the issue is not only about Iran, but about the **stability of the global nuclear order under the NPT system**.

Key Facts Regarding Iran's Nuclear Ambiguity

1. NPT Paradox (Peaceful Use vs Weapon Risk)

The **Non-Proliferation Treaty (NPT)** allows countries the right to use nuclear energy for **peaceful purposes**.

However, the same technologies used for peaceful energy can also be used for weapons:

- **Uranium enrichment**
- **Nuclear fuel reprocessing**

This creates a structural problem:

- A country can legally develop advanced nuclear capability
- But still be very close to **weapon-grade capability**

Iran is a major example of this **legal-but-sensitive overlap**.

2. Uranium Enrichment Levels

- Iran has enriched uranium up to around **60%**
- For nuclear weapons, enrichment needs to reach around **90%**

Important point:

- The jump from **60% to 90%** is technically faster than earlier enrichment stages
- This reduces the time needed to reach weapons-grade material

So, Iran is considered **technically very close to weapon capability**, even if it has not built a weapon.

3. Threshold State Concept

Iran is described as a **threshold state**, meaning:

- It has **knowledge + infrastructure + enriched material**
- It can potentially build a nuclear weapon **quickly if it chooses**
- But it has not taken the final step of weaponization

This is different from:

- Full nuclear weapon states (like USA, Russia, China)
- Completely non-nuclear states

4. Breakout Time (Very Important Concept)

Breakout time means:

The time required to produce enough fissile material for one nuclear weapon.

For Iran:

- Experts estimate this time has reduced to **weeks**

This is significant because:

- A shorter breakout time increases **strategic uncertainty**
- It makes prevention or detection harder

5. Nuclear Cascade Risk

If one country moves closer to nuclear weapons:

- Neighbouring countries may feel insecure
- They may also try to develop nuclear weapons

This is called a **nuclear cascade or domino effect**

In West Asia, this risk is especially serious due to:

- Regional conflicts
- Security competition

6. JCPOA (2015 Iran Nuclear Deal)

The **Joint Comprehensive Plan of Action (JCPOA)** was signed in 2015.

Its key objectives were:

- Restrict Iran's uranium enrichment
- Increase monitoring by international agencies
- Reduce risk of nuclear weapon development

However:

- In **2018, the United States withdrew from the deal**
- After this, Iran gradually resumed higher levels of enrichment

This breakdown of trust is a key reason for the current crisis.

7. Covert and External Actions Against Iran's Program

Iran's nuclear program has also faced external pressure, including:

- **Stuxnet cyberattack**: A computer worm that damaged centrifuges
- Targeted killings of nuclear scientists
- Military tensions and indirect conflicts

These actions aim to delay or prevent Iran from achieving **full nuclear weapon capability**, but also increase geopolitical tensions.

What is the Non-Proliferation of Nuclear Weapons Treaty (NPT)?

About NPT

The **NPT** is a global arms control treaty designed to:

- Prevent spread of nuclear weapons
- Promote peaceful use of nuclear energy
- Encourage eventual nuclear disarmament

It was:

- Opened for signature in **1968**
- Entered into force in **1970**

It is the **most widely accepted nuclear arms control treaty in the world.**

Three Pillars of NPT

1. Non-Proliferation

- Countries without nuclear weapons agree **not to develop or acquire them**
- Nuclear weapon states agree **not to transfer weapons or help others develop them**

2. Disarmament

- Nuclear weapon states commit to **good-faith negotiations**
- Long-term goal: **complete nuclear disarmament**

However, this pillar is often seen as the least effectively implemented.

3. Peaceful Use of Nuclear Energy

- All member countries have the right to develop **nuclear energy for civilian purposes**
- Examples:
 - Electricity generation
 - Medical applications
- But this must be under **international safeguards**

Nuclear “Haves” vs “Have-Nots”

Nuclear Weapon States (NWS)

Defined as countries that tested nuclear weapons before 1 January 1967:

- United States
- Russia
- United Kingdom
- France
- China

These are also called the **P5 members of the UN Security Council.**

Non-Nuclear Weapon States (NNWS)

- All other NPT member countries
- They agree not to develop nuclear weapons
- They receive access to peaceful nuclear technology under supervision

Role of the IAEA

The **International Atomic Energy Agency (IAEA)** ensures compliance with NPT obligations.

Its functions include:

- Inspecting nuclear facilities
- Monitoring nuclear material
- Ensuring peaceful use of nuclear energy
- Detecting diversion towards weapons use

It acts as the **global nuclear watchdog.**

Criticism of the NPT

1. Discriminatory Structure

- Divides the world into:
 - Nuclear weapon states (legally allowed)
 - Non-nuclear weapon states (legally restricted)
- Critics argue this creates a **permanent inequality**

2. Weak Disarmament Progress

- Nuclear weapon states have not fully disarmed
- No fixed timeline for elimination of nuclear weapons

3. Withdrawal Clause (Article X)

- Allows a country to withdraw if it feels:
 - “Extraordinary events jeopardize its supreme interests”
- This is seen as a **loophole**, as it may allow states to leave and pursue nuclear weapons

4. Non-Signatory and Withdrawal Cases

- Non-signatories:
 - India
 - Pakistan
 - Israel
 - South Sudan
- **North Korea:**
 - Joined NPT in 1985
 - Withdrew in 2003
 - Later developed nuclear weapons

India-Vietnam Enhanced Comprehensive Strategic Partnership

INDIA, VIETNAM ELEVATE TIES TO ENHANCED STRATEGIC PARTNERSHIP



Why in News?

- The President of Vietnam recently concluded an official State Visit to India, which lined up with the **10th anniversary** of the bilateral Comprehensive Strategic Partnership established in 2016.

- The visit marked a crucial milestone in diplomatic ties, with New Delhi reconfirming that Hanoi remains a primary anchor of its **Act East Policy** and its broader maritime blueprint, **Vision SAGAR** (Security and Growth for All in the Region).

High-Level Highlights of the State Visit

- **Upgrading Diplomatic Ties:** The bilateral relationship has been officially elevated to an "**Enhanced Comprehensive Strategic Partnership.**" This represents the third major advancement in diplomatic ties over the past two decades, building on the 2007 Strategic Partnership and the 2016 framework.
- **Trade and Economic Targets:** The two countries set an ambitious mutual trade target of **USD 25 billion by 2030**. To protect regional supply corridors, both sides committed to accelerating updates to the ASEAN-India Trade in Goods Agreement (AITIGA) by the conclusion of 2026.
- **Defense and Maritime Security:** Vietnam formally joined India's **Indo-Pacific Oceans Initiative (IPOI)**, highlighting a shared focus on maintaining a free, open, and rules-based maritime arena.
 - Both leaders pledged to expand military procurement. India offered Maintenance, Repair, and Overhaul (MRO) services for Vietnam's combat platforms, including its Kilo-class submarines and Su-30 fighter jets.
 - Without explicitly naming regional neighbors, both nations emphasized the necessity of freedom of navigation, resolving maritime disputes peacefully under **UNCLOS (1982)**, and finalizing a binding Code of Conduct (CoC) in the South China Sea.
- **Rare Earths and Critical Mineral Security:** In an effort to diversify global control over critical resources, India's IREL Ltd. signed a major agreement with Vietnam's Institute for Technology of Radioactive and Rare Elements (ITRRE). This formalizes joint work in mining and refining rare earth elements used in clean energy, defense systems, and manufacturing.
- **Financial Tech and Connectivity:** NPCI International Payments Limited (NIPL) joined forces with Vietnam's NAPAS to introduce cross-border QR code compatibility, enabling seamless digital transactions for travelers. Concurrently, the Reserve Bank of India (RBI) and the State Bank of Vietnam set up a collaborative framework to track digital financial innovations.
- **Healthcare and Pharma Market Access:** A regulatory agreement between India's CDSCO and the Drug Administration of Vietnam was signed to smooth out bureaucratic bottlenecks and improve market access for Indian pharmaceutical products in Vietnam.
- **Public Sector Auditing:** The Comptroller and Auditor General (CAG) of India renewed its cooperation with Vietnam's State Audit Office to improve transparency and governance standards in public sector audits.
- **Agricultural Trade and Culture:** Direct market access was cleared for Indian grapes entering Vietnam and Vietnamese Durian entering India, supported by a new five-year Cultural Exchange Programme running from 2026 to 2030.
- **Educational Exchange:** Both nations signed agreements to set up Indian Council for Cultural Relations (ICCR) Chairs of Indian Studies across universities in Vietnam. Another agreement focuses on the digitization, preservation, and online archiving of historic Cham manuscripts of Indian origin kept in Vietnam.

Current Status of India-Vietnam Relations

- **Bilateral Trade:** Combined trade values successfully crossed **USD 16 billion during the 2025-26** financial year. India primarily exports engineering components and medications while importing heavy machinery and assembled electronics.
- **Defense Defense Ties:** Guided by the Joint Vision Statement 2030 and a Mutual Logistics Support agreement, tactical ties include India gifting the active missile corvette **INS Kirpan** to Vietnam and holding regular joint exercises like the **VINBAX** peacekeeping drills.

- **Development Assistance:** India funds grassroots regional development through Quick Impact Projects (QIPs) under the Mekong Ganga Cooperation (MGC) model. Furthermore, the Archaeological Survey of India (ASI) leads structural conservation efforts at the My Son UNESCO World Heritage site in Vietnam.
- **Humanitarian Operations:** New Delhi launched **Operation Sadbhav** in September 2024 to fly immediate humanitarian relief and emergency assets straight to affected areas in Vietnam following the destruction left by Typhoon Yagi.

Strategic Importance of Vietnam to India

- **Maritime Anchor:** Vietnam is located right along vital shipping channels in the South China Sea, where more than **50% of India's commercial trade** passes through. Vietnam's focus on resisting regional dominance makes it a key partner in maintaining a balanced, multipolar Asia.
- **Supply Chain Diversification:** As global businesses diversify production lines away from single-source dependencies under the "China-Plus-One" strategy, Vietnam has turned into a major manufacturing center. Partnering closely helps Indian companies step smoothly into wider ASEAN supply networks.
- **Energy Exploration:** ONGC Videsh Limited (OVL) continues long-term commercial investments in offshore oil and gas exploration sectors within Vietnam's Exclusive Economic Zone (EEZ), securing key resource pipelines for India despite external geopolitical pressures.
- **Multilateral Alignment:** Vietnam's firm condemnation of cross-border terrorism (including the recent Pahalgam attack) and its backing of India's bid for a permanent seat in a reformed UN Security Council reinforce strong multilateral alignment.

Major Challenges in Bilateral Relations

- **The "Four Noes" Policy:** Vietnam sticks to a strict defensive baseline: *no military alliances, no choosing sides in global rivalries, no hosting foreign military hubs, and no using*

force in international issues. This limits how deeply India and Vietnam can integrate direct military forces.

- **Trade Asymmetry:** The trade balance leans heavily in Vietnam's favor. India mainly sends raw commodities and bovine meat eastward while buying back high-value, pre-assembled technology items and electronics.
- **Physical Transit Bottlenecks:** The India-Myanmar-Thailand (IMT) Trilateral Highway, meant to build a land link toward Vietnam, is hit by constant delays due to instability inside Myanmar and funding hurdles. There is also a shortage of direct, high-frequency shipping lines between major Indian docks and Vietnamese ports like Haiphong, making transit more expensive and time-consuming.
- **Defense Delivery Delays:** India has opened several defensive credit paths, including a USD 500 million Line of Credit. However, actual project rollouts move slowly due to administrative paperwork in both capitals.
- **Divergent Regional Priorities:** While Vietnam is a central pillar of India's Act East Policy, ASEAN as a whole is often divided on how to handle the Indo-Pacific and the Quadrilateral Security Dialogue (QUAD), which can sometimes dilute bilateral initiatives.

Way Forward

- **Defense Co-production and Exports:** Accelerate the planned export of advanced defense systems like the BrahMos supersonic cruise missile and use current credit lines to deliver ready-to-use, Indian-made patrol vessels and radar grids to reduce Vietnam's historical dependence on Russian military hardware.
- **Correcting the Trade Imbalance:** To hit the USD 25 billion trade goal by 2030, New Delhi must push to eliminate non-tariff barriers, fast-track the AITIGA review, and aggressively market its IT, FinTech, and pharmaceutical services in Vietnam.
- **Securing Critical Supply Chains:** Put the new Rare Earth Elements agreement into action immediately to secure supply lines for tech manufacturing and reduce vulnerability to critical mineral monopolies.

- **Scaling Digital Public Infrastructure (DPI):** Roll out the UPI-NAPAS QR code link quickly to create an active digital corridor, supporting smooth e-commerce and regional tourism while serving as a model for wider ASEAN digital integration.

India Leads the 2026 Kimberley Process Session in Mumbai



Why in News?

- As the presiding **Chair of the Kimberley Process (KP) for 2026**, India recently organized the KP Intersessional Meeting in Mumbai.
- The primary goal of this convention was to tighten international trade oversight and protect the supply pipelines of the natural diamond industry.

Core Objectives and Directives

- **Combating Blood Diamonds:** The core focus of the session centers on the Kimberley Process Certification Scheme (KPCS). This global initiative was established following UN General Assembly Resolution 55/56 in 2000 to block "conflict diamonds" from entering standard commercial channels. These are raw diamonds utilized by insurgent factions to fund military campaigns against recognized states.
- **Original Membership:** India is recognized as one of the pioneering nations that helped establish the KPCS framework.
- **The 2026 Agenda:** Under India's leadership, the current session is anchored by the **3Cs agenda: Credibility, Compliance, and Consumer Confidence**. This strategy aims to introduce better clarity and long-term sustainability to the natural diamond market.
- **Modernizing Oversight:** India aims to update the regulatory framework during its tenure to ensure it remains functional amidst shifting

geopolitical realities, reinforcing the reputation of natural diamonds as ethically sourced luxury goods.

Understanding the Kimberley Process Framework

- **Origins:** Established in 2000 by a coalition of Southern African nations, the KP serves as a specialized transnational forum to monitor the movement of raw, un-cut diamonds.
- **Structural Design:** The KP does not function as an official international body or a legally binding treaty. Instead, it relies on shared administrative contributions from member states, working closely with commercial enterprises and human rights organizations.
- **Domestic Enforcement:** Because the framework lacks independent international legal authority, its guidelines are carried out purely through the domestic legislation of each individual member country.
- **Global Network:** The forum includes 60 designated participants representing **86 nations** (treating the European Union as a unified entity). It also incorporates key external observers, including the World Diamond Council and the Civil Society Coalition. In total, KP constituents manage roughly **99.8%** of global rough diamond extraction.

Economic Dimensions for India

- **The World's Workshop:** Managing this international forum highlights India's status as the top global destination for diamond refining. The country handles the cutting and polishing of nearly **90%** of the planet's rough gems, commanding about **75%** of the total worldwide diamond valuation.
- **Sourcing Logistics:** Although India processes the vast majority of these stones, it possesses minimal domestic diamond mines. The country relies heavily on importing raw materials from key international trading partners, primarily the **UAE, Belgium, and Russia**. The primary manufacturing clusters are concentrated in **Surat and Mumbai**.
- **Expansion into Synthetics:** Beyond the traditional gemstone sector, India is rapidly scaling its manufacturing of Lab-Grown Diamonds (LGDs), accounting for more than **15%** of global synthetic diamond production.

BRICS Meeting and West Asian Diplomacy



Why in News?

- The **BRICS Foreign Ministers' Meeting** took place in **New Delhi in May 2026**. The bloc backed an independent Palestinian State using **pre-1967 borders** with **East Jerusalem** as its capital. India also backed its usual **two-state solution** to clear up the regional dispute.
- A joint declaration was blocked due to arguments between **Iran and the United Arab Emirates (UAE)**. Instead, the group put out a "**Chair's Statement and Outcome Document**." A similar standstill happened in April 2026 when both nations argued over the Iran-linked US-Israel conflict and regional moves.

Key Highlights of the Summit

- **Palestinian Statehood:** The meeting backed a sovereign Palestinian State based on pre-1967 borders. This matches **UN Security Council resolutions** and the **Arab Peace Initiative**.
- **Gaza Strip Status:** The document called Gaza an inseparable part of the Occupied Palestinian Territory and pushed to unite Gaza and the West Bank under the **Palestinian Authority**. Both Iran and the UAE strongly disagreed with how this shift was worded.
- **Maritime Safety:** Members focused on keeping shipping safe through key areas like the **Strait of Hormuz**, the **Red Sea**, and the **Bab-el-Mandeb Strait**, despite having split views on the conflicts there.

- **Chabahar Port Hub:** Iran presented the **Chabahar Port** as a prime gateway for India to reach Central Asia, the Caucasus, and Europe.
- **Russia-India Pacts:** Russia promised steady energy supplies to India. They also discussed plans for the **North-South Transport Corridor**, nuclear power, and trading in local currencies.

Profile of the BRICS Group

- **Origins:** The term BRIC was made by Jim O'Neill in 2001 for **Brazil, Russia, India, and China**. The group held its first official summit in **Russia in 2009**. **South Africa joined in 2010**, making it BRICS.
- **BRICS+ Expansion:** The alliance recently expanded to include **Egypt, the UAE, Ethiopia, Indonesia, and Iran**. The bigger bloc holds roughly **49.5% of the world population, 40% of global GDP, and 26% of global trade**.
- **Core Goal:** It looks to update global leadership and offer choices next to Western groups like the IMF and World Bank.
- **Setup:** The group runs on a **rotating annual chair** without a fixed main office or official charter. India's 2026 leadership theme is "**BRICS: Building for Resilience, Innovation, Cooperation and Sustainability**" using a "**Humanity First**" approach.
- **New Development Bank (NDB):** Set up in **Shanghai in 2015** to fund basic infrastructure and sustainable projects across developing economies.

Understanding the Two-State Solution

- **The Concept:** A peace plan to settle the conflict by making two separate nations: **Israel** for the Jewish population and **Palestine** for the Palestinian population.
- **History:** It started with the **1947 UN Partition Plan (Resolution 181)**. Later, the **1993 Oslo Accords** saw Israel and the **Palestine Liberation Organization (PLO)** recognize each other, setting up the Palestinian Authority for basic self-governance.
- **Main Challenges:**
 - **Borders:** Global plans favor lines from before the **1967 Six-Day War**

(the Green Line) with agreed land swaps.

- **Jerusalem:** Both sides claim it as their capital. Most plans suggest making **East Jerusalem** the Palestinian capital while West Jerusalem stays with Israel.
- **Refugees:** Requires a settled deal on the "**right of return**" or compensation for millions of displaced people from the 1948 and 1967 wars.

India's Shifting Approach

- **Historical Support:** India was the first non-Arab country to recognize the PLO as the sole representative of the Palestinian people in 1974. It officially recognized the State of Palestine in 1988.
- **Ties with Israel:** New Delhi opened full diplomatic relations with Israel in 1992, building strong defense and strategic ties.
- **De-hyphenation Policy:** India now handles its relationships with Israel and Palestine **independently**. Ties with one nation do not depend on or change ties with the other.
- **Current Stance:** India condemned the October 2023 terror strikes by Hamas and stands with Israel against terror. At the same time, it continues to send **humanitarian aid to Gaza** and firmly backs a peaceful two-state solution.

Geography of the Region

1. Main Territories

- **Israel:** Borders **Lebanon** (North), **Syria** (Northeast), **Jordan** (East), and **Egypt** (Southwest). It touches the **Mediterranean Sea** on the west and the Red Sea (**Gulf of Aqaba**) on the south.
- **The West Bank:** A landlocked zone bordered by Jordan to the east and Israel on all other sides. It has **no coastline**.
- **The Gaza Strip:** A thin coastal area bordered by Israel (North/East), Egypt (South), and the Mediterranean Sea (West). It **does not border Jordan** or the West Bank.

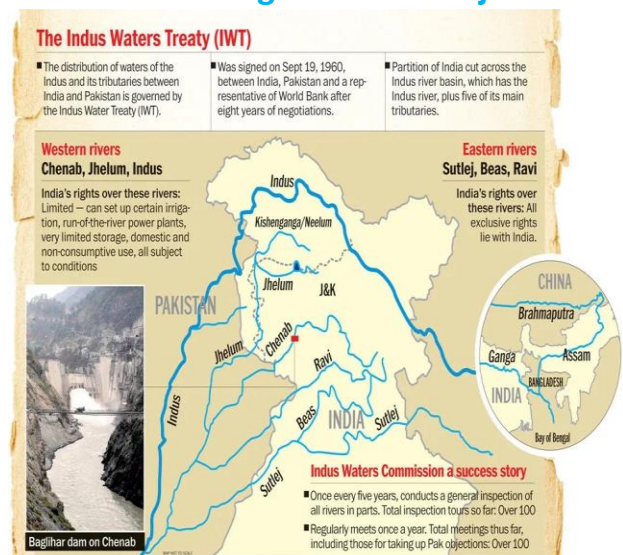
2. Strategic Zones and Water Bodies

- **Golan Heights:** A rocky plateau captured by Israel from Syria in 1967. It overlooks the Jordan Rift Valley and the **Sea of Galilee**.
- **Sinai Peninsula:** A piece of Egyptian land bridging Africa and Asia. Israel held it in 1967 but returned it under the **1979 Camp David Accords**.
- **Jordan River & Dead Sea:** The Jordan River runs south through the Sea of Galilee (Israel's main fresh water source) into the Dead Sea. It forms the **natural eastern border** of Israel and the West Bank. The Dead Sea is a hyper-salty lake and marks the **lowest land point on Earth**.

3. Key Crossings and Cities

- **Rafah Crossing:** The only exit point between Gaza and Egypt that Israel does not run directly.
- **Kerem Shalom & Erez:** Kerem Shalom is a freight crossing where Gaza, Israel, and Egypt meet. Erez is the main foot-travel crossing between northern Gaza and Israel.
- **Jerusalem & Ramallah:** Jerusalem is a highly contested holy city split historically by the Green Line. Ramallah serves as the active administrative center for the Palestinian Authority.
- **Haifa Port:** A major Mediterranean port city in northern Israel, recently bought by India's **Adani Group**.

India Rejects Permanent Court of Arbitration Ruling on Indus Projects



Why in News?

- India has rejected the **May 2026 ruling** issued by the **Permanent Court of Arbitration (PCA)** at
- The Hague regarding the "**maximum pondage**" (**water storage capacity**) limits at Indian hydroelectric plants on the Indus river system.
- India stated that the tribunal is "**illegally constituted**" and emphasized that the **Indus Waters Treaty (IWT), 1960**, remains in abeyance following the **April 2025 Pahalgam terror attack**.

Core Hydroelectric Project Disputes

- **The Infrastructure Projects:**
 - **Kishenganga Project:** A **330 MW** run-of-the-river power plant built on the Kishenganga River (a tributary of the Jhelum) in Jammu and Kashmir.
 - **Ratle Project:** An **850 MW** power installation constructed on the Chenab River in Jammu and Kashmir.
- **Pakistan's Objections:** Islamabad claims the design features, pondage caps, and spillways breach the IWT rules. It argues that India is building storage facilities far larger than technically necessary, which could disrupt downstream river flows into its territory.

Technical and Legal Standpoint

- **Parallel Proceedings Conflict:** The core dispute involves Pakistan's move to bypass the standard Neutral Expert path. In 2016, Pakistan asked the World Bank to set up a Court of Arbitration (CoA), while India simultaneously requested a **Neutral Expert** to audit the technical blueprints.
- **Breach of Graded Steps:** India maintains that running two separate court paths at the same time for the exact same issue violates the **sequential, graded dispute resolution mechanism** forced by the treaty.
- **The World Bank's Stance:** The World Bank paused both tracking lines in 2016 to prevent clashing verdicts. However, it **lifted the pause in 2022**, allowing both lines to run concurrently. India participates in the Neutral Expert track but **boycotts the CoA**, calling it an illegal parallel process.

- **National Security Suspension:** Following the deadly cross-border terror strike in Pahalgam in April 2025, New Delhi linked regional water sharing directly to national security. India placed the **treaty in abeyance** until cross-border terrorism from Pakistan stops entirely.

Framework of the Indus Waters Treaty (IWT), 1960

1. Water Allocation Model

The treaty was signed in Karachi in 1960 and brokered by the World Bank to split the water resources of the Indus basin:

- **Eastern Rivers:** Allocated to India for exclusive use (**Beas, Ravi, and Sutlej**).
- **Western Rivers:** Allocated largely to Pakistan (**Chenab, Indus, and Jhelum**). India holds limited, non-consumptive rights here for farming, household use, navigation, and run-of-the-river power generation under strict design checks.

2. Three-Tier Dispute Resolution Steps

The IWT lays down a rigid, three-step track to handle disagreements:

1. **Permanent Indus Commission (PIC):** Initial technical questions are discussed and resolved by commissioners representing both countries.
2. **Neutral Expert (NE):** Unsettled technical differences are handed over to an independent expert chosen by the World Bank.
3. **Court of Arbitration (CoA):** If the issues turn out to be legal rather than technical, or if both sides agree, the formal dispute goes to a Court of Arbitration.

Profile of the Permanent Court of Arbitration (PCA)

- **Origins:** Established in **1899** during the first Hague Peace Conference, the PCA is the oldest global body dedicated to settling international disputes. It is an independent intergovernmental organization based at **The Hague, Netherlands**.

- **Foundational Framework:** It runs under the **1899 Convention for the Pacific Settlement of International Disputes**, which was later updated at the second Hague Peace Conference in 1907.
- **UN Relationship:** The PCA is **not a United Nations (UN) agency**, but it was granted **Permanent Observer status** at the UN General Assembly in 1993. It handles arbitration cases involving states, international bodies, and private groups.

The Evolving US-China-Russia Strategic Triangle



Why in News?

- A new alignment in great-power politics emerged following the US President's two-day visit to China in **May 2026**.
- This summit was closely followed by a scheduled visit from the Russian President to mark the **25th anniversary of the Sino-Russian Treaty**.
- These back-to-back meetings showcase China's central position in global diplomacy.
- They have also sparked intense international debate over a shift from post-Cold War unipolarity toward a three-way superpower dynamic, often described as an emerging "**G-3**" world order.

Key Highlights of the US-China Summit

- **Economic and Trade Compromises:** To ease ongoing tensions, China agreed to buy **200 American-made Boeing aircraft**, lift specific restrictions to import more US beef, and increase its purchases of American soybeans.

- **Technology and Investments:** The US allowed 10 Chinese tech firms to restart buying advanced Nvidia computing chips, which are essential for artificial intelligence and high-performance computing. Both countries also discussed creating a **Board of Trade** and a **Board of Investment** to systematically manage tariffs and oversee non-sensitive business investments.
- **Strategic Stability Framework:** Beijing proposed a new baseline called a "constructive relationship of strategic stability" to manage volatile geopolitical flashpoints like Taiwan and the South China Sea.
- **The Thucydides Trap Warning:** Chinese leadership explicitly spoke about the need to avoid the "**Thucydides Trap**." This political concept warns that when a rising global power threatens to displace an established ruling power, the structural friction frequently results in military conflict.
- **West Asian Energy Security:** Both superpowers found common ground on maritime safety, agreeing on the absolute necessity of keeping the **Strait of Hormuz** open to international shipping and preventing Iran from developing nuclear weapons.

Structural Implications for India

- **Challenge to a Multipolar Asia:** India has always pushed for a decentralized, multipolar global order, specifically inside Asia. A rigid US-China duopoly or a G-3 framework directly threatens India's vision of a balanced regional distribution of power.
- **Dilution of the Quad Alliance:** If Washington shifts its focus toward bilateral, transactional deals with Beijing, it could weaken its commitment to the Quad. This would cost India a vital maritime counterweight against regional assertiveness in the Indo-Pacific.
- **Managing a Validated China:** A China that feels validated as an equal peer to the US could become more confident. This shift might make it more complicated for New Delhi to negotiate and resolve long-standing bilateral border issues like the **Line of Actual Control (LAC)** standoff.

- **Slowing the "China Plus One" Strategy:** A steady diplomatic thaw between Washington and Beijing stabilizes trade risks. This could prompt global corporations to re-evaluate manufacturing on the Chinese mainland, potentially slowing down foreign direct investment (FDI) inflows into India's electronics and semiconductor assembly sectors.

Way Forward

- **Expanding Alternative Minilaterals:** India must look past traditional alliances and strengthen security and economic ties with highly motivated middle powers. Deepening minilateral networks like the **India-Japan-Australia** group, or creating new defense matrices with France, South Korea, and the UK, will keep the Indo-Pacific resilient.
- **Championing Democratic Multipolarity:** New Delhi must position itself as a fair, development-centric leader for the Global South. By offering a consultative partnership model, India can offer an alternative to both Chinese infrastructure debt traps and Western transactional diplomacy.
- **Independent India-China Engagement:** India's diplomatic track with Beijing should run independently of US foreign policy. Maintaining open, high-level military and diplomatic channels with China is crucial to independently managing border disputes and preventing sudden escalations.
- **Reforming Global Multilateral Forums:** India should actively utilize and reform existing groups like the **G20, BRICS, and the Shanghai Cooperation Organisation (SCO)**. This ensures these platforms do not turn into simple rubber stamps for US-China corporate or political interests.
- **Building Issue-Based Coalitions:** Indian diplomacy needs to remain fluid and practical. New Delhi should cooperate closely with the US on high-tech defense transfers via frameworks like the **iCET**, while simultaneously working with Eurasian powers to secure continental trade paths and stabilize its immediate neighborhood.

- **Fortifying Energy Corridors:** Because India depends heavily on West Asian oil, it must proactively protect its energy lines. Rather than counting on great-power coordination to keep paths like the Strait of Hormuz safe, India must expand its strategic oil reserves, diversify its global energy suppliers, and boost its own naval footprint in the Indian Ocean.

India and Cyprus Elevate Relations to a Strategic Partnership



Why in News?

India and Cyprus officially elevated their bilateral ties to a **Strategic Partnership** during the State Visit of the President of Cyprus to New Delhi.

Key Highlights of the Bilateral Visit

1. Defense and Security Upgrades

- **Five-Year Defense Roadmap (2026–2031):** The two nations unveiled a comprehensive framework to boost collaboration between the Cyprus Defense & Space Industries Cluster (CyDSIC) and the Society of Indian Defense Manufacturers (SIDM).
- **Military Hardware Procurement:** Cyprus expressed a strong interest in acquiring Indian military hardware, including drones and advanced missile systems recently tested during Operation Sindoor. This positions Cyprus as a strategic entry point for Indian defense exports into Europe.
- **Counter-Terrorism and Cyber Security:** An MoU was signed to establish a Joint Working Group on Counter-Terrorism alongside a dedicated Cybersecurity Dialogue.
- **Peacekeeping Recognition:** Cyprus appreciated India's long-standing contribution to the UN Peacekeeping Force in Cyprus (UNFICYP).

2. Economic and Digital Integration

- **IMEC Corridor:** Both leaders emphasized the critical role of Cyprus in the India-Middle East-Europe Economic Corridor (IMEC).
- **Indo-Pacific Oceans Initiative (IPOI):** Cyprus formally joined the IPOI under the "Trade, Connectivity and Maritime Transport" pillar.
- **Digital Payment Integration:** The visit welcomed the upcoming interoperability of India's Unified Payments Interface (UPI) with the European Central Bank's Target Instant Payment Settlement (TIPS) system to ease cross-border financial flows.
- **Mumbai Trade Center:** Cyprus announced plans to open a Cyprus Trade Center in Mumbai to enhance commercial and investment links.

3. Health, Space, and Mobility

- **Joint Action Plan:** Both nations agreed to ensure timely implementation of the India-Cyprus Joint Action Plan 2025–2029 across key strategic sectors.
- **Health Diplomacy:** India announced the gifting of an indigenous **BHISM Cube** (a state-of-the-art mobile hospital unit) to Cyprus.
- **Space Cooperation:** The two nations celebrated the first-ever India-Cyprus Space Day on **18 May 2026** to foster joint technological research.
- **Migration and Diaspora:** A new Consular Dialogue will be established to coordinate on visas and mobility. Both sides agreed to expedite a Migration and Mobility Partnership and a Social Security Agreement to benefit the 15,500-strong Indian diaspora in Cyprus.

Profile of Cyprus

- **Geographic Matrix:** Cyprus is a Eurasian island country located in the northeastern Mediterranean Sea, south of the Anatolian Peninsula. It shares maritime borders near Turkey, Syria, and Lebanon, and is a member of the European Union.
- **Topography:** It is the third-largest island in the Mediterranean (after Sicily and Sardinia). Its capital is Nicosia. The terrain features the Kyrenia and Troodos mountain ranges, with Mount Olympus standing as its highest peak. Its longest river is the Pedieos.

- **Natural Resources:** The country possesses natural deposits of copper, pyrites, gypsum, timber, salt, marble, and clay minerals.

Strategic Significance of Cyprus for India

- **Geopolitical Counterbalance:** Located near Turkey, Cyprus gives India a stable diplomatic foothold in the Eastern Mediterranean. Because Turkey consistently backs Pakistan's position on Kashmir, India's support for a UN-mandated, bizonal federation in Cyprus (rejecting Turkey's occupation of Northern Cyprus) strengthens New Delhi's regional leverage.
- **EU Gateway:** As a member state currently holding the Presidency of the Council of the European Union, Cyprus serves as a critical economic and political bridge for India into the wider European market.
- **FDI Routing:** Cyprus has historically been a major conduit for Foreign Direct Investment (FDI) into India due to a favorable Double Taxation Avoidance Agreement (DTAA). It remains a key base for financial institutional investors routing capital into Indian equities.
- **Global Forum Support:** Cyprus remains an unwavering supporter of India's bid for permanent membership in a reformed UN Security Council (UNSC) and its entry into the Nuclear Suppliers Group (NSG).

Facets of India-Cyprus Bilateral Relations

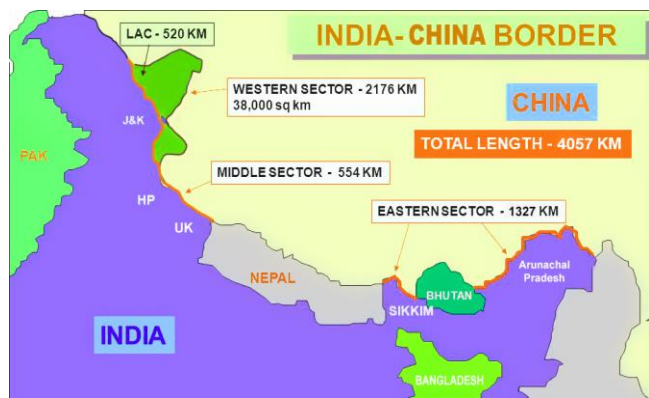
- **Historical Background:** Diplomatic ties were established in 1962, with both nations serving as early pioneers of the Non-Aligned Movement.
- **Maritime Interoperability:** Highlighting growing naval cooperation, India's Talwar-class guided-missile frigate **INS Trikand** conducted a port call at Limassol and executed a Passing Exercise (PASSEX) with the Cyprus Navy.
- **Trade Volumes:** Bilateral trade reached nearly **USD 140 million** in 2024–25. India's main exports include organic chemicals, pharmaceuticals, seafood, and electrical machinery. Cyprus mainly exports metals, aluminum, copper, and mechanical machinery.

- **FDI Footprint:** Cyprus ranks among the top 9 investors in India, accounting for cumulative FDI equity inflows of **USD 15.76 billion** between April 2000 and June 2025.
- **Trilateral Framework:** Commercial ties were broadened via the official launch of the **India-Greece-Cyprus (IGC) Business and Investment Council** in Mumbai.
- **Regulatory Alignment & FPI Status:** Following a revision of the DTAA to curb tax round-tripping, India rescinded the classification of Cyprus as a “Notified Jurisdictional Area.” Furthermore, SEBI notified Cyprus as an eligible jurisdiction for **Category-I Foreign Portfolio Investment (FPI) status**, making it one of only three non-FATF countries (alongside Mauritius and the UAE) to receive this designation.

Core Challenges and Mitigation Measures

Strategic Domain	Core Challenges	Measures Required
Economic Corridors & Supply Chains	West Asian conflicts and the proposed China-Pakistan-Russia-Turkey corridor threaten the execution of IMEC and regional trade routes.	India should operationalize IMEC through Cyprus’s “clean ports” (those lacking Chinese state equity stakes) to secure resilient access to European markets.
Financial Integrity & Investment	Managing historical concerns regarding round-tripping and illicit financial flows while Cyprus transitions away from its older dependence on Russian capital.	Secure strict enforcement of the revised DTAA, utilize the new Category-I FPI status, and leverage the India-EU FTA framework to draw transparent European investments.
Asymmetric Warfare & Security	India faces persistent cross-border terrorism, while Cyprus deals with rising cyber espionage risks in the volatile Levant region.	Fully operationalize the newly signed Joint Working Group on Counter-Terrorism, deepen cybersecurity exchange, and improve real-time intelligence sharing.

India-China Hold 35th WMCC Meeting on Border Affairs



Why in News?

- India and China held the **35th meeting of the Working Mechanism for Consultation and**

Coordination on India-China Border Affairs (WMCC) in Beijing.

- The high-level diplomatic engagement focused on boundary delimitation, border management, mechanism building, and cross-border cooperation between the two nations, serving as a constructive step toward normalizing bilateral relations.

Key Highlights of the Bilateral Talks

- **Progress Along the LAC:** Both delegations reviewed the frontier situation and expressed satisfaction with the progress made in maintaining peace and tranquility along the Line of Actual Control (LAC). They acknowledged that border stability has directly enabled the gradual normalization of broader ties.
- **Trans-Border Rivers Mechanism:** The Indian delegation emphasized the pressing need to convene an early meeting of the **Expert Level Mechanism on Trans-border Rivers**, highlighting its strategic and ecological importance.
- **Special Representatives (SR) Talks:** Both sides agreed to actively execute substantive preparations for the upcoming **25th round of Special Representatives (SR) talks** on the boundary question, which is scheduled to be hosted in China.
- **Institutional Leadership:** The Indian delegation was led by Sujit Ghosh, Joint Secretary (East Asia) in the Ministry of External Affairs, while the Chinese side was co-chaired by Hou Yanqi, Director General of the Boundary and Oceanic Affairs Department.

Institutional Framework: WMCC vs. SR Talks

Parameters	Working Mechanism for Consultation & Coordination (WMCC)	Special Representatives (SR) Dialogue
Establishment	Formally established in 2012 .	Established to handle high-level political talks.
Primary Focus	Operational and diplomatic management of border zones.	Final long-term resolution of the boundary dispute.
Functional Role	Deals with immediate border security, stability, and tension management.	Focuses on negotiating a comprehensive political framework.
Composition	Conducted jointly by diplomatic and military officials.	Led by top political representatives (e.g., National Security Adviser).

Profile of the India-China Border

The border between India and China is not fully demarcated, and active efforts to clarify and confirm the de facto boundary are handled through diplomatic and military grids.

- **The Line of Actual Control (LAC):** Emerged after the 1962 India-China War, serving as the functional boundary separating Indian-controlled and Chinese-controlled territories.
- **Length Perception Asymmetry:** India officially considers the total length of the LAC to be **3,488 km**, whereas China estimates it much lower at approximately **2,000 km**.
- **Primary Guarding Force:** The **Indo-Tibetan Border Police (ITBP)** serves as India's primary border-guarding force along this frontier.

Geographic Sectors of the Frontier:

- **Western Sector (Ladakh):** Centered primarily on the Aksai Chin dispute. India bases its territorial claims on the **Johnson Line (1865)**, while China relies on the **McDonald Line (1893)**.
- **Middle Sector (Himachal Pradesh, Uttarakhand):** Historically the least contentious sector. This is the only boundary area where both nations have mutually exchanged detailed maps to clarify perceptions.
- **Eastern Sector (Sikkim, Arunachal Pradesh):** Centered on the **McMahon Line**, which originated from the 1914 Simla Convention. China completely rejects this treaty line and claims Arunachal Pradesh as "South Tibet."

Cuba Navigates Severe Economic and Energy Crisis



Why in News?

Recently, Cuba has captured international attention amid a severe economic and energy crisis marked by prolonged electrical blackouts, acute fuel shortages, and widespread public protests. This internal instability has been further intensified by renewed United States sanctions and heightened diplomatic pressure.

Profile and Geography of Cuba

- **Geographic Matrix:** Cuba is strategically situated at the meeting point of the Caribbean Sea, the Gulf of Mexico, and the Atlantic Ocean. It lies directly south of the state of Florida (USA), west of Haiti, and north of Jamaica.
- **Physical Geography:** Characterized as a long, narrow island, Cuba stands as the largest island in the Caribbean Sea. It forms a primary part of the **Greater Antilles** island chain, a landscape shaped over millennia by ancient tectonic activity.
- **Relief and Land Use:** Approximately **one-third** of Cuba's terrain is covered by high mountain ranges and rolling hills. The remaining **two-thirds** of the land consist primarily of lowland plains that are heavily utilized for domestic agriculture.
- **Unique Fauna:** The island's diverse forest ecosystems are home to highly specialized wildlife, including the **bee hummingbird** (recognized as the world's smallest bird) and one of the world's smallest frog species.

Mineral Wealth and Economic Assets

Despite its current energy challenges, Cuba possesses extensive mineral deposits that serve as its primary industrial export commodities:

- **Core Reserves:** Holds globally significant reserves of **nickel and cobalt**.
- **Other Mineral Deposits:** Features active deposits of chromium, copper, gold, iron ore, manganese, silver, and tungsten.

Geopolitical and Political Significance

- **Strategic Maritime Node:** Cuba's location near critical global shipping lanes and the entrance to the Gulf of Mexico gives it immense importance for regional maritime connectivity, international logistics, and foreign power competition.

- **Governance and International Alignments:** Cuba operates under a centralized communist state system and has maintained long-standing diplomatic and economic tensions with the United States. Conversely, **China** maintains close economic and political ties with Havana, actively supporting its sovereignty and publicly opposing external interference or foreign trade embargoes.

EDITORIALS

Crux of The Hindu & Indian Express

International Issues

India–Brazil Trade Pact Expansion with MERCOSUR



Why is this in the news?

- India and Brazil have agreed to **expand their existing trade agreement with MERCOSUR**, a major South American trade bloc.
- This decision was taken during a meeting in New Delhi between:
 - India's Commerce Minister **Piyush Goyal**
 - Brazil's Vice President **Geraldo Alckmin**
- The goal is to make trade between India and South America:
 - bigger,
 - easier,
 - and more beneficial for both sides.

What is being agreed?

- Both countries want to **upgrade the old Preferential Trade Agreement (PTA)** into a stronger and wider trade partnership.

Key decisions:

- The agreement will be **significantly expanded**
- It will cover **more goods and sectors**
- It will include:
 - tariff issues (tax on imports/exports)
 - non-tariff issues (rules, standards, regulations)
- Private companies will also be consulted
- A **technical dialogue** will start soon
- Talks aim to finish within **1 year**

Simple meaning of PTA

- A **Preferential Trade Agreement (PTA)** means: Countries reduce taxes (tariffs) on selected goods traded between them.
- It is a **limited trade deal**, not a full free trade agreement.
- India and MERCOSUR already have a PTA since **2004–2009**, but it covers only a small number of products.

What is MERCOSUR?

- MERCOSUR is a regional trade group in South America.

Members:

- Argentina
- Brazil
- Paraguay
- Uruguay
- Bolivia (full member later)
- Venezuela (currently suspended)

Important features:

- Created in **1991 (Treaty of Asunción)**
- One of the world's largest trade blocs after EU and others
- Headquarters: **Montevideo, Uruguay**
- Languages: Spanish and Portuguese

Main aim:

To promote free movement of goods, services, money, and (in some cases) people among member countries.

Why is India interested?

India wants stronger trade with South America because:

- MERCOSUR is a **huge market**

- It has rich natural resources (oil, minerals, agricultural products)
- India can increase exports like:
 - medicines
 - textiles
 - machinery
 - technology products

Also, India wants:

- better investment opportunities
- stronger global trade partnerships

What will change after expansion?

If the agreement is expanded:

1. More products will be traded with lower taxes

- This makes Indian goods cheaper in South America
- And South American goods cheaper in India

2. Trade will become easier

- Fewer restrictions
- Better rules for companies

3. Investment will increase

- Companies from both sides may invest more in each other's countries

Why is this important for India?

- Helps India diversify trade (not depend on few countries)
- Expands presence in Latin America
- Boosts exports and job creation
- Supports India's goal of becoming a **global trade hub**

Oman and India Trade via Strategic Ports



Why is this in the news?

Oman's key ports—Sohar and Salalah—are playing an important role in:

- helping **India export food items** to Gulf countries,
- ensuring **smooth trade even during regional disruptions**, and
- avoiding risks in the **Strait of Hormuz** route.

These ports are now becoming a **safe alternative trade route** for the Gulf region.

What is happening?

- India exports food products to **six GCC (Gulf Cooperation Council) countries**.
- Normally, goods pass through sensitive sea routes like the **Strait of Hormuz**.
- But due to possible disruptions, trade is now being routed through **Oman's ports**.

Key ports involved:

- **Sohar Port**
- **Salalah Port**

These ports are:

- modern,
- well-connected,
- and have special facilities for agricultural goods.

Why are Oman's ports important?

1. Strategic location

Oman is located near:

- the **Arabian Sea**
- the **Gulf of Oman**
- the entrance of the **Persian Gulf**

This makes it a **key global shipping hub**.

2. Safe alternative route

- Avoids risks in the **Strait of Hormuz**
- Ensures uninterrupted trade even during geopolitical tensions

3. Food security for Gulf countries

GCC countries depend heavily on imports for food.

Oman helps ensure:

- steady supply of grains,
- fruits and vegetables,
- and other essential food items.

4. Modern port infrastructure

- Special agricultural terminals
- Fast cargo handling systems
- Better storage and logistics facilities

About Oman :

Location

- Oman is a country in the **Arabian Peninsula (West Asia)**.

Borders

- UAE (north-west)
- Saudi Arabia (west)
- Yemen (south-west)

Seas around Oman

- Arabian Sea (south & east)
- Gulf of Oman (north-east)

Capital

- **Muscat**

Physical Features (Important Points)

- Climate:
 - Hot desert climate
 - Humid coastal areas
 - Strong monsoon in southern region
- Highest point:
 - **Jebel Shams (Mount Shams)**
- Major desert:
 - **Rub' al-Khali (Empty Quarter)**
- Natural resources:
 - Petroleum (oil)
 - Natural gas
 - Copper, gypsum, limestone, chromium

Important Ports of Oman

1. Sohar Port

- Major industrial and logistics hub
- Key role in trade with Asia and Gulf countries

2. Salalah Port

- One of the largest ports in Oman
- Important for global shipping routes between Asia, Africa, and Europe

Why this matters for India?

- Strengthens India–Gulf trade connectivity
- Ensures smooth export of Indian food products
- Reduces dependence on risky sea routes
- Supports India's role as a major food supplier

Xi Warns Trump About the “Thucydides Trap”



Why is this in the news?

- During a high-level summit in **Beijing (May 2026)**, Chinese President **Xi Jinping** warned U.S. President **Donald Trump** about something called the:
 - **“Thucydides Trap”**
- This term is used in international politics to explain why **big powers sometimes go to war when global power shifts**.

What is the “Thucydides Trap”?

- The term comes from ancient history and modern political science.

Simple meaning:

When a **rising power** challenges an **already dominant power**, tension increases and war becomes more likely.

Historical Origin

The idea comes from the ancient Greek historian:

- Thucydides

He wrote about the war between:

- **Athens (rising power)**
- **Sparta (dominant power)**

He observed that:

Sparta became afraid of Athens' rise

→ this fear led to war.

Modern Explanation

The term was popularized by:

- Graham Allison

His idea:

- When a new power grows fast,
- the old superpower feels threatened,
- and both may move toward conflict unless carefully managed.

How it relates to today

In modern geopolitics:

- **United States = established global power**
- **China = rising global power**

So Xi used this idea to:

- warn about possible tension,
- and suggest avoiding war through cooperation.

What exactly did Xi say?

Xi asked a key question:

Can China and the U.S. avoid the Thucydides Trap and build a new model of relations?

He also said:

- both countries should work together,
- and avoid conflict,
- especially over sensitive issues like Taiwan.

What was Trump's response?

Trump:

- blamed previous U.S. leadership (Joe Biden),
- said the U.S. had declined earlier but is now improving,
- and highlighted trade deals with China.

He did **not directly respond to the theory**, but emphasized stronger economic ties.

Why is this concept important?

- The "Thucydides Trap" is widely discussed because:

1. History shows a pattern

- Many past power shifts led to wars.

2. It explains US-China tensions

- Trade, technology, and military competition are increasing.

3. It is a warning, not a prediction

- Experts say war is **not inevitable**, but risks increase without diplomacy.

Key issues linked to this warning

- Taiwan dispute (most sensitive issue)
- Trade and tariffs
- Military presence in Asia-Pacific
- Technology competition (AI, chips, etc.)

Zimbabwe Begins Process to Join BRICS New Development Bank



Why in News?

- Zimbabwe has officially started negotiations to become a member of the **BRICS New Development Bank (NDB)**.
- Zimbabwe's Finance Minister Mthuli Ncube announced that the country received official communication from Dilma Rousseff confirming the beginning of the accession process.

Key Highlights

Formal Membership Process Started

- The **Board of Directors of the New Development Bank** approved the start of Zimbabwe's accession process.
- The communication also outlined the next steps for obtaining full membership.

Why Does Zimbabwe Want to Join the NDB?

Main Objective

Zimbabwe wants:

- **Long-term development financing**
- More funds for:
 - Infrastructure
 - Economic development
 - National projects

Expected Benefits

Membership in the **New Development Bank (NDB)** may help Zimbabwe:

- Mobilise development finance
- Improve economic growth
- Support infrastructure projects
- Reduce dependence on Western financial institutions

Zimbabwe's National Goal

- Zimbabwe aims to become:
An Upper-Middle-Income Economy by 2030
- The government believes that NDB membership can support this vision.

About BRICS New Development Bank (NDB)

- **Established By** The bank was established by:
BRICS countries
- Brazil
- Russia
- India
- China
- South Africa

Established In

- **2014**
- Headquarters:
 - Shanghai, China

Purpose of NDB

Main Objective

To provide:

- Loans
- Financial assistance
- Infrastructure funding
- Sustainable development financing for developing and emerging economies.

About Zimbabwe

Location

- Zimbabwe is a **landlocked country** in **Southern Africa**.

Bordering Countries

Direction	Country
Northeast & East	Mozambique
South	South Africa
Southwest & West	Botswana
Northwest	Zambia

Capital City

- Capital:
 - Harare

Geographical Features of Zimbabwe

Topography

- Dominated by a high plateau called:
 - **Highveld**
- Consists mainly of grasslands.

Climate

- Located within the tropics
- Experiences **subtropical climate** due to high elevation.

Highest Peak

Mount Nyangani

- Height:
 - **2,592 metres**
- Highest mountain in Zimbabwe.

Important Lakes

Lake Kariba

- Located on:
 - Zambia–Zimbabwe border
- One of the world's largest man-made lakes.

Major Rivers of Zimbabwe

Important Rivers

- **Zambezi River**
- **Limpopo River**
- **Sabi River**
- **Runde River**

Desert Region

- Parts of Zimbabwe include:
 - **Kalahari Desert**

Natural Resources

Zimbabwe is rich in minerals such as:

- **Coal**
- **Chromium ore**
- **Vanadium**
- **Lithium**
- **Tin**
- **Platinum**

India–Italy Relations Strengthened: Space Partnerships and Special Strategic Partnership



Why in News?

- Nine Indian space-tech startups signed partnerships and collaboration agreements during **Space Meetings Veneto 2026** held in Venice.
- The Indian delegation was led by Indian National Space Promotion and Authorisation Centre (**IN-SPACE**).
- During Prime Minister Narendra Modi's visit to Italy, both countries upgraded their relations to a **Special Strategic Partnership**
- PM Modi was also awarded the **FAO Agricola Medal 2026**

Key Highlights of Space-Tech Partnerships

Indian Start-Ups Participating

The following Indian space-tech companies participated:

- **Astrogate Labs**
- **Astrobase Space Technologies**
- **VyomIC**
- **Suhora**
- **Kepler Aerospace Ltd.**
- **Hyspace Technologies**
- **TakeMe2Space**
- **Jarbits Pvt. Ltd.**
- **Dhruva Space**

Important Agreements Signed

Astrobase Space Technologies

- Signed an **MoU** with:
 - **Impulso Space**

Objective:

- Support customer access
- Explore launch opportunities
- Improve mission management services

Kepler Aerospace

- Signed framework agreement with:
 - Apogeo Space

Objective:

- Expand **Ground Station as a Service (GSaaS)** infrastructure
- Strengthen satellite cooperation between:
 - India and Europe

Areas of Cooperation:

- CubeSat systems
- Satellite missions
- Infrastructure operations

About IN-SPACE

Full Form

Indian National Space Promotion and Authorisation Centre

Role

- Single-window agency for:
 - Private sector participation in India's space sector

Function

- Promotes:
 - Private space companies
 - Innovation
 - Commercial space activities

India–Italy Special Strategic Partnership

Relations Upgraded

India and Italy upgraded their ties from:

- **Strategic Partnership** to
- **Special Strategic Partnership**

Key Highlights of PM Modi's Visit to Italy

1. Political & Strategic Cooperation

- New mechanism led by:
 - Foreign Ministers of both countries
- To review:
 - **India–Italy Joint Strategic Action Plan 2025–2029**

2. Trade & Economic Cooperation

Bilateral Trade Target

- Target set at:
 - **EUR 20 Billion by 2029**

Focus Sectors

- Clean technology
- Semiconductors
- Critical minerals
- Pharmaceuticals

Defence and Security Cooperation

Defence Industrial Roadmap Adopted

Focus Areas:

- Helicopters
- Naval platforms
- Electronic warfare

Maritime Security Dialogue

- India and Italy agreed to launch:
 - **Formal Dialogue on Maritime Security**

Science & Technology Cooperation

INNOVIT India

New Innovation Hub

Purpose:

- Connect:
 - Startups
 - Universities
 - Industries

Artificial Intelligence (AI)

Both countries supported:

- **Human-centric AI**
- Ethical and responsible AI development

Critical Minerals & Energy Cooperation

MoU Signed For:

- Securing critical minerals
- Recycling electronic waste

Cooperation Areas

- Green hydrogen
- Smart grids
- Renewable energy

India-Middle East-Europe Economic Corridor (IMEC)

What is IMEC?

A major connectivity project linking:

- India
- Middle East
- Europe

Importance

- Improves:
 - Trade routes
 - Logistics
 - Energy connectivity
 - Supply chains

Strategic Importance

- Strengthens emerging **Indo-Mediterranean Strategic Space**

Migration and Mobility

Agreement to Promote Mobility of Skilled Workers

Focus Areas:

- STEM professionals
- Nurses
- Skilled workforce

Important Initiative:

- ICI – Italy Calls India

Cultural Relations

2027 to be Celebrated as:

- *Year of Culture and Tourism between India and Italy*

FAO Agricola Medal 2026 Awarded To

- Prime Minister Narendra Modi

Given By

- Food and Agriculture Organization (FAO)

About Agricola Medal

Highest Award of FAO

Given For:

- Fighting hunger
- Reducing poverty
- Achieving Sustainable Development Goals (SDGs)

Why Was India Recognised?

Major Achievements Highlighted

1. Food Security

- India runs:
 - World's largest food-based social safety net
- Covers:
 - 800 million people

2. PM-KISAN Scheme

- Direct income support to:
 - 110+ million farmers

3. Sustainable Agriculture

- Promotion of:
 - Natural farming
 - Regenerative agriculture
 - Climate-resilient farming

4. Millets Promotion

- India played major role in:
 - International Year of Millets 2023

5. Digital Agriculture

- Use of:
 - Digital Public Infrastructure (DPI) in farming

Importance of Italy for India

1. Important Partner in IMEC

- Italy acts as:
 - European entry point for IMEC

2. Defence Cooperation

Italy has expertise in:

- Radar systems
- Electronic warfare
- Helicopters

This supports:

- **Make in India**
- Defence modernisation

3. Strategic Importance in Europe

- Italy is:
 - EU's third-largest economy
- Helps India in:
 - India–EU Free Trade Agreement negotiations

4. Technology & Green Transition

Italy is strong in:

- Precision manufacturing
- Robotics
- Circular economy practices

India–Italy Trade Relations

Trade

- Italy is:
 - India's 4th largest trading partner in the EU

Bilateral Trade:

- Around:
 - USD 13.76 Billion (2024–25)

Foreign Direct Investment (FDI)

Italy's Investment Areas in India

- Automobile sector
- Trading
- Industrial machinery

Defence & Maritime Cooperation

Naval Cooperation Includes:

- PASSEX Exercises
- Participation in:
 - MILAN Naval Exercises

Space Cooperation

Cooperation Between:

- Indian Space Research Organisation (ISRO)
- Italian Space Agency (ASI)

Areas:

- Satellite services
- Ground station solutions

Challenges in India–Italy Relations

Major Challenges

- Geopolitical instability in West Asia affecting IMEC

- EU protectionist policies like:
 - **CBAM**
- Bureaucratic delays in defence projects
- Data privacy differences:
 - India's **DPDP Act**
 - Europe's **GDPR**
- Lack of Social Security Agreement (**SSA**)

Measures to Strengthen Relations

Suggested Steps

- Increase defence R&D cooperation
- Promote green technology transfer
- Create data-sharing framework
- Finalise Social Security Agreement
- Expand AI and semiconductor cooperation

Rubio's India Visit Signals Steady Growth in U.S.-India Ties, Quad Cooperation



Why in News?

- Recent diplomatic engagements, including US Secretary of State **Marco Rubio's visit to India** and the **Quad Foreign Ministers' Meeting**, have highlighted both **reassurance and uncertainty** in India–US relations amid shifting global geopolitics.
- The discussions come against the backdrop of evolving US policies on trade, immigration, and strategic priorities, alongside broader changes in the Indo-Pacific balance.

India–US Relations: Historical Context

The India–US relationship has strengthened significantly in the **first quarter of the 21st century**, driven by:

- Shared democratic values
- Common geopolitical interests
- Alignment on global issues such as:
 - Technology cooperation
 - Supply chain resilience
 - Trade and investment

Key Strategic Assumptions

- Both nations are **vibrant democracies with converging interests**
- **China identified as a common strategic challenge**
- Gradual **de-hyphenation of India from Pakistan** in US policy, viewing India as a key independent partner

Challenges in Recent Years

1. Economic and Trade Frictions

- US tariffs on Indian goods disrupted assumptions of smooth trade convergence
- India was referred to as a **“tariff king”** in US discourse
- Raised concerns over trade predictability and fairness

2. Strategic and Defence Issues

- US use of **CAATSA sanctions threats** over India's defence ties with Russia
- Highlighted limits of flexibility in bilateral defence cooperation

3. Immigration and Technology Frictions

- Tightening of **H-1B visa policies**
- Impact on India–US technology ecosystem:
 - Silicon Valley–Bengaluru talent flow disrupted

4. Geopolitical Shifts

- US discussions on a potential **“G2 framework” with China**
- Renewed US engagement with Pakistan created regional unease in India

Marco Rubio's Visit: Reassurance and Reset Attempt

US Secretary of State **Marco Rubio** sought to:

- Reaffirm long-term commitment to India–US strategic partnership
- Clarify that US tariffs and visa actions were **not India-specific**
- Emphasise reforms aimed at:
 - Trade rebalancing
 - Immigration modernization

Key Statement

- The relationship will become **“stronger than it has ever been”** by the end of the current US administration

Pakistan and Regional Messaging

- US engagement with other countries described as **tactical**
- Reassurance that it would not weaken strategic ties with India

India's Strategic Framework

External Affairs Minister **S. Jaishankar** presented a **five-point approach**:

1. Dialogue and diplomacy
2. Safe and unimpeded maritime commerce
3. Respect for international law
4. Opposition to weaponisation of trade and resources
5. Strengthening trusted partnerships and resilient supply chains

Quad Foreign Ministers' Meeting: Key Outcomes

The Quad announced cooperation in:

- Maritime surveillance systems
- Port infrastructure development
- Critical minerals supply chains
- Energy security frameworks

These initiatives aim to:

- Strengthen Indo-Pacific stability
- Build resilient supply chains
- Counter strategic vulnerabilities

US–China Factor and Global Rebalancing

Emerging Developments:

- Signs of **US–China rapprochement**
- Possible US strategic focus shift toward **West Asia**

Implications:

- Raises questions about sustained US Indo-Pacific commitment
- Tests long-term cohesion of Quad objectives
- Reinforces need for India's strategic adaptability

India–China Context

- India–China relationship remains:
 - Structurally competitive
 - Strategically sensitive
- Requires continuous diplomatic management

India–US Geopolitical Relationship: Key Analytical Insights

1. Nature of the Partnership

- Built on shared democracy and strategic convergence
- Strong alignment on:
 - Countering China
 - Global technology ecosystems
 - Economic integration

2. Fragilities Exposed

The past years revealed vulnerabilities:

- Trade protectionism and tariff disputes

- Strategic conditionalities in defence cooperation
- Immigration tightening affecting tech ties
- Fluctuating US engagement in South Asia

3. Diplomatic Efforts for Stabilisation

Rubio's visit reflects attempts to:

- Rebuild trust
- Separate trade tensions from security cooperation
- Reinforce India's role in Indo-Pacific strategy
- Sustain Quad commitment

4. Suggested Directions for Strengthening Ties

Key recommendations emerging from analysis:

- Formalising India's strategic partner status in US policy
- Recognising India's independent foreign policy choices, including ties with Russia
- Protecting technology and skilled migration channels from political volatility
- Strengthening high-level political engagement (including Quad leadership summits)

Key Theme: "America First" vs "India First"

- US continues "America First" approach
- India asserts "India First" approach

Meaning:

- Cooperation is based on **converging interests, not alignment**
- Relationship is increasingly **transactional and interest-driven**

Structural Insight

The evolving relationship shows:

- Diplomacy alone is insufficient without domestic economic strength
- Strategic autonomy is essential in a multipolar world
- External partnerships depend on internal capability building

Conclusion

India–US relations remain a **critical but evolving strategic partnership**, shaped by cooperation in the Indo-Pacific and tensions in trade, immigration, and geopolitics. While recent engagements reaffirm long-term commitment, the relationship is increasingly **complex, interest-driven, and sensitive to global power shifts**.

The future trajectory will depend on:

- Sustained diplomatic engagement

- Structural trust-building
- India's domestic economic and technological strengthening
- Stability in US global strategic priorities

India–Canada CEPA Talks: “Game Changer” for Bilateral Economic Relations



Why in News?

- On **26 May 2026**, Union Minister of Commerce and Industry **Shri Piyush Goyal** visited **Ottawa, Canada**, leading the largest-ever Indian business delegation to advance negotiations on the **India–Canada Comprehensive Economic Partnership Agreement (CEPA)**.
- During the visit, Prime Minister of Canada **Mr. Mark Carney** described the proposed CEPA as a “**game changer**” for bilateral economic relations.

Key Highlights of the Visit

- India and Canada reaffirmed commitment to conclude a **balanced CEPA by end of 2026**
- Delegation included representatives from **100+ Indian companies**
- Focus on strengthening trade, investment, technology, and agriculture cooperation
- Visits held in **Ottawa (May 25)** and **Toronto (May 26–27)**

India–Canada CEPA: Background

- CEPA negotiations have accelerated since:
 - **Terms of Reference signed in March 2025**
- Negotiation rounds:
 - First virtual round: March 2026
 - Second round: concluded on 8 May 2026
 - Technical negotiations ongoing in Ottawa (May 25–29, 2026)

Key Outcomes of High-Level Meetings

1. Meeting with Canadian Prime Minister

- Shri Goyal met Prime Minister **Mark Carney**
- Discussions focused on:
 - Strengthening economic cooperation
 - Expanding trade and investment
- Canada reaffirmed CEPA as a “**game changer**”
- Both sides agreed to work toward an **ambitious, balanced, and commercially meaningful agreement**

2. Trade and Investment Discussions

Meeting with Canadian Minister of International Trade **Mr. Maninder Sidhu**:

- Reviewed progress of CEPA negotiations
- Identified opportunities to expand:
 - Trade flows
 - Investment linkages
- Target set to conclude agreement by **end of 2026**

3. Agriculture and Food Security Cooperation

Meeting with Agriculture Minister **Mr. Heath MacDonald** focused on:

- Food security cooperation
- Agri-technology collaboration
- Food processing sector development

Expected Benefits:

- Strengthening agricultural trade
- Boosting farmer and producer incomes
- Enhancing agri-tech integration

4. Strategic and Economic Partnership Talks

Meeting with Foreign Minister **Ms. Anita Anand**:

- Discussed strengthening strategic partnership
- Focus on:
 - Trade
 - Investment
 - Technology linkages

India highlighted opportunities in:

- Infrastructure
- Renewable energy
- Logistics
- Digital infrastructure
- Consumer sectors

India–Canada Economic Engagement

- Current bilateral trade: ~USD 8.5 billion
- Target: USD 50 billion by 2030
- Delegation includes sectors such as:
 - Energy
 - Mining
 - Automotive goods
 - Pharmaceuticals
 - Telecommunications
 - Artificial Intelligence
 - Textiles
 - Leather

Significance of the CEPA

1. Trade Expansion

- Expected to significantly expand bilateral trade and investment

2. Economic Integration

- Strengthens supply chain linkages between India and Canada

3. Investment Opportunities

- Encourages long-term Canadian investment in India's growing sectors

4. Agricultural Cooperation

- Enhances food security and agri-tech collaboration

5. Diaspora Linkages

- Indian diaspora in Canada contributes to:
 - Economic ties
 - Cultural relations
 - People-to-people connections

Strategic Context

- Visit builds on engagement during Canadian PM's visit to India in March 2026
- Reflects sustained high-level diplomatic momentum since mid-2025
- Aligns with India's broader strategy of expanding global trade partnerships

Conclusion

The India–Canada CEPA negotiations represent a major step toward strengthening bilateral economic relations. With both sides committing to conclude a balanced agreement by 2026 and expanding trade to USD 50 billion by 2030, the partnership is positioned for a significant transformation driven by trade, investment, agriculture, and technology cooperation.

Quad Foreign Ministers' Meeting Joint Statement 2026



Why in News?

- On 26 May 2026, the Foreign Ministers of the Quad countries — India, the United States, Australia, and Japan — met in New Delhi for the **Quad Foreign Ministers' Meeting**, hosted by India.

The meeting produced a detailed Joint Statement covering:

- Indo-Pacific security
- Maritime cooperation
- Critical minerals
- Energy security
- Emerging technologies
- Humanitarian assistance
- Counter-terrorism
- Regional geopolitical developments

The statement reflects the Quad's expanding role as a strategic, economic, technological, and security partnership in the Indo-Pacific.

Key Highlights

Feature	Details
Event	Quad Foreign Ministers' Meeting
Date	26 May 2026
Venue	New Delhi
Members	India, USA, Australia, Japan
Hosted by	India
Main Focus	Indo-Pacific peace, security, resilience and prosperity

What is the Quad?

The **Quadrilateral Security Dialogue (Quad)** is an informal strategic grouping of:

- India
- United States
- Australia
- Japan

Objectives

- Promote a free and open Indo-Pacific

- Uphold international law
- Ensure maritime security
- Strengthen regional resilience
- Enhance economic and technological cooperation

Major Themes of the Joint Statement

1. Commitment to a Free and Open Indo-Pacific

The Quad reaffirmed support for:

- Peace
- Stability
- Prosperity
- Rule-based order

in the Indo-Pacific region.

Core Principles Highlighted

- Respect for sovereignty and territorial integrity
- Peaceful resolution of disputes
- Adherence to international law
- Opposition to unilateral changes to status quo by force or coercion

This reflects the Quad's opposition to aggressive actions that threaten regional stability.

2. Maritime Security and Freedom of Navigation

The statement stressed the importance of:

- Freedom of navigation
- Freedom of overflight
- Uninterrupted global commerce

consistent with:

- International law
- UNCLOS (United Nations Convention on the Law of the Sea)

Concerns Raised

The Quad expressed concern regarding:

- Dangerous manoeuvres in the South China Sea
- Militarisation of disputed features
- Unsafe use of water cannons and flares
- Obstruction of offshore resource development

Though China was not directly named, the concerns clearly relate to Chinese actions in the region.

3. Concerns over East and South China Seas

The Quad strongly opposed:

- Coercive actions
- Attempts to alter the status quo
- Maritime intimidation

The statement emphasized:

- Peaceful settlement of disputes

- Respect for international arbitration decisions

Importance of UNCLOS

The statement reaffirmed that maritime disputes should be resolved according to:

- UNCLOS provisions

It also referenced the arbitral tribunal ruling on the South China Sea disputes.

4. Strait of Hormuz and Red Sea Security

The Quad highlighted concerns over:

- Maritime disruptions
- Attacks on commercial shipping

particularly in:

- Strait of Hormuz
- Red Sea

Importance :

These routes are critical for:

- Global energy trade
- Food security
- Fertilizer supply chains

The Quad condemned attacks on commercial vessels and opposed actions inconsistent with UNCLOS.

5. Position on North Korea

The Quad reaffirmed commitment to:

- Complete denuclearisation of North Korea

in accordance with:

- UN Security Council Resolutions (UNSCRs)

Concerns Raised

- Ballistic missile development
- Weapons of mass destruction (WMD) programmes
- Cyber activities funding missile programmes
- Military cooperation with North Korea

The statement also stressed:

- Enforcement of international sanctions

6. ASEAN Centrality and Regional Institutions

The Quad reaffirmed support for:

- ASEAN centrality
- ASEAN-led regional architecture

It also emphasized cooperation with:

- Pacific Islands Forum
- Indian Ocean Rim Association (IORA)

This demonstrates the Quad's effort to avoid appearing exclusionary in the Indo-Pacific.

7. Situation in Myanmar

The Quad expressed concern over:

- Ongoing conflict in Myanmar

and called for:

- Immediate cessation of violence
- Release of unjustly detained persons
- Humanitarian assistance
- Inclusive dialogue

The statement also noted:

- Regional security implications
- Growth of transnational crime

8. Maritime and Transnational Security Cooperation Indo-Pacific Partnership for Maritime Domain Awareness (IPMDA)

The Quad welcomed India's operationalisation of:

- Indian Ocean Region programme under IPMDA

through:

- Information Fusion Centre – Indian Ocean Region (IFC-IOR), Gurugram

Objective

To improve:

- Maritime surveillance
- Real-time information sharing
- Monitoring of unlawful maritime activities

9. Indo-Pacific Maritime Surveillance Collaboration (IPMSC)

The Quad announced:

- Coordination of maritime surveillance efforts

initially focused on:

- Indian Ocean Region

Significance

- Enhances maritime domain awareness
- Improves interoperability
- Strengthens regional security coordination

10. Quad-at-Sea Ship Observer Mission

After the first mission from:

- Palau to Guam (2025)

India will host the next edition.

Purpose

- Improve naval interoperability
- Share operational knowledge
- Counter illegal maritime activities

11. Counter-Terrorism Cooperation

The Quad strongly condemned:

- Terrorism in all forms
- Cross-border terrorism

The statement specifically mentioned:

- Pahalgam terror attack in India (2025)
- Bondi Beach attack in Australia (2025)

Focus Areas

- Action against terror groups

- Countering terror financing
- Tackling misuse of emerging technologies by terrorists

12. Tackling Online Scam Centres and Cybercrime

The Quad expressed concern about:

- Online scam centres in Southeast Asia

linked to:

- Human trafficking
- Cybercrime
- Drug trafficking
- Sexual extortion
- Illicit finance

The members pledged:

- Greater law enforcement cooperation
- Regulatory coordination

13. Economic Security and Critical Minerals

The Quad emphasized:

- Economic resilience
- Diversified supply chains
- Reducing dependence on single-country suppliers

Quad Critical Minerals Framework

The Quad announced a new framework for:

- Mining
- Processing
- Recycling critical minerals

Importance

Critical minerals are essential for:

- Semiconductors
- Batteries
- Renewable energy
- Defence industries

14. Quad Initiative on Indo-Pacific Energy Security

The Quad launched:

- Quad Initiative on Indo-Pacific Energy Security

Objectives

- Stable energy markets
- Resilient energy supply chains
- Energy cooperation

This reflects growing concerns over:

- Global energy disruptions
- Supply vulnerabilities

15. Infrastructure and Port Development

The Quad announced cooperation with Fiji to develop:

- Port infrastructure projects

Significance

- Supports regional connectivity
- Counters strategic infrastructure influence
- Strengthens Indo-Pacific partnerships

16. Undersea Cable Connectivity

The Quad highlighted the importance of:

- Trusted undersea cable systems

Importance

Undersea cables are critical for:

- Internet connectivity
- Digital economy
- Secure communications

The Quad aims to:

- Improve resilience
- Prevent sabotage
- Support Pacific Island connectivity

17. Critical and Emerging Technologies

The Quad reaffirmed cooperation in:

- 5G and 6G
- Artificial Intelligence (AI)
- Digital standards
- Trusted technology ecosystems

Focus Areas

- Open and interoperable systems
- Reduced dependence on single vendors
- Secure digital infrastructure

18. Pax Silica Initiative

The Quad welcomed:

- Pax Silica

as part of its economic security agenda.

Focus Areas

- AI ecosystem
- Semiconductors
- Advanced manufacturing
- Trusted supply chains

This reflects the growing importance of technology competition globally.

19. Biomanufacturing and Health Security

The Quad committed to cooperation in:

- Pharmaceutical supply chains
- Health security infrastructure

The focus is on:

- Preparedness for future health emergencies

20. Humanitarian Assistance and Disaster Relief (HADR)

The Quad reaffirmed commitment to:

- Disaster response cooperation

Examples Mentioned

- Papua New Guinea landslide (2024)

- Myanmar earthquake (2025)

The Quad emphasized:

- Interoperability
- Logistics coordination
- Rapid humanitarian response

21. Indo-Pacific Logistics Network (IPLN)

The IPLN aims to:

- Coordinate logistics during disasters
- Improve regional response mechanisms

Activities

- Tabletop exercises
- Field training exercises
- SOP development

Significance of the Joint Statement

1. Expansion of Quad's Role

The Quad has evolved beyond a security dialogue into:

- Economic cooperation
- Technology coordination
- Infrastructure partnership
- Disaster response mechanism

2. Strategic Signalling

The statement signals collective concern regarding:

- Coercive maritime behaviour
- Supply chain vulnerabilities
- Regional instability

3. India's Growing Role

India's hosting of the meeting highlights:

- Its central role in Indo-Pacific diplomacy
- Leadership in maritime initiatives

4. Focus on Practical Cooperation

The Quad increasingly emphasizes:

- Deliverable-oriented partnerships
- Regional capacity building
- Infrastructure and technology projects

Challenges Facing the Quad

- Managing diverse strategic priorities
- Balancing economic ties with China
- Ensuring ASEAN confidence
- Financing large-scale initiatives
- Avoiding perception of military bloc politics

Conclusion

The 2026 Quad Foreign Ministers' Joint Statement reflects the transformation of the Quad into a multidimensional strategic partnership focused on security, resilience, technology, economic cooperation, and humanitarian assistance.

With Quad Pledge, Fiji Hopes for a Development Spurt



Why in News?

- On **27 May 2026**, Fiji welcomed an announcement by the **Quad countries** — India, the United States, Australia, and Japan — regarding cooperation on a “model” port development project in Fiji.
- The move is seen as strategically significant in the Indo-Pacific region amid growing geopolitical competition between China and Quad nations in the Pacific Islands.
- The proposed project may support Fiji’s ambitious plan to redevelop and potentially relocate the country’s main port at Suva.

Key Highlights of the Development

Feature	Details
Country Involved	Fiji
Group Involved	Quad
Quad Members	India, USA, Australia, Japan
Main Focus	Port development in Fiji
Strategic Location	South Pacific Ocean
Proposed Project	Redevelopment/relocation of Suva Port
Estimated Cost	Around \$1.82 billion
Major Concern	China’s growing presence in Pacific Islands

What is the Quad?

The **Quadrilateral Security Dialogue (Quad)** is an informal strategic grouping of:

- India
- United States
- Australia
- Japan

Main Objectives

- Promote a free, open, and inclusive Indo-Pacific

- Ensure maritime security
- Strengthen supply chains and infrastructure
- Counter coercive influence in the region

Initially focused on security cooperation, the Quad has increasingly expanded into:

- Infrastructure development
- Climate action
- Technology
- Maritime connectivity

Why is Fiji Important?

- Fiji is strategically located in the South Pacific and has become increasingly important in Indo-Pacific geopolitics.

Strategic Importance

- Located along important Pacific maritime routes
- Acts as a gateway to Pacific Island nations
- Important for naval and logistics access
- Significant in regional diplomacy and influence

Background of the Port Development Issue

Fiji’s Proposal to China

- In 2023, Fiji’s Prime Minister Sitiveni Rabuka proposed redevelopment of Fiji’s port and shipbuilding industry to Chinese President Xi Jinping.

Chinese Presence in Fiji

- Around 100 Chinese fishing vessels operate from Suva Port
- Chinese naval and tracking vessels have visited the port
- The Chinese vessel Yuan Wang 7 reportedly used the port

This increased concerns among Western and Indo-Pacific partners regarding China’s strategic footprint in the Pacific.

Australia’s Response

Australia, which views China’s growing influence in the Pacific with concern, later agreed to support Fiji in:

- Wharf redevelopment
- Port modernisation efforts

However, Australia had not committed to relocating Suva Port.

Quad’s Announcement

During a Quad foreign ministers’ meeting in India, the four countries announced cooperation to build a:

- “Model” port project in Fiji

This announcement:

- Came as a surprise to Fiji Ports officials
- Raised hopes for large-scale infrastructure investment
- Signalled greater Quad engagement in the Pacific Islands

Possible Suva Port Relocation

Proposed Mega Project

Fiji Ports has discussed:

- **Port upgrades worth \$181 million**
- A larger \$1.82 billion plan to relocate Suva Port

Why Relocate?

The current Suva Port:

- Faces space constraints
- Requires modernisation
- Has strategic and commercial importance

If implemented, the relocation could become one of the largest infrastructure projects in Fiji's history.

Role of the United States

The United States has increased engagement with Fiji through:

- Infrastructure discussions
- Feasibility studies
- Development assistance

Millennium Challenge Corporation (MCC)

Fiji has reached an agreement with the US Millennium Challenge Corporation (MCC) for:

- Port feasibility studies
- Potential grant-based infrastructure financing

Significance

Prime Minister Rabuka emphasised that:

- Funding would involve grants, not loans

This contrasts with concerns over debt burdens associated with some Chinese infrastructure financing models.

China's Presence and Debt Concerns

Fiji still owes approximately:

- **\$109 million to Chinese state banks**

These loans were used for:

- Road construction
- Infrastructure projects

This reflects broader concerns in many developing countries regarding:

- Debt dependency
- Strategic leverage through infrastructure finance

Geopolitical Significance

1. Indo-Pacific Competition

The project highlights growing strategic competition between:

- China
- Quad countries

for influence in the Pacific Islands.

2. Infrastructure Diplomacy

Infrastructure development is increasingly being used as a tool of:

- Strategic influence
- Economic partnership
- Diplomatic engagement

3. Countering Chinese Influence

Quad-backed investments are viewed as alternatives to:

- China's Belt and Road Initiative (BRI)
- Chinese-funded infrastructure projects

4. Maritime Security

Ports in Pacific Islands hold importance for:

- Naval access
- Logistics support
- Maritime surveillance
- Regional security cooperation

About Fiji

- Fiji is an island nation in the: South Pacific Ocean

It lies:

- Northeast of New Zealand
- Southwest of Hawaii

It surrounds the:

- Koro Sea

Geographical Features

Islands

- Around 300 islands
- About 100 inhabited

Terrain

- Mountains
- Plateaus
- Coastal plains
- Forests and grasslands

Highest Peak

- Mount Tomanivi
- Height: 1,324 metres

Largest Island

- Viti Levu ("Great Fiji")

The capital city:

- Suva is located on Viti Levu.

Population Composition

Majority:

- Mixed Melanesian-Polynesian ancestry

Large minority:

- South Asian origin population

Languages

- English
- Fijian
- Hindi

Religions

- Christianity
- Hinduism
- Islam

Currency

- Fiji Dollar

Economy of Fiji

Fiji has one of the most developed economies in the Pacific region.

Major Economic Sectors

- Tourism
- Sugar industry
- Fisheries
- Services

The country is highly dependent on:

- External trade
- Tourism revenues
- Infrastructure development

Colonial Rule

- Fiji was a British colony for nearly a century

Independence

- Gained independence in 1970

Governance System

- Parliamentary democracy based on the Westminster system

Political Instability

Fiji experienced coups in:

- 1987
- 2000
- 2006

Currently, Fiji functions under:

- The 2013 Constitution

Significance for India : India-Pacific Outreach

The development strengthens India's:

- Indo-Pacific engagement
- Pacific Islands diplomacy

Strategic Cooperation

India's role in the Quad enhances:

- Maritime cooperation

- Infrastructure diplomacy
- Development partnerships

Diaspora Link

- Fiji has a large population of Indian origin, strengthening historical and cultural ties with India.

Challenges Ahead

- Geopolitical rivalry between major powers
- Debt sustainability concerns
- Environmental impact of port projects
- Balancing relations between China and Quad nations
- Climate vulnerability in Pacific Island states

PM Modi's UAE & Europe Tour (May 2026)



Background

- Prime Minister Narendra Modi started a **five-nation foreign tour** on **15 May 2026**.
- **Countries Included:**
 - United Arab Emirates (UAE)
 - Netherlands
 - Norway
 - Sweden
 - Italy
- The visit is happening during the ongoing **Iran-West Asia conflict**, which has created:
 - Rising oil prices
 - Supply chain disruptions
 - Global energy uncertainty
- Prime Minister Narendra Modi visited the United Arab Emirates (UAE) on **15 May 2026** as the first stop of his five-nation diplomatic tour
- During the visit, PM Modi held extensive discussions with UAE President Mohamed bin Zayed Al Nahyan in **Abu Dhabi**.

The visit became highly significant because it produced:

- A landmark **Strategic Defence Partnership Framework**,
- Major **energy security agreements**,
- A **\$5 billion UAE investment package** for India,
- Cooperation in **Artificial Intelligence (AI)** and **supercomputing**,
- Maritime infrastructure agreements,
- And enhanced trade and connectivity initiatives.

The visit took place during a period of:

- Rising tensions in **West Asia**,
- The ongoing **Iran conflict**,
- Growing uncertainty in global energy markets,
- Supply-chain disruptions,
- And concerns over safe shipping routes in the Gulf region.

Because India imports a large portion of its energy requirements from West Asia, the visit had major strategic and economic importance.

Historical Background of India–UAE Relations



Ancient Trade and Cultural Links

India and the Gulf region have shared historical ties for centuries through:

- Maritime trade,
- Cultural exchanges,
- Commercial partnerships across the **Arabian Sea**.

Historically, traders exchanged:

- **Spices**,
- **Pearls**,
- **Dates**,
- **Cotton textiles**,
- Fishery products,
- Precious goods.

Western Indian coastal states such as:

- **Gujarat**,

- **Kerala**, maintained close trading relations with Gulf ports.

These historical interactions helped create:

- Strong commercial trust,
- Cultural familiarity,
- Deep people-to-people connections.

Establishment of Diplomatic Relations

- Formal diplomatic relations between India and UAE were established in: → **1972**

After this:

- Embassies were opened,
- Trade expanded,
- Labour migration increased,
- Strategic cooperation gradually strengthened.

Transformation After 2015

- India–UAE relations entered a new phase after PM Modi’s historic UAE visit in: → **2015**

This visit was historic because:

- It was the first visit by an Indian Prime Minister in 34 years,
- It marked the beginning of a broader **Comprehensive Strategic Partnership**.

Since then:

- PM Modi has visited UAE **7 times** since 2014.
- UAE President Sheikh Mohamed bin Zayed has visited India **five times**.

This high-level engagement reflects:

- Strong political trust,
- Shared strategic interests,
- Long-term economic cooperation.

Strategic Importance of UAE for India

The UAE is one of India’s most important partners in:

- Energy,
- Trade,
- Investment,
- Maritime connectivity,
- Defence,
- Technology,
- Diaspora relations.

1. Importance in Energy Security

India imports a large percentage of its:

- Crude oil,
- Natural gas,
- LPG requirements from abroad.

The UAE is among India’s most trusted energy suppliers.

In FY 2024–25, UAE was:

- India's **4th largest crude oil supplier**,
- **3rd largest LNG supplier**,
- **Largest LPG supplier**,
- **2nd largest export destination** for Indian petroleum products.



This makes UAE extremely important for:

- India's transportation sector,
- Industrial production,
- Economic stability,
- Energy security framework.

2. Importance in Trade and Investment

- India–UAE economic relations have expanded rapidly.

Bilateral merchandise trade crossed:

-  **\$101.25 billion** in FY 2025–26. This is the **1st time trade** crossed the **\$100 billion mark**.
- Both countries have now set a target to:  Increase trade to **\$200 billion by 2032**.

3. Importance of Indian Diaspora

Indians are the largest expatriate community in the UAE.

Millions of Indians work in:

- Construction,
- Healthcare,
- IT,
- Retail,
- Banking,
- Hospitality,
- Logistics,
- Engineering sectors.

These workers contribute to:

- UAE's economic growth,
- India's remittance inflows,
- India's foreign exchange reserves.

The Indian diaspora acts as a major:

- Cultural bridge,
- Economic bridge, between the two countries.

Strategic Context of the Visit

The visit took place amid:

- Ongoing **Iran-related tensions**,
- Threats to maritime shipping routes,
- Rising global oil prices,
- Concerns regarding the **Strait of Hormuz**.

Importance of the Strait of Hormuz

- The Strait of Hormuz is one of the world's most important oil shipping routes.

A large share of global:

- Crude oil,
- LNG exports, passes through this narrow waterway.

Any disruption in this region can lead to:

- Oil price increases,
- Supply shortages,
- Global inflation,
- Energy insecurity.

India's Position During the Visit

PM Modi:

- Strongly condemned recent attacks on the UAE,
- Expressed solidarity with UAE leadership,
- Supported safe and uninterrupted navigation through the Strait of Hormuz.

India stated that secure maritime routes are essential for:

- Regional peace,
- Global trade,
- Energy security,
- Food security.

Major Outcomes of the Visit

Outcome 1: Strategic Collaboration on Petroleum Reserves

Agreement Between:

- Indian Strategic Petroleum Reserves Limited (ISPRL)
- Abu Dhabi National Oil Company (ADNOC)


What Are Strategic Petroleum Reserves?

- **Strategic Petroleum Reserves (SPR)** are emergency crude oil storage systems maintained by countries to deal with:
 - Wars,
 - International crises,
 - Oil shortages,
 - Global supply disruptions,
 - Sudden price spikes.

India stores crude oil in underground facilities to ensure continuous supply during emergencies.

Key Features of the Agreement

Under the agreement:

- UAE will enhance participation in India's SPR programme,
- UAE participation will increase to:  **30 million barrels**,

- Both countries will also cooperate in creating:
 - **Strategic gas reserves** in India.

Importance of the Agreement

The agreement is important because it:

- Strengthens India's long-term energy security,
- Improves crisis preparedness,
- Reduces vulnerability to international supply shocks,
- Expands India's energy storage capacity.

The agreement also supports:

- LNG infrastructure,
- LPG storage expansion,
- Long-term hydrocarbon cooperation.

Outcome 2: Long-Term LPG Supply Agreement

Agreement Between:

- Indian Oil Corporation (IOCL)
- Abu Dhabi National Oil Company (ADNOC)

Importance of LPG Agreement

- LPG is an essential cooking fuel used by millions of Indian households.

Demand for LPG is increasing because:

- More families are shifting to clean cooking energy,
- Urbanisation is rising,
- Welfare schemes have expanded LPG access.

The agreement ensures:

- Stable LPG supply,
- Better domestic energy planning,
- Reduced risk of shortages,
- Long-term supply security.

It also reinforces UAE's role as one of India's most dependable energy partners.

Outcome 3: UAE Announces \$5 Billion Investment in India

- One of the biggest outcomes of the visit was the announcement of: → **\$5 billion UAE investment package** in India.

Breakdown of Investments

1. Emirates NBD Investment

- Emirates NBD will invest: → **\$3 billion** into: RBL Bank

2. ADIA–NIIF Infrastructure Investment

Abu Dhabi Investment Authority (ADIA) will invest: → **\$1 billion** along with: National Infrastructure and Investment Fund (NIIF) for:

- Infrastructure projects,
- Strategic development initiatives.

3. International Holding Company Investment

- International Holding Company will invest: → **\$1 billion** into: Sammaan Capital

Importance of the Investment Package

The investments are important because they:

- Increase capital inflows into India,
- Support infrastructure development,
- Strengthen investor confidence,
- Boost economic growth,
- Generate employment opportunities.

The investments also reflect UAE's:

- Long-term confidence in India's economy,
- Commitment to India's growth story.

Outcome 4: Framework for Strategic Defence Partnership

- India and UAE signed a: → **Framework for Strategic Defence Partnership**

Main Features of the Defence Framework

The agreement focuses on:

- Defence industrial cooperation,
- Joint defence production,
- Co-development of advanced technologies,
- Innovation partnerships,
- Maritime security,
- Cyber defence,
- Secure communication systems,
- Joint training and military exercises.

Importance of the Defence Partnership

This framework supports India's:

- Defence modernisation,
- Indigenous defence manufacturing,
- "Make in India" initiative,
- Strategic autonomy goals.

The partnership will also strengthen:

- Gulf maritime security,
- Regional stability,
- Defence technology cooperation.

Outcome 5: 8 Exaflop Supercomputing Cluster Partnership Between:

- Centre for Development of Advanced Computing (CDAC)
- G42

Meaning of Exaflop Supercomputer

- An **Exaflop Supercomputer** can perform: → Quintillions of calculations per second.
- This is among the highest levels of computing power in the world.

Importance of the Project

The project will:

- Strengthen India's AI ecosystem,
- Improve sovereign AI capabilities,
- Boost scientific research,
- Support cybersecurity and big data analysis,
- Enhance digital infrastructure.

Meaning of Sovereign AI

Sovereign AI refers to:

- AI systems developed and controlled domestically,
- National ownership over strategic data,
- Reduced dependence on foreign digital systems.

This is increasingly important for:

- National security,
- Technological independence,
- Economic competitiveness.

Outcome 6: Ship Repair Cluster at Vadinar, Gujarat

Agreement Between:

- Cochin Shipyard Limited
- Drydocks World

Importance of the Project

The project will:

- Develop maritime infrastructure,
- Improve ship repair capabilities,
- Strengthen logistics networks,
- Enhance port connectivity,
- Support coastal industrialisation.

The project also supports: Make in India through:

- Domestic industrial development,
- Indigenous maritime capability building.

Outcome 7: Skill Development in Maritime Sector

A tripartite agreement was signed for:

- Maritime training,
- Technical upskilling,
- Shipbuilding expertise development.

Importance

The initiative supports:

- Employment generation,
- Skilled workforce creation,
- India's emergence as a global maritime talent hub.

It also aligns with: Skill India Mission

Outcome 8: Virtual Trade Corridor and MAITRI Platform

- India and UAE welcomed the operationalisation of: → **Virtual Trade Corridor** using: → **MAITRI digital framework**

Purpose of MAITRI

The framework connects:

- Customs authorities,
- Ports,
- Trade systems of both countries.

Benefits

The initiative will:

- Reduce cargo delays,
- Lower logistics costs,
- Improve trade efficiency,
- Reduce transit time,
- Strengthen supply-chain connectivity.

Role of CEPA

- The visit also strengthened implementation of: → **India-UAE Comprehensive Economic Partnership Agreement (CEPA)**

CEPA has already helped:

- Increase bilateral trade,
- Improve market access,
- Boost investment cooperation.

Overall Strategic Importance of the Visit

- The visit demonstrates that India-UAE relations are evolving from a traditional: → **Oil-based partnership** into a: → **Future-oriented strategic partnership.**

The relationship now includes:

- Energy security,
- AI and supercomputing,
- Defence manufacturing,
- Maritime infrastructure,
- Digital connectivity,
- Logistics,
- Investment,
- Skill development.

2. Netherlands Visit



- PM Modi's second visit to the Netherlands after 2017.

Main Areas of Cooperation

(a) Semiconductor Technology

An agreement will be signed between:

- Tata Electronics
- ASML

Purpose:

To support a semiconductor fabrication plant in:

- Dholera, Gujarat

Why Semiconductors Matter

Semiconductors (chips) are used in:

- Mobile phones
- Cars
- Computers
- Defence equipment
- AI systems

India wants to become less dependent on imports from East Asia.

(b) Clean Energy & Water Management

- PM Modi and Dutch PM visit: **Afsluitdijk Dam**



Focus Areas:

- Water management
- Hydrogen energy
- Sustainable fisheries
- Climate resilience

The Netherlands is globally famous for flood control and water technology.

(c) Trade & Investment

The Netherlands is:

- India's largest export destination in Europe
- A major investor in India

Bilateral Trade:

- → Around \$27.8 billion

(d) Indian Community

The PM will interact with:

- NRIs
- Surinami Hindustani community

This is the largest Indian-origin group in mainland Europe.

3. Sweden Visit



- PM Modi visited Sweden previously in 2018.

Why Sweden Is Important

Sweden is a leader in:

- Innovation
- Research
- Green technology
- Telecommunications
- Defence manufacturing

Key Areas of Cooperation

(a) Technology & AI Corridor

- India and Sweden signed: **SITAC** (Sweden-India Technology and AI Corridor)

Areas Covered:

- AI
- Quantum computing
- 6G technology
- Life sciences
- Digital technology

(b) Defence Cooperation

Saab is building a manufacturing plant in:

- Jhajjar, Haryana

Importance:

It is India's first: → 100% FDI-based defence manufacturing project

(c) Critical Minerals Partnership

Sweden has large deposits of critical minerals needed for:

- EV batteries
- Semiconductors
- Defence electronics

India wants secure supply chains for future industries.

(d) Green Investments

A Swedish company signed an investment agreement in Maharashtra for:

- Electric boats

Worth: → ₹1,990 crore

4. Norway Visit



- This is the first standalone bilateral visit by an Indian PM to Norway in 43 years.
- PM Modi will also attend: **Third India-Nordic Summit**

Why Norway Matters

(a) India-EFTA Trade Agreement

- India signed a trade agreement with EFTA countries.

Full Form:

European Free Trade Association

Countries include:

- Norway
- Switzerland
- Iceland
- Liechtenstein

Benefits:

- \$100 billion investment commitment
- 1 million jobs expected over 15 years

(b) Maritime Cooperation

Indian shipyards are building ships for Norway.

Important agreement:

- Cochin Shipyard
- Kongsberg Maritime

(c) Polar & Space Cooperation

ISRO Presence

- Indian Space Research Organisation antennas are operational in: Svalbard

Importance:

Useful for:

- Satellite communication
- Arctic research
- Space missions

(d) Clean Energy

Norway is a major renewable energy producer.

Cooperation includes:

- Green shipping
- Renewable energy
- Sustainable transport

5. Italy Visit



- PM Modi will visit Italy from May 19–21.
- He will meet: Giorgia Meloni

Why Italy Is Important

(a) IMEEC Corridor

- Italy supports: **IMEEC** (India-Middle East-Europe Economic Corridor)

This project aims to improve:

- Trade routes
- Connectivity
- Energy transportation
- Supply chains


(b) Undersea Cable Project

A submarine cable linking India to Europe through Italy has become operational.


Benefits:

- Better internet connectivity
- Faster digital communication
- Data transfer security

(c) Trade & Investment

Italy is India's:  4th largest trading partner in the EU

Bilateral Trade:

-  Around \$16.77 billion

(d) Major Tata Deal

- Tata Motors acquired: Iveco Group

Deal Value:

 3.8 billion euros

This is one of the biggest Indian investments in Italy.



Hate Speech and the Constitution: Supreme Court Calls for Stronger Enforcement



Why in News?

- The **Supreme Court of India** recently observed that **hate speech** emerges from an “**us versus them**” mindset and weakens the constitutional value of **fraternity**.
- While recognizing its harmful impact on society, the Court clarified that India does **not need new laws**, but rather **stronger enforcement of existing laws**.

Key Observations of the Supreme Court

1. Hate Speech is Against Fraternity

- The Court observed that hate speech damages the **moral fabric of the Republic**.
- It undermines the constitutional principle of **Fraternity** mentioned in the **Preamble**.
- Hate speech is not merely offensive language; it directly threatens social unity.

2. Against India’s Civilisational Ethos

- The “**us versus them**” mentality contradicts India’s traditional philosophy of **Vasudhaiva Kutumbakam** (“*The world is one family*”).
- India has historically embraced diversity and coexistence.
- Citizenship cannot become a basis for exclusion or division.

3. Role of Fundamental Duties

- Referring to **Article 51A(e)**, the Court reminded citizens of their duty to:
 - Promote **harmony**
 - Encourage **brotherhood**
 - Rise above religious, linguistic, and regional differences

- Citizens must actively support national unity and social peace.

4. Judiciary Cannot Create New Laws

- The Court clarified that making criminal laws is the responsibility of the **Legislature**.
- Judicial framing of statutory schemes would violate the doctrine of **Separation of Powers**.

5. Existing Laws are Adequate

- Existing laws such as the **Bharatiya Nyaya Sanhita (BNS), 2023** already address hate speech.
- The real challenge is **weak enforcement and poor implementation**.
- According to the Court, violence and unrest occur due to administrative failure, not legal vacuum.

Procedural Safeguards for Citizens

Alternative Complaint Mechanism

- If police refuse to register a complaint, **Section 173(4) of BNSS, 2023** allows citizens to send written complaints directly to the **Superintendent of Police (SP)**.

No Prior Sanction Required

- Magistrates can take cognisance of hate speech complaints **without prior government approval**.

Mandatory FIR Registration

- Reaffirming the **Tehseen Poonawalla Case (2018)**, the Court directed police authorities to:
 - Register FIRs immediately
 - Conduct fair investigations
 - Act promptly in hate speech cases

What is Hate Speech?

Definition

- India currently lacks a single comprehensive legal definition of hate speech.
- The **267th Law Commission Report (2017)** defined hate speech as speech inciting hatred against groups based on:
 - Religion
 - Race
 - Ethnicity
 - Gender
 - Sexual orientation

Nature of Hate Speech

Hate speech may include:

- Spoken words

- Written content
- Gestures
- Online posts
- Public displays

Its objective is often to:

- Incite violence
- Promote discrimination
- Spread hostility
- Intimidate communities

Legal Framework Against Hate Speech

Constitutional Provisions

Article 19(1)(a)

- Guarantees Freedom of Speech and Expression.

Article 19(2)

- Permits **reasonable restrictions** in the interest of:
 - Public order
 - Sovereignty and integrity
 - Dignity
 - Prevention of offences

Major Legal Provisions

Bharatiya Nyaya Sanhita (BNS), 2023

- Punishes promotion of enmity between groups.
- Penalizes deliberate insults to religious beliefs.

Representation of the People Act, 1951

- Disqualifies candidates convicted of promoting communal hatred.

SC/ST (Prevention of Atrocities) Act, 1989

- Criminalizes insults and humiliation targeting SC/ST communities.

Protection of Civil Rights Act, 1955

- Penalizes practices promoting **untouchability**.

Digital and Media Regulations

Information Technology Rules, 2021

- Social media platforms must remove unlawful content, including hate speech, after receiving official notice.

Cable Television Networks Regulation Act, 1995

- Prohibits TV broadcasts that:
 - Attack religions or communities
 - Promote communal hatred
 - Use contemptuous religious content

Important Supreme Court Judgments

Shaheen Abdulla v. Union of India (2022)

- Directed police to take **suo motu action** against hate speech without waiting for complaints.

Tehseen S. Poonawalla v. Union of India (2018)

- Issued guidelines to curb **mob lynching** and hate-driven violence.

Shreya Singhal v. Union of India (2015)

- Struck down **Section 66A of the IT Act** for violating free speech rights.

Pravasi Bhalai Sangathan v. Union of India (2014)

- Asked the Law Commission to define hate speech clearly.

Suo Motu FIR Directives

- The Supreme Court directed all States and UTs to register FIRs against hate speech even without formal complaints.

Hate Speech vs Hate Crime

Hate Speech

- Expression or communication spreading hatred
- May not involve physical violence
- Includes speeches, slogans, or online content

Hate Crime

- Involves actual criminal acts
- Includes assault, violence, or property damage
- Motivated by prejudice or identity-based bias

Major Drivers of Hate Speech

Psychological & Social Factors

- Prejudice and stereotypes
- Fear and insecurity
- Lack of empathy
- “Us vs. Them” mentality

Political Factors

- Electoral polarization
- Identity politics
- Vote-bank strategies

Technological Factors

Algorithmic Amplification

- Social media algorithms promote sensational content for greater engagement.

Echo Chamber Effect

- Users repeatedly consume similar opinions, strengthening biases.

Fake News & Sensationalism

- Media sensationalism accelerates polarization and hostility.

Legal & Regulatory Issues

- Lack of clear legal definitions
- Weak enforcement mechanisms
- Misuse under freedom of speech claims

Socio-Economic Factors

- Economic stress often leads to scapegoating of marginalized groups.

Data Gaps

- NCRB stopped publishing separate hate crime data after 2017.
- However, **Crime in India 2022** reported a **45% rise** in cases related to promoting enmity between groups.

Measures Needed to Curb Hate Speech

1. Legislative Clarity

- Implement recommendations of:
 - **267th Law Commission Report**
 - **Viswanathan Committee (2015)**

2. Institutional Accountability

- Strictly enforce the **Tehseen Poonawalla guidelines**.
- Appoint **Nodal Police Officers** in every district.

3. Global Best Practices

Germany's NetzDG Act (2017)

- Imposes strict penalties on social media companies failing to remove hate speech quickly.

4. National SOP on Hate Speech

- Adopt the **UN Rabat Plan of Action**, which evaluates:
 - Speaker
 - Intent
 - Content
 - Context
 - Reach
 - Likelihood of harm

5. Independent Regulatory Body

- Establish an autonomous authority to monitor hate speech during elections.

6. Algorithmic Accountability

- Social media companies should:
 - Audit algorithms regularly
 - Prevent amplification of polarizing content
 - Use NLP tools in Indian regional languages

Cauvery Water Dispute: CWMA Directs Karnataka on Timely Water Release



Why in News?

The **Cauvery Water Management Authority (CWMA)** has reaffirmed the **2018 Supreme Court verdict** and directed **Karnataka** to ensure the **timely release of Cauvery water to Tamil Nadu for May 2026**.

This directive reinforces the implementation of the final water-sharing framework and highlights the continuing role of institutional mechanisms in inter-state water disputes.

What is Cauvery Water Management Authority (CWMA)?

Establishment

- The **CWMA** was constituted in **June 2018** under the **Cauvery Water Management Scheme, 2018**.
- It functions along with the **Cauvery Water Regulation Committee (CWRC)**.
- It was notified under **Section 6A of the Inter-State River Water Disputes Act, 1956**.
- It ensures implementation of the **Supreme Court's 2018 judgment** on Cauvery water sharing.

Nature and Functioning

- CWMA is a **statutory and quasi-judicial body**.
- It operates under the **Ministry of Jal Shakti**.
- Headquarters: **New Delhi**.

Composition

- Chairperson: Senior engineer or IAS officer (Secretary/Additional Secretary rank), appointed for 5 years.
- Members include:
 - Two full-time members (Water Resources and Agriculture)
 - Two part-time members from the Central Government

- Four part-time members representing basin states (**Karnataka, Tamil Nadu, Kerala, Puducherry**)
- Secretary from Central Water Engineering Services

Key Functions

- Water Apportionment: Regulates release of water from major reservoirs such as **Krishnarajasagara (Karnataka)** and **Mettur Dam (Tamil Nadu)**.
- Distress Sharing: Allocates water proportionately during drought or low rainfall years.
- Monitoring: Collects real-time data on inflows, storage, and usage through CWRC.
- Efficiency Promotion: Advises states on **micro-irrigation** and **cropping pattern changes**.

Significance

- Replaced the earlier **Cauvery River Authority**.
- Provides a **permanent institutional mechanism** for dispute resolution.
- Reduces litigation and political tensions among riparian states.
- Ensures **technical and rule-based governance** of river waters.

About Cauvery (Kaveri) River

Overview

- The **Cauvery River** is one of the most important rivers of South India.
- It is often called the “**Ganga of the South**”.
- It is central to one of India’s longest-standing inter-state water disputes.

Origin and Course

- Origin: **Talakaveri, Brahmagiri Range, Western Ghats (Karnataka)**
- Length: ~800 km
- Flow Direction: Southeast through Karnataka and Tamil Nadu
- Outflow: **Bay of Bengal near Poompuhar**

Drainage Basin

- Covers parts of:
 - Karnataka
 - Tamil Nadu
 - Kerala
 - Puducherry

Major Tributaries

- Left Bank Tributaries:

- Harangi
- Hemavati
- Shimsha
- Arkavati

Right Bank Tributaries:

- Kabini
- Lakshmana Tirtha
- Suvarnavathi
- Bhavani
- Noyyal
- Amaravati

Major Dams

- **Krishna Raja Sagara (KRS Dam)** – Karnataka
- **Mettur Dam (Stanley Reservoir)** – Tamil Nadu

Cauvery Water Dispute: Background Colonial Origins

- The dispute originated from agreements in **1892 and 1924** between:
 - Mysore Princely State (Karnataka)
 - Madras Presidency (Tamil Nadu)
- Tamil Nadu, as a lower riparian state, secured larger water usage rights due to early irrigation systems.

Post-Independence Issues

- Karnataka argued that colonial agreements were **unfair and outdated**.
- It demanded greater share for irrigation and development needs.

Constitutional Framework

- Article 262 empowers Parliament to resolve inter-state river disputes.
- The **Inter-State River Water Disputes Act, 1956** provides the legal framework.
- The **Cauvery Water Disputes Tribunal (CWDT)** was established in 1990.

Core Conflict

- Upper riparian state (**Karnataka**) priorities:
 - Drinking water needs
 - Irrigation requirements
- Lower riparian state (**Tamil Nadu**) priorities:
 - Agricultural survival of delta regions
- Disputes intensify during **low rainfall (distress years)**.

Supreme Court Judgment (2018)

Key Observations

- Declared rivers as a **national resource**, not the property of any state.

- Emphasized equitable distribution of water among states.

Drinking Water Provision

- Karnataka received an additional **14.75 TMC** for **Bengaluru's drinking water needs**.

Revised Allocation

- Tamil Nadu: **404.25 TMC** (reduced from 419 TMC)
- Karnataka: **284.75 TMC** (increased from 270 TMC)
- Kerala: **30 TMC**
- Puducherry: **7 TMC**

Institutional Mechanism

- Directed creation of:
 - **Cauvery Water Management Authority (CWMA)**
 - **Cauvery Water Regulation Committee (CWRC)**
- Objective: Ensure **implementation and compliance** of water-sharing norms.

Public Accounts Committee (PAC): K.C. Venugopal Reappointed Chairman for 2026–27



Why in News?

- **K.C. Venugopal** has been reappointed as the **Chairman of the Public Accounts Committee (PAC)** of Parliament for the **2026–27 term**.
- The development highlights the continued importance of the **PAC as a key instrument of parliamentary financial oversight and executive accountability**.

About Public Accounts Committee (PAC)

Role and Objective

- The PAC is a **parliamentary committee** that ensures **executive accountability to the legislature**.

- It examines how the government **spends public money** and whether expenditure is:
 - Legal
 - Efficient
 - Economical
 - Within parliamentary approval

Genesis and Evolution

- Established in **1921** under the **Montagu-Chelmsford Reforms**.
- Became a constitutional parliamentary committee after **1950 (Constitution of India)**.
- Since **1967**, a convention exists that the **Chairman is from the Opposition**, ensuring neutrality and accountability.

Composition

- Total Members: **22**
 - 15 from **Lok Sabha**
 - 7 from **Rajya Sabha**
- Members are elected annually through **proportional representation (single transferable vote system)**.
- **Ministers are not eligible** to be members.
- Tenure of members: **1 year**.
- Chairman is appointed by the **Speaker of Lok Sabha**.

Core Functions of PAC

Financial Scrutiny

- Examines:
 - **Appropriation Accounts**
 - **Finance Accounts**
 - **CAG Reports**
- Ensures that **public funds are used for approved purposes only**.

Oversight of Public Expenditure

- Ensures government spending is:
 - Legally sanctioned
 - Economically efficient
 - Properly justified

Detection of Financial Irregularities

- Identifies:
 - Wasteful expenditure
 - Financial mismanagement
 - Loss of public money
- Recommends **corrective and disciplinary actions**.

Excess Expenditure Review

- Examines cases where government exceeds **parliamentary sanctioned funds**.

- Such excess is later regularized under **Article 115 of the Constitution**.

Significance of PAC

- Acts as the **financial watchdog of Parliament**.
- Strengthens **transparency and accountability** in governance.
- Ensures **prudent use of taxpayer money**.
- Helps Parliament manage complex financial oversight in a modern state.

Link with the Comptroller and Auditor General (CAG)

CAG as Foundation of PAC Work

- The **CAG's audit reports** form the basis of PAC examinations.
- CAG conducts audits related to:
 - Financial accuracy
 - Compliance (regularity audit)
 - Policy justification (propriety audit)
 - Performance evaluation
- CAG is often called the **"friend, philosopher, and guide"** of PAC.

Follow-Up Mechanism

- Government must submit **Action Taken Notes/Reports (ATNs/ATRs)** on PAC recommendations.
- Generally required within **six months**.
- The **Audit Para Monitoring System (APMS)** helps track compliance and reduce pendency.

Conclusion

The **Public Accounts Committee (PAC)** remains one of the most powerful instruments of **parliamentary financial control in India**. Its functioning, supported by the **CAG's audit system**, ensures that public expenditure remains **transparent, accountable, and aligned with legislative intent**, thereby strengthening democratic oversight over executive power.

Public Interest Litigation (PIL): Government Calls for Review Amid Misuse Concerns



Why in News?

- The **Union government** has urged the **Supreme Court of India** to reconsider the existing framework of **Public Interest Litigation (PIL)**, citing concerns over rising **"agenda-driven litigation."**
- The move has revived the debate on whether PIL, originally a tool for **social justice and access to courts**, now requires **recalibration to prevent misuse while preserving its constitutional purpose**.

Key Concerns Regarding PIL

1. Dilution of Locus Standi and Misuse ("Three Ps")

- PIL has shifted from **restricted standing** to broad citizen access.
- This has led to misuse through:
 - **Private Interest Litigation** (corporate or personal disputes disguised as PILs)
 - **Publicity Interest Litigation** (filed for media attention)
 - **Political Interest Litigation** (used for political contestation)
- In **Subhash Kumar v. State of Bihar (1991)**, the Supreme Court held that PIL cannot be used for **personal or private disputes**.

2. Judicial Overreach and Constitutional Friction

- PILs sometimes push courts into **policy-making domains of the executive and legislature**.
- This raises concerns over **separation of powers** and judicial overreach.
- In **State of Tamil Nadu v. K. Balu (2017)**:
 - The Court banned liquor shops near highways.
 - The decision had major **economic and employment impacts**, later requiring modification.
- Courts may lack **technical expertise and democratic accountability** for policy decisions.

3. Polycentric Nature and Stakeholder Exclusion

- PILs often involve **multiple affected stakeholders**.
- However, all parties are not always heard, violating:
 - **Audi alteram partem** (right to be heard)

- This weakens fairness in complex policy-related disputes.

4. Concerns Over Amicus Curiae Role

- In some cases, **amicus curiae** has shifted from neutral advisor to **quasi-petitioner**.
- This can affect:
 - Procedural neutrality
 - Adversarial balance
 - Judicial accountability

5. Rise of “Ambush PILs”

- Poorly drafted PILs are filed strategically to ensure early dismissal.
- This can block genuine future claims due to **res judicata**.

6. Judicial Backlog and Resource Burden

- Over **5 crore pending cases** in India.
- Expansive PILs consume significant judicial time.
- This affects **timely justice in regular civil and criminal cases**.

7. Enforcement and Credibility Issues

- Weak implementation of PIL orders reduces effectiveness.
- Limited enforcement mechanisms and delays in compliance weaken:
 - Judicial authority
 - Public trust in outcomes

What is Public Interest Litigation (PIL)?

Definition

- PIL is a legal mechanism allowing **public-spirited individuals or organisations** to approach courts on behalf of disadvantaged groups.
- It enables justice for those unable to access courts due to:
 - Poverty
 - Illiteracy
 - Social disadvantage

Origin

- Inspired by **American jurisprudence**.
- Developed in India during the **late 1970s and 1980s**.
- Pioneered by judges like **Justice V.R. Krishna Iyer** and **Justice P.N. Bhagwati**.

Shift from Traditional Rule

- Earlier principle: **Locus Standi** (only aggrieved person can file case).

- PIL relaxed this rule, allowing **representative litigation for public interest**.

Constitutional Basis of PIL

Article 32

- Known as the **“heart and soul” of the Constitution**.
- Enables direct access to the **Supreme Court for enforcement of Fundamental Rights**.
- Expanded through PIL to include **public-spirited petitioners**.

Article 226

- Empowers **High Courts** to entertain PILs on:
 - Governance issues
 - Environmental concerns
 - Administrative failures

Article 39A

- Mandates **equal justice and free legal aid**.
- Forms the **philosophical foundation of PIL**.

Judicial Guidelines and Safeguards

Balwant Singh Chauhan Guidelines (2010)

- Verify petitioner credentials
- Ensure genuine public interest
- Prevent political or private motives
- Impose costs on frivolous petitions

Supreme Court Rules (2013)

- Mandatory disclosure of:
 - Prior similar petitions
 - Personal interest
 - Income and occupation
- Designed to ensure **bona fides and transparency**

Significance of PIL

Voice of the Voiceless

- Provides access to justice for:
 - Undertrials
 - Bonded labourers
 - Marginalised communities
 - Disaster victims

Catalyst for Social Reform

- **M.C. Mehta v. Union of India (1986)**: Environmental jurisprudence and **absolute liability principle**
- **Vishaka v. State of Rajasthan (1997)**: Workplace sexual harassment guidelines
- **Narmada Bachao Andolan v. Union of India (2000)**: Balancing development and rehabilitation

Accountability Mechanism

- Checks **government inaction and corruption**.
- Ensures **constitutional compliance by the executive**.

Expansion of Fundamental Rights

- Article 21 expanded to include:
 - Clean environment
 - Speedy trial
 - Legal aid
 - Privacy rights
- **Hussainara Khatoon v. State of Bihar (1979)**:
 - Exposed undertrial injustice
 - Established **right to speedy trial**

Measures to Strengthen PIL Framework

1. Strict Enforcement of Guidelines

- Apply **Balwant Singh Chauhal** norms at admission stage itself.

2. Exemplary Penalties

- Penalise **frivolous or publicity-driven PILs** with heavy costs.

3. Filtering Mechanism

- Establish **PIL scrutiny cells** in High Courts and Supreme Court.
- Pre-screen petitions before judicial listing.

4. Specialised PIL Benches

- Domain-specific benches for:
 - Environment
 - Health
 - Education
- Example: **Green Bench of Calcutta High Court**

5. Judicial Restraint

- Courts must avoid acting as **policy-makers**.
- Intervention only in cases of:
 - Fundamental rights violation
 - Constitutional vacuum

Conclusion

The issue is not **Public Interest Litigation** itself, but its **misuse and procedural distortion**. Strengthening **filters, penalties, judicial discipline, and procedural safeguards** can ensure that PIL continues to function as a powerful instrument of **social justice, constitutional accountability, and protection of fundamental rights**, without being misused for extraneous purposes.

India Tightens OCI Framework: Citizenship (Amendment) Rules, 2026 Introduced



Why in News

- The Union Ministry of Home Affairs (MHA) has notified the **Citizenship (Amendment) Rules, 2026**
- The rules introduce major changes to the **Overseas Citizen of India (OCI)** system
- Key focus areas include:
 - **Digital transformation of OCI services**
 - Introduction of **e-OCI (electronic OCI) cards**
 - Mandatory **online application system**
 - **Biometric data integration** for immigration processing
 - Strict rule that **minors with Indian passports cannot hold foreign passports**
- The issue is in news due to its direct impact on:
 - **Overseas Indians**
 - **Citizenship and immigration procedures**
 - **Data security and identity management systems**

Key Highlights of the New Rules

1. Ban on Dual Passports for Minors

- Under **Rule 3 of Citizenship Rules, 2009**
- A **minor with an Indian passport cannot hold any foreign passport**
- Purpose: Prevent **dual citizenship misuse**

2. Introduction of e-OCI (Electronic OCI)

- Launch of **digital OCI identity cards**
- Will work alongside **physical OCI cards**
- Aim: Create a **paperless identity system**

3. Fully Online OCI Applications

- OCI applications under **Section 7A**
- Must be submitted via **Form XXVIII**
- No physical submission required
- System fully **online and digitised**

4. Biometric Data Integration

- Mandatory **biometric consent**
- Linked with **Fast Track Immigration Programme**
- Enables faster and automated immigration checks

5. Centralised Digital OCI Database

- National database maintained in **electronic Form XXX**
- Stores details of all OCI holders
- Improves **data management and coordination**

6. Online Renunciation & Cancellation

- OCI renunciation (**Rule 34**) now online
- OCI cancellation (**Rule 35**) also online
- Includes structured **appeal mechanism**
- Non-compliance may lead to **OCI invalidation**

What is OCI (Overseas Citizen of India)?

- OCI is a status under the **Citizenship Act, 1955**
- Granted to eligible foreign citizens of Indian origin

Eligibility Includes:

- Former Indian citizens (on or after **26 January 1950**)
- Individuals linked to territories added after **15 August 1947**
- Their:
 - Children, grandchildren, great-grandchildren
- Minor child with at least **one Indian parent**
- Spouse of Indian citizen/OCI holder (minimum **2-year marriage**)

Exception

- Not eligible if ancestry includes **Pakistan or Bangladesh citizenship**

Benefits of OCI Cardholders

- **Lifelong multiple-entry visa** to India
- Parity with **NRIs** in:
 - Economic, financial, and educational fields
- No **voting rights** in India

Demand to Elevate Right to Vote to Fundamental Right Gains Political Momentum



Why in News

- The Opposition has demanded that the **Right to Vote** be upgraded from a **statutory right** to a **Fundamental Right under Part III of the Constitution**
- The demand has gained urgency amid concerns over the **Special Intensive Revision (SIR) process**
- Allegations of **large-scale deletion of names from electoral rolls** have raised fears of **electoral exclusion and disenfranchisement**
- The issue is being discussed in the context of strengthening **electoral rights and democratic safeguards**

Key Demands

- Upgrade **Right to Vote** to a **Fundamental Right**
- Ensure stronger **constitutional protection against arbitrary deletion from voter lists**
- Provide citizens direct access to courts for enforcement:
 - **Supreme Court under Article 32**
 - **High Courts under Article 226**

Why This Matters

- Would make voting rights **strictly enforceable under the Constitution**
- Strengthens protection against **state-led disenfranchisement**
- Ensures greater **electoral inclusion and transparency**
- Reinforces concerns over fairness in **electoral roll revisions (SIR process)**

Constitutional Background of Right to Vote

Current Status

- Right to vote is a **statutory right, not a Fundamental Right**
- Based on principle of **Universal Adult Franchise**

Constitutional Provision

- **Article 326:**
 - Guarantees voting rights to citizens aged **18 and above**
 - Age reduced from 21 to 18 by the **61st Constitutional Amendment Act, 1988**

Legal Framework

- **Representation of the People Act, 1950:**
 - Deals with voter eligibility (citizenship, residence, etc.)
- **Representation of the People Act, 1951:**
 - Governs conduct of elections, voting process, and disqualifications

Freedom of Voting as a Fundamental Aspect

- Recognised under **Article 19(1)(a)** (Freedom of speech and expression)
- Includes:
 - Choice of candidate
 - Option of **NOTA (None of the Above)**
- Applies only during the **electoral process**

Judicial Interpretation of Right to Vote

- **N.P. Ponnuswami (1952)**
 - Right to vote is a **statutory right**, subject to legal limits
- **Jyoti Basu (1982)**
 - Voting is **not a fundamental or common law right**
 - It is purely a **statutory right**
- **Kuldip Nayar (2006)**
 - Reaffirmed that the **right to vote is statutory in nature**

Historical Context

- The demand aligns with concerns raised by **Dr. B.R. Ambedkar**
- He warned that future governments could potentially misuse electoral mechanisms to **restrict democratic participation**

IT Rules 2021 and Online Censorship: Concerns Over Digital Freedom in India



Why in News

- The Union government's increasing reliance on the **Information Technology (IT) Act, 2000 and IT Rules, 2021** for online content regulation has raised concerns over **freedom of speech, transparency, and executive overreach** in India's digital ecosystem.
- The expansion of tools like the **Sahyog Portal** and faster takedown mechanisms has intensified debates on whether censorship is bypassing **judicial safeguards and proportionality standards**.

What are the Recent Concerns Associated with Censorship in India?

1. Expanding Use of Legal Provisions

- Increasing reliance on:
 - **Section 69A (IT Act, 2000)** → Blocking online content in the interest of sovereignty, security, and public order
 - **Section 79(3)(b)** → Loss of "safe harbour" if content is not removed quickly
- Concerns over **targeted takedowns of independent media and political content**

2. Faster and Stricter Compliance Rules

- IT Rules Amendment (2026) requires:
 - **3-hour takedown deadline** for flagged content

- Platforms risk:
 - Loss of safe harbour protection
 - Criminal liability for non-compliance

3. Bypass of Judicial Safeguards

- Concerns that enforcement ignores the **Shreya Singhal vs Union of India (2015)** ruling
- “Actual knowledge” standard is allegedly being diluted

4. Sahyog Portal Concerns

- Enables police nationwide to issue takedown requests
- Seen as creating a **centralised censorship mechanism**
- Raises concerns of limited parliamentary oversight

5. Lack of Transparency

- No public data on:
 - Volume of takedown orders
 - Justification for content removal
- Creates opacity in digital governance

6. Platform Compliance Bias

- Intermediaries often:
 - Prefer compliance over legal challenge
 - Avoid court disputes
- Leads to **over-removal of content (over-censorship)**

What are the Constitutional and Legal Provisions for Censorship in India?

Constitutional Framework

- Article 19(2): Allows **reasonable restrictions** on free speech in cases of:
 - Security of the State
 - Public order
 - Decency and morality
 - Friendly relations with foreign states
 - Contempt of court
 - Incitement to offence

Digital Regulation

- IT Act, 2000 governs online content regulation
- IT Rules, 2021 regulate:
 - Intermediaries
 - OTT platforms
 - Code of Ethics

- 2026 amendment targets:
 - **AI-generated deepfakes and synthetic content (3-hour removal rule)**

Other Key Laws

- **Bharatiya Nyaya Sanhita (BNS), 2023 (Section 152)** → Punishes acts threatening unity and integrity
- **CBFC under Cinematograph Act, 1952** → Film certification and pre-release censorship
- **Press and Registration of Books Act, 1867** → Print regulation
- **Official Secrets Act, 1923** → National security-related restrictions
- **Cable TV Act, 1995** → Broadcast content regulation
- **Contempt of Courts Act, 1971** → Protects judicial integrity

Need vs Challenges of Censorship

National Security

- **Need:** Prevent secessionism, misinformation, and threats to sovereignty
- **Challenge:** Broad interpretation may suppress dissent

Social Harmony

- **Need:** Prevent communal violence and inflammatory content
- **Challenge:** Risk of “heckler’s veto” and suppression of free expression

Protection of Minors

- **Need:** Shield children from harmful digital content
- **Challenge:** VPNs and internet access make enforcement difficult

Information Integrity

- **Need:** Prevent deepfakes and fake news
- **Challenge:** Technology evolves faster than regulation

Public Decency

- **Need:** Maintain societal moral standards
- **Challenge:** Subjectivity in defining obscenity

Judicial Integrity

- **Need:** Prevent trial by media
- **Challenge:** Over-censorship can weaken transparency

What Steps are Needed to Balance Censorship and Free Speech?

1. Proportionality Test Compliance

- Based on **K.S. Puttaswamy (2017)**:
 - Legality
 - Legitimate aim
 - Proportionality
 - Procedural safeguards

2. Clear Legal Definitions

- Avoid vague terms like:
 - "Fake news"
 - "Objectionable content"
- Prevents **chilling effect on speech**

3. Judicial Oversight

- Strengthen review of **Section 69A blocking orders**
- Ensure transparency as upheld in **Anuradha Bhasin case (2020)**

4. Independent Regulatory Mechanism

- Creation of:
 - Digital rights ombudsman
 - Multi-stakeholder oversight body

5. Transparency in Takedowns

- Mandatory publication of:
 - Removal requests
 - Legal basis
 - Appeal outcomes

6. Strong Grievance Redressal

- Effective 3-tier appeal system
- Written justification for content removal

7. Protect Safe Harbour

- Section 79 safeguards must remain intact
- Liability only on:
 - Court orders
 - Valid government directions

Conclusion

India's digital governance framework is evolving rapidly, but increasing censorship powers must be balanced with **constitutional safeguards, judicial oversight, and transparency mechanisms** to protect democratic free speech in the digital age.

Rights of Acid Attack Victims & The RPwD Act



Why in News?

The Supreme Court of India has extended the scope of the **Rights of Persons with Disabilities (RPwD) Act, 2016**, declaring that individuals who survive **forced acid consumption** must be legally classified as "acid attack victims."

What Did the Supreme Court Rule Regarding the Acid Attack Victims?

- **Widening the Definition:** The Court formally brought individuals who are forced to consume or are forcibly administered acid under the protective umbrella of the law. Previously, the RPwD Act, 2016, applied strictly to individuals facing disfigurement from acid thrown *at* them.
- **Accounting for Internal Harm:** The judgment made it clear that survivors dealing with severe internal organ damage from acid exposure are fully eligible for state protection and disability benefits, even in the absence of external or visible scarring.
- **Retroactive Protection:** To secure justice for past survivors, the Supreme Court ruled that this broader interpretation will apply retrospectively from **2016** (the year the RPwD Act was passed). This allows victims of forced ingestion from previous years to claim the financial relief, disability benefits, and official disability identity cards they were historically denied.
- **Immediate Executive Action via Article 142:** To bypass legislative delays, the Supreme Court exercised its extraordinary plenary powers under **Article 142 of the Constitution**. It introduced this change as a "deemed amendment," ensuring it functions

with the full force of law until the Union Government updates the official Schedule of the RPwD Act, 2016.

Observations on Accountability and Deterrence

- **Offender-Funded Restitution:** The Court proposed seizing and attaching the personal assets of the perpetrators (including their legal shares in Joint Hindu Family holdings) to fund comprehensive survivor compensation.
- **Shifting the Onus of Proof:** It suggested turning the burden of proof upside down, placing it squarely on the accused rather than the victim.
- **Targeting Illicit Retailers:** The ruling recommended booking shopkeepers who participate in the unverified or illegal sale of corrosive chemicals as co-accused in these assault cases.

Rights of Persons with Disabilities (RPwD) Act, 2016

- **Historical Context:** Enacted to fulfill India's international commitments under the **United Nations Convention on the Rights of Persons with Disabilities (UNCRPD)**, ratified by the nation in 2007. It overturned the outdated 1995 legislation, transitioning India's legal framework from a charitable, welfare-driven model to an assertive, rights-based system.
- **Expanded Scope:** The law increased the registry of recognized disabilities from 7 to **21**. Survivors of acid attacks are accounted for under the **physical/locomotor disability** grouping.
- **Broader Conditions Recognized:** The Act covers conditions such as Autism Spectrum Disorder, Cerebral Palsy, Dwarfism, Hemophilia, Multiple Sclerosis, Parkinson's disease, Sickle Cell disease, and Specific Learning Disabilities, while giving the Central Government the authority to incorporate new conditions.

Key Rights and Entitlements

- **Guaranteed Education:** Every youth with a benchmark disability between the ages of **6 and 18 years** has an absolute right to free schooling (broadening the standard RTE Act, 2009, framework which covers ages 6 to 14).

- **Public Employment Quotas:** Job reservations in government departments for individuals with benchmark disabilities were raised from 3% to **4%**.
- **Higher Education Access:** The law enforces a mandatory **5%** seat reservation for disabled applicants across state-run and state-funded institutions of higher learning.
- **Universal Accessibility:** It mandates that public infrastructure, transport networks, and digital communication systems be upgraded to barrier-free, accessible standards within an explicit timeline.
- **Legal Agency and Limited Guardianship:** It moves away from *plenary guardianship* (where a guardian holds absolute decision-making power) to a "**limited guardianship**" model. This setup requires joint decision-making, ensuring the individual's personal choices and autonomy are preserved.
- **Oversight Bodies:** Mandates the creation of Central and State Advisory Boards alongside Chief Commissioners for PwDs to monitor ground-level compliance.

What are the Laws Regarding Acid Attacks in India?

- Acid violence is classified as a highly calculated assault where highly corrosive chemicals—such as sulphuric, hydrochloric, or nitric acid—are deployed to inflict extreme physiological devastation and trauma.
- The compounding costs of long-term reconstructive surgeries frequently drive families into debt and push survivors out of the mainstream workforce.

Law Commission of India (226th Report, 2009):

Identified acid violence as a specialized offense causing irreversible bodily and mental trauma. The report emphasized its deeply gendered characteristics and called for independent penal sentences and state-backed rehabilitation programs.

1. Prevalence of Acid Attack in India

- **Statistical Insights:** The National Crime Records Bureau (NCRB) documented 207 incidents in 2023, reflecting a rise from 176 occurrences in 2021.
- **The Reality of Underreporting:** While state data captures instances in the hundreds, the

Acid Survivors Trust International (ASTI) estimates that closer to 1,000 assaults occur across India every year, masked by social isolation and fear of reprisal.

- **Geographic Trends:** West Bengal, Uttar Pradesh, and Gujarat registered the highest case counts in 2023. These numbers frequently correlate with industrial centers (such as rubber or textile clusters) where commercial-grade acid is easily obtained despite existing legal bans.

2. Legal Provisions for Acid Attack Survivors

Legal Statute / Scheme	Key Provision & Protection
Bharatiya Nyaya Sanhita (BNS), 2023: Section 124	Intentionally inflicting grievous injury using acid (via throwing or administration) is a cognizable and non-bailable crime. Convictions carry a minimum 10-year prison sentence (extendable to life) alongside mandatory financial penalties.
Bharatiya Nagrik Suraksha Sanhita (BNSS), 2023: Section 397	Legally obligates all medical facilities (both public and private) to offer immediate, cost-free emergency first-aid to survivors and instantly notify law enforcement.
Bharatiya Nagrik Suraksha Sanhita (BNSS), 2023: Section 396	Establishes the institutional Victim Compensation Scheme to distribute rehabilitation funds to survivors or their dependent family members.
NALSA Acid Attack Victim Legal Services Scheme, 2016	Operating under the Legal Services Authorities Act, 1987, this framework guarantees priority legal representation, administrative backing, and counseling for survivors and their families.
Financial Assistance Networks	The <i>Compensation Scheme for Women Victims/Survivors of Sexual Assault and Other Crimes (2018)</i> standardizes state-level relief payouts. Survivors are also entitled to an additional lump-sum grant of Rs 1 lakh through the Prime Minister's National Relief Fund over and above standard local awards.

3. Judicial Landmarks and Reform Committees

- **Laxmi vs Union of India (2014):** The Supreme Court introduced tight retail regulations, prohibiting over-the-counter sales to minors, requiring verified photo identification for buyers, and ordering retailers to register all liquid inventories with local magistrates.
- **Parivartan Kendra vs Union of India (2015):** The apex court expressed concern over lax local enforcement of retail rules, ordering state governments to guarantee rapid compensation delivery and hold violating jurisdictions accountable.
- **Justice JS Verma Committee (2013):** Created in the wake of the Nirbhaya tragedy to assess

systemic failures in female safety, this panel labeled acid attacks as an aggressive form of gender-targeted terror. The committee advocated for severe mandatory sentencing and a national medical fund, laying the groundwork for subsequent statutory modifications.

Challenges in Providing Justice to Acid Attack Survivors

- **Compromised Initial Investigations:** Delayed filing of First Information Reports (FIRs), inadequate preservation of chemical crime scenes, overlooked internal clinical data, and a failure to map the supply chain of the weapon lead to weak prosecutions and high acquittal rates.
- **Systemic Judicial Logjams:** Trials regularly grind on for years. Out of 703 pending cases tracked by the NCRB in 2023, only 16 resulted in convictions while 27 led to acquittals, underscoring a stalled justice delivery mechanism.
- **Victim Blaming and Social Shaming:** Survivors face highly insensitive interrogations, severe public alienation, and intimidation from their communities, which systematically deters families from pursuing long-term legal battles.
- **Lax Retail Enforcement:** Despite high-profile judicial restrictions, industrial-grade acids remain readily accessible on the open market, particularly in manufacturing districts, giving abusers an easy tool for violence.
- **Coerced Out-of-Court Settlements:** Offenders frequently exploit structural imbalances to force survivors into informal financial deals, allowing attackers to evade criminal records.
- **Delayed Recovery Packages:** Administrative delays in disbursing financial aid and clearing multi-stage reconstructive medical costs leave survivors bearing an immense economic and psychological load.

What Steps are Necessary to Curb Acid Attack and Support Rehabilitation?

- **Aggressive Retail Policing:** India must implement strict criminal penalties for

unregulated chemical sales and shut down non-compliant stores, following the example of Bangladesh, where robust retail monitoring slashed attacks from 494 in 2002 to just 13 in 2024.

- **Sensitized Fast-Track Trials:** Set up specialized, time-bound courts to handle these cases, while running mandatory gender and disability sensitization courses for law enforcement and magistrates to end institutional bias.
- **Lifelong Rehabilitation Models:** Fully operationalize the core suggestions of the Justice J.S. Verma Committee by establishing a dedicated national trust fund to guarantee permanent medical, psychiatric, and livelihood retraining support for survivors.
- **Targeted Cultural Campaigns:** Execute large-scale public communication drives to actively break down the patriarchal entitlement and toxic revenge mindsets that drive these gender-targeted assaults.

The Constitutional Challenge of "Bulldozer Justice"



Why in News?

The rise of "bulldozer justice" as a quick tool for punishment shows that some parts of the public want instant revenge. However, this practice raises big worries about breaking the rule of law and destroying the balance of power between the government and courts.

What is "Bulldozer Justice"?

- **Definition:** This is a term used when government officials use heavy machines to tear down the homes, shops, or buildings of

people accused of major crimes like rioting or violence.

- **The Official Reason:** Government officials usually say these actions are just regular clean-up drives against illegal buildings. However, because the demolitions happen right after a crime takes place, most people see them as instant punishment by the government.

Why is it Happening?

- **Extreme Speed:** Buildings are often torn down within **24 to 48 hours** of a crime. This happens long before the police can finish their investigation or a court can start a trial.
- **Bypassing the Courts:** Local police and city officials make the decision on their own. This stops the courts from doing their job of deciding if someone is actually guilty or innocent.
- **Delayed Justice:** People demand instant results because India's formal legal system is heavily overloaded with more than **5.5 crore** pending court cases.

Big Worries and Constitutional Problems

1. Breaking Due Process

This practice completely flips the legal order of justice:

- **The Right Way:** Allegation → Investigation → Court Trial → Punishment
- **The Bulldozer Way:** Allegation → Instant Punishment (Skipping the Court entirely)

2. Punishing Innocent Families

Indian criminal law states that only the person who committed the crime should be punished. Tearing down a family home and making children or elderly parents homeless is a form of collective punishment. This goes against global human rights rules like the **1949 Geneva Convention**.

3. Harming Fundamental Rights

- **Article 21 (Right to Life and Shelter):** The Supreme Court has ruled that the right to life includes having a safe place to live. Sudden evictions without giving people another place to stay break this vital right.
- **Article 300A (Right to Property):** The government cannot take away or destroy a citizen's property without a fair, lawful, and proper procedure.

- **Article 14 (Right to Equality):** Human rights groups point out that these drives often target specific communities or critics, while similar illegal buildings nearby are completely ignored.

4. Irreversible Damage

If an innocent person is sent to jail, a court can later set them free and clear their name. But when a family home or a small shop is flattened, the loss of shelter and livelihood cannot be easily fixed.

Important Court Decisions

- **Olga Tellis Case (1985):** The Supreme Court ruled that poor people living on pavements or in slums cannot be forced out without a fair process. It stated that destroying a person's shelter destroys their choice to earn a living.
- **Chameli Singh Case (1996):** The Court stated that the right to shelter does not mean just living like an animal. It means having proper space, safe surroundings, and basic facilities.
- **Sudama Singh Case (2010):** The Delhi High Court ruled that before forcing anyone out, the state must do a proper survey and provide a clear plan to settle them elsewhere.

New Supreme Court Guidelines

To stop these arbitrary actions, the Supreme Court set up strict rules across India:

- **No Demolition for Crimes:** Being accused or even convicted of a crime is not a legal reason to tear down a house.
- **Mandatory 15-Day Notice:** City officials must send a formal warning by registered post and paste it on the building at least **15 days** before taking any action.
- **Right to be Heard:** The owner must be given a personal hearing to explain their side. Officials must write down exactly why demolition is the only option left.
- **Personal Accountability:** The entire demolition must be recorded on video. Any official who breaks these rules will face court charges and must pay for the damages out of their own salary.

Exceptions: These protective rules do not apply to clearly illegal structures built on public spaces like roads, railway tracks, footpaths, or riverbeds.

Way Forward

- **Follow the Rules:** The 15-day notice period must be strictly followed to prevent quick, angry actions by local officials.
- **Emergency Court Benches:** High Courts should set up special emergency benches to quickly hear complaints from people whose houses are under threat of demolition.
- **Separate Crime from Buildings:** The law must clearly separate criminal cases from city zoning issues. A criminal charge should not be used as an excuse to clear a building without a proper land survey.
- **Independent Tribunals:** Set up independent local boards to review all demolition orders first, so that absolute power does not stay entirely with city officials.

National Panchayat Awards 2025 Announced



Why in News?

- The Ministry of Panchayati Raj recently declared the **National Panchayat Awards 2025**.
- A total of **42 Panchayats** from across the nation were chosen for their achievements under two primary divisions: the **Deen Dayal Upadhyay Panchayat Satat Vikas Puraskar** and the **Nanaji Deshmukh Sarvottam Panchayat Satat Vikas Puraskar**.
- In the state-wise tally, Karnataka topped the list with 6 winning Panchayats, while Andhra Pradesh and Odisha followed closely with 5 awards each.

Breakdown of the Award Categories

1. Deen Dayal Upadhyay Panchayat Satat Vikas Puraskar

- **Core Objective:** This division honors exceptional Gram Panchayats for their work across **9 themes** of the Localization of Sustainable Development Goals (LSDGs). These themes include creating poverty-free livelihoods, improving health services, securing water sufficiency, upgrading sanitation, ensuring women-friendly governance, and delivering social justice.
- **Selection Metric:** Awards are given out for Rank 1, Rank 2, and Rank 3 within each specific LSDG theme. The evaluation process is tied directly to the performance figures on the Panchayat Advancement Index (PAI) 2.0.
- **Tally:** A total of 34 Gram Panchayats across 17 States and Union Territories were chosen under this tier.

2. Nanaji Deshmukh Sarvottam Panchayat Satat Vikas Puraskar

- **Core Objective:** This category celebrates overall top performance across multiple local governance levels, spanning the district, block, and gram tiers.
- **Tally:** Eight Panchayats secured honors under this track, featuring three district Panchayats, two block Panchayats, and three Gram Panchayats.

Profile of the National Panchayat Awards

1. Framework and Incentives

The Ministry of Panchayati Raj presents these annual awards to appreciate and encourage local bodies driving inclusive, participatory, and sustainable rural development. To support further grassroots growth, winning Panchayats receive substantial financial incentives ranging from **Rs 50 lakh to Rs 5 crore**, depending on their tier and award division.

2. Policy Implementation

The program runs under the Incentivization of Panchayats (IoP) system, which is a key central part of the broader Centrally Sponsored Scheme of **Rashtriya Gram Swaraj Abhiyan (RGSA)**.

3. Recent Structural Revamp

The entire evaluation framework was restructured to align tightly with the 9 core themes of the Localization of Sustainable Development Goals

(LSDGs). This change makes the grading process much more holistic, transparent, and driven by hard data.

4. Strategic Value

The awards reinforce the baseline capacity of Panchayats to meet global sustainability targets. By turning national policy priorities into real, grassroots solutions, these local bodies play a vital role in building toward the vision of *Viksit Bharat @ 2047*.

India's 22nd State: Sikkim's Path to Statehood



Why in News?

- The Vice President attended the event marking **Sikkim's 51st Statehood Day** on 16 May 2026 in Gangtok.
- The **36th Constitutional Amendment Act of 1975** officially made Sikkim the **22nd state of India** on 16 May 1975. This change took place following a public vote in April 1975, where more than **97% of the voters** chose to end the monarchy and join the Indian Union.
- This full statehood status replaced the short-lived arrangement set up by the **35th Constitutional Amendment Act of 1974**, which had briefly labeled Sikkim as an **"Associate State."**

Historical Timeline of Sikkim

- **The Rule of the Chogyals:** Before becoming an Indian state, Sikkim was an independent kingdom in the Himalayas. It was ruled by the hereditary **Namgyal dynasty** from 1642 up until 1975.
- **The Indian Protectorate Phase (1947–1974):** After India won independence from British rule, the two sides signed the **Indo-Sikkim Treaty of 1950**. This agreement turned Sikkim into an Indian **"protectorate."** Under this status, the kingdom managed its own

local internal affairs, but handed control of its defense, foreign policy, and communications over to the Indian government.

Special Rules Under Article 371F

To preserve the distinct heritage and social mix of the region during its merger, the Indian Constitution added **Article 371F**. Its main features include:

- **Keeping Existing Laws:** It protects local laws and customs that existed before 1975, ensuring they stay valid unless the state legislature decides to change them.
- **Protecting Land Rights:** It shields local communities by putting restrictions on land ownership, meaning only native residents of Sikkim can buy and own land there.
- **Special Powers for the Governor:** It gives the Governor specific duties and powers to maintain peace and ensure all social groups in the state receive fair treatment and growth opportunities.

Structural Strains in Indian Federalism



Why in News?

Indian federalism is facing growing strain due to shifting demographics, altered fiscal devolution models, and increasing centralization. These rising regional disparities require the Center to adopt consensus-building mechanisms and democratic restraint to preserve cooperative federalism.

Key Structural Challenges to India's Federal Matrix

1. Demographic Shift and the Delimitation Crisis

The upcoming readjustment of political representation threatens to penalize states that have

successfully implemented development and population control programs.

- **The 131st Constitutional Amendment Bill (2026):** Introduced to lay the groundwork for a fresh post-2026 delimitation exercise, this bill proposes increasing the Lok Sabha's maximum strength to 850 seats (815 for states and 35 for union territories).
- **The "Democratic Deficit":** Relying strictly on a population-proportionate model exposes a sharp North-South fault line. Southern states have successfully brought their Total Fertility Rate (TFR) down to or below replacement levels ($TFR \leq 2.1$), while populations in the northern Hindi heartland continue to grow.
- **Political Marginalization Risks:** Population-based seat restructuring would shift overwhelming legislative power to northern states like Uttar Pradesh and Bihar, heavily diluting the institutional voice of the Southern and Western regions in Parliament.

2. Fiscal Asymmetry and Shrinking of the Divisible Pool

The balance between revenue generation by industrialized regions and centralized fiscal redistribution has created growing regional friction.

- **Surcharge and Cess Leakage:** The Union government increasingly relies on cesses and surcharges to collect revenue. Because these levies fall completely outside the divisible tax pool under Article 270, they now absorb nearly 20% of Gross Tax Revenue (GTR). Consequently, while the statutory vertical devolution to states is set at 41%, the actual share of tax revenue reaching state budgets is significantly lower.
- **The 16th Finance Commission Formula (2026–31):** The newly introduced formula adds a 10% weight for a state's 'Contribution to GDP', replacing the older tax effort metric to reward industrial output. However, the Commission simultaneously lowered the

weights for redistributive metrics like Income Distance (from 45% to 42.5%) and Area (from 15% to 10%). This has created a dual grievance: poorer states argue it hurts fiscal equity, while contributor states feel they are unfairly subsidizing others.

- **Conditional Borrowing Caps:** Tight limits on off-budget borrowings, combined with linking additional borrowing space to mandatory structural changes (like power sector privatization), are viewed by state governments as a direct attack on their constitutional fiscal autonomy.

3. Legislative Unilateralism and Concurrent List Encroachment

- States argue that the Center regularly legislates on Concurrent List subjects without holding proper institutional dialogue.
- The sweeping replacement of the Indian Penal Code of 1860 with the **Bharatiya Nyaya Sanhita of 2023**, alongside major overhauls of agricultural frameworks and labor codes, are frequently cited as instances where state assemblies and regional stakeholders were sidelined.
- This friction is worsened by the chronic underutilization of the **Inter-State Council (Article 263)**, which prevents pre-legislative consensus-building and forces states to rely on the Supreme Court to resolve disputes after laws are passed.

4. Gubernatorial Friction and Executive Conflict

- **Weaponization of Article 200:** The discretionary powers of the Governor have turned into a primary political flashpoint. In several states, Governors have indefinitely withheld assent to bills passed by elected legislatures, effectively creating a pocket veto that paralyzes local policy agendas.
- **Central Agency Deployments:** The unilateral deployment of central investigative bodies (such as the CBI and ED) and Central Armed Police Forces (CAPF) inside state lines—often without the consent of the elected state administration—erodes mutual trust and undermines local law enforcement autonomy.

5. Centralized Narratives vs. Regional Innovation

Uniform policy drives like 'One Nation, One Market' and the proposed 'One Nation, One Election' are perceived by states as measures that push a unitary governance model over a federal one.

- Historically, states have served as testing grounds for policy innovations (such as Tamil Nadu's Mid-Day Meal scheme, which was later scaled nationally).
- Centralized policy mandates restrict states from tailoring initiatives to their unique socio-economic realities.
- For instance, several opposition-led states initially resisted joining the centrally designed PM SHRI Schools scheme, arguing it undermined local control over education.

6. Horizontal Frictions and Linguistic Identity

- **Resource and Border Clashes:** Federal tensions also manifest as state-vs-state conflicts. Deeply entrenched inter-state water disputes (such as the Cauvery river dispute between Karnataka and Tamil Nadu) and sudden border clashes (like the Assam-Mizoram boundary friction) hamper regional economic cooperation.
- **The Language Debate:** Linguistic identity remains highly sensitive. Periodic discussions regarding making Hindi the primary language for official Union communications or mandating its integration into schools via the National Education Policy 2020 face sharp political blowback in Southern and Northeastern states.

7. Dilution of the Rajya Sabha's Role

The Council of States was originally designed to protect regional interests from central overreach. However, the removal of the local domicile requirement for Rajya Sabha MPs in 2003 has altered its character. The Upper House now frequently functions as a secondary political chamber for national party leaders rather than a dedicated forum for protecting state-specific concerns, causing voting patterns to align strictly with party lines rather than regional needs.

Understanding India's Constitutional Federal Framework

- **Quasi-Federal Architecture:** The Indian Constitution establishes a governance model

that splits political power between the central national government and regional state units. It is explicitly described as "quasi-federal" because it fuses a strong central structure with autonomous states, operating through cycles of **Cooperative Federalism** (collaborative action) and **Bargaining Federalism** (continuous negotiation over resources and policy).

- **The Union Mandate:** The word 'Federation' is deliberately omitted from the text of the Constitution. Instead, **Article 1(1)** states that "*India, that is Bharat, shall be a Union of States.*" Dr. B.R. Ambedkar emphasized that this layout means the Indian setup is not the result of a voluntary agreement among independent states, and no state possesses the legal right to secede. It is an indestructible Union made up of destructible states.
- **Core Federal Pillars:** Balance is maintained through a written and rigid Constitution, constitutional supremacy, an independent judiciary with judicial review powers, a bicameral parliament, and a clear **Division of Powers via the Seventh Schedule**.
- **The Unitary Bias:** To safeguard national integrity during crises, the Constitution leans toward the Center. Key unitary features include vesting residuary powers in the Union (**Article 248**), enforcing a single citizenship model, allowing Parliament to alter state borders without local consent, maintaining All India Services (**Article 312**), and executing overriding Emergency Provisions (**Article 356**).

Landmark Supreme Court Judgments

- **State of West Bengal v. Union of India (1962):** The Supreme Court ruled that legislative and executive powers are balanced to favor the Union, ensuring that national unity, centralized economic planning, and development take precedence.
- **S.R. Bommai v. Union of India (1994):** The Court declared federalism an essential part of

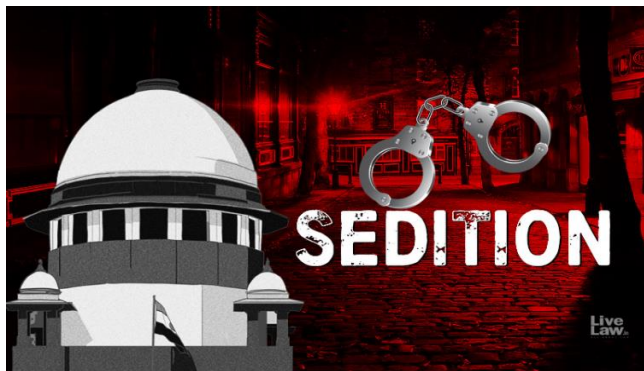
the Constitution's "**Basic Structure**," introducing strict guidelines that severely curtailed the arbitrary misuse of Article 356 (President's Rule) to dismiss state governments.

- **State of Punjab v. Principal Secretary to the Governor (2023):** The Supreme Court explicitly ruled that Governors cannot use a pocket veto to sit indefinitely on bills passed by elected assemblies, as doing so directly subverts democratic governance.

Measures Needed to Strengthen Federal Ties

- **Revitalize the Inter-State Council (ISC):** Transform the ISC into a mandatory, highly active forum for continuous Center-State consultation and pre-legislative review before laws are introduced in Parliament.
- **Rebalance Fiscal Devolution:** Implement clear caps on the collection of cesses and surcharges to protect the divisible tax pool, ensure fair baseline resource distribution, and strengthen State Finance Commissions through matching central grants.
- **Codify the Governor's Discretionary Role:** Explicitly define the specific constitutional boundaries under Article 163 where a Governor can act independently. Policymakers should implement the long-standing recommendations of the **Sarkaria Commission (1988)** and the **Punchhi Commission (2010)**, making it mandatory to consult a state's Chief Minister before appointing a Governor and selecting eminent, non-partisan individuals from outside the state.
- **Adopt a Hybrid Representation Formula:** To resolve the post-2026 delimitation deadlock, seat allocation must shift away from a strict population-only model. Parliament should adopt a weighted calculation that factors in demographic performance and human development achievements, ensuring states that successfully stabilized their population growth are not politically marginalized.

The Judicial Status and Evolution of Sedition Law in India



Why in News?

- The Supreme Court of India, in its **May 2026** clarification in *Kamran v. State of Madhya Pradesh*, ruled that lower courts are permitted to proceed with trials and appeals under Section 124A (Sedition) of the Indian Penal Code (IPC), on the condition that the accused persons explicitly consent to the proceedings.
- This decision has renewed the legal debate over the colonial-era law, even as its broader constitutional validity remains under challenge before a larger bench of the Supreme Court.

Historical and Judicial Background of Section 124A

- **Colonial Origin:** Section 124A was originally drafted by Thomas Babington Macaulay in 1837 but was omitted when the IPC was enacted in 1860. It was later introduced in 1890 via Special Act XVII to suppress nationalist dissent against the British Raj.
- **Targeting Freedom Fighters:** The provision was extensively weaponized against prominent independence leaders, including Bal Gangadhar Tilak and Mahatma Gandhi. Gandhi famously termed Section 124A "*the prince among the political sections of the Indian Penal Code designed to suppress the liberty of the citizen.*"

Key Judicial Precedents:

- **Romesh Thapar v. State of Madras (1950):** The Supreme Court held that criticizing the government cannot justify restrictions on free speech unless it directly threatens state security or aims to overthrow it. Following

this, the High Courts of Punjab & Haryana (1951) and Allahabad (1959) declared Section 124A unconstitutional.

- **Kedar Nath Singh v. State of Bihar (1962):** A Constitution Bench upheld the validity of Section 124A but severely restricted its scope. The Court ruled that strong criticism of the government is not sedition unless accompanied by an **incitement to violence** or the **intention to create public disorder**.
- **Balwant Singh v. State of Punjab (1995):** The Court clarified that casually raising anti-national slogans a few times without public response or violence does not amount to sedition.
- **The S.G. Vombatkere Freeze (2022):** In *S.G. Vombatkere v. Union of India*, the Supreme Court placed Section 124A in complete abeyance. Observing that the law was designed for a colonial regime, the Court ordered a halt to all fresh FIRs, ongoing investigations, and pending trials across the country under this section.

The Transition to the Bharatiya Nyaya Sanhita (BNS), 2023

With the repeal of the IPC, the framework governing offenses against the state has transitioned into the **Bharatiya Nyaya Sanhita (BNS), 2023**:

- **Omission of "Sedition":** The term "sedition" (*Rajdroh*) has been dropped from the statutory text.
- **Section 152 of the BNS:** This provision penalizes acts that endanger the "*sovereignty, unity, and integrity of India.*"
- **Shift from Government to State:** While the old Section 124A penalized disaffection toward the *Government*, Section 152 of the BNS focuses on threats to the *State* itself—specifically criminalizing secessionist activities, armed rebellion, or subversive acts, carrying punishments ranging from 7 years to life imprisonment.

Recommendations of the 22nd Law Commission

The 22nd Law Commission strongly recommended retaining a provision for sedition to safeguard internal security against extremism and separatism. However, it proposed critical amendments to curb widespread misuse:

- **Statutory Safeguards:** Formally incorporating the *Kedar Nath* guidance by explicitly adding the phrase "tendency to incite violence or cause public disorder."
- **Procedural Filter:** Mandating that no FIR be registered under this provision without a preliminary inquiry by an Inspector-level officer and prior permission from the government.
- **Alternative Risk:** Warning that completely scrapping the provision would force the state to prosecute speech-related offenses under harsher counter-terror laws like the **Unlawful Activities (Prevention) Act (UAPA), 1967**.

Concerns Raised by the Resumption of Section 124A Trials

- **Compromised Consent:** Critics argue that undertrials facing prolonged imprisonment may "consent" to sedition proceedings out of desperation for bail or legal closure, raising doubts about whether such consent is truly voluntary.
- **The Co-Accused Dilemma:** The latest order does not clarify procedural steps when one accused consents to proceed with a trial while co-accused individuals refuse, potentially creating fragmented trials and conflicting judgments.
- **Chilling Effect on Dissent:** Civil liberty advocates emphasize that the broad application of the law creates a chilling effect on legitimate democratic speech, investigative journalism, and political dissent.

Way Forward

- **Convene the Seven-Judge Bench:** The Supreme Court should expedite the seven-judge Constitution Bench to definitively rule on the validity of Section 124A, evaluating its compatibility with the modern proportionality standards under Article 14 and Article 21.
- **Establish a Single Standard for Sovereignty:** The judiciary must formulate a unified standard that separates protected political speech from actual security threats, removing the operational reliance on the "consent" of vulnerable undertrials.

- **Accountability for Administrative Misuse:** Introduce mandatory disciplinary action and legal penalties against investigating officers if independent inquiries reveal that security-related charges were weaponized to suppress peaceful journalism or activism.
- **Define Ambiguous Terms in the BNS:** Broad expressions in Section 152 of the BNS, such as "subversive activities" and "feelings of separatist activities," must be narrowly and exhaustively defined to prevent arbitrary interpretation by local law enforcement agencies.

EDITORIALS

Crux of The Hindu & Indian Express

Indian Polity & Governance

Mamata Banerjee says she won't resign: What happens next, what the law says on forming a new govt after elections?



Context :

- On 5 May 2026, Mamata Banerjee refused to resign even after clear election results.
- Results show:
 - BJP → **207 seats (clear majority)**
 - TMC → **80 seats**
- She has:
 - Alleged **rigging and bias**
 - Claimed a **“moral victory”**
 - Refused to meet the Governor to submit resignation

- At the same time:
 - Term of the 17th West Bengal Legislative Assembly ends on **7 May 2026**

This creates a **constitutional situation** where:

- The sitting CM has **lost electoral mandate**
- But is **refusing to step down**

Core Constitutional Principle :

- The whole system is based on one rule:
- **“Government must have majority support in the Legislative Assembly.”**

This comes from:

Article 164(2) – Collective Responsibility

- Council of Ministers is collectively responsible to the Assembly

Simple meaning:

- If majority is lost → government cannot continue
- If Assembly ends → responsibility ends → legitimacy ends

So:

- After **7 May 2026**, the current government loses its **constitutional base**

Key Constitutional Provisions:

1. Article 164(1) – Pleasure of the Governor

- CM is appointed by Governor
- Ministers hold office during Governor’s pleasure

But:

- This is **not personal or arbitrary**
- It depends on **majority in Assembly**

So:

- When CM loses majority → Governor’s “pleasure” ends automatically in constitutional sense

2. Article 164(2) – Collective Responsibility

- Ministers must enjoy confidence of Assembly

Important implication:

- No Assembly → no accountability → no valid government

Thus:

- After Assembly term expires → CM cannot continue as a full authority government

3. Article 163 – Governor’s Discretion

- Normally Governor follows CM’s advice
- But in crisis situations → can act independently

Such situations include:

- Loss of majority
- Refusal to resign
- Political breakdown

What Happens If CM Refuses to Resign (Step-by-Step)

Step 1: Governor Invites Majority Party

- Governor will invite BJP (majority party) leader to form government

This is a **constitutional duty**, not a choice

Step 2: Floor Test (If Required)

- Based on S.R. Bommai Case

Key principle:

- Majority must be proven **on the floor of the House**

If CM cannot prove majority → must resign

Step 3: Dismissal by Governor

- If CM still refuses:
 - Governor can dismiss CM under Article 164(1)

Reason:

- CM no longer has majority support

Step 4: Caretaker Government (Normal Practice)

- Usually outgoing CM:
 - stays as **caretaker CM**
 - handles routine work only

But if CM refuses:

- Governor can directly proceed with:
 - Swearing-in of new CM

Step 5: President’s Rule (Extreme Situation)

- Under Article 356

Used only when:

- Constitutional machinery fails

Example:

- CM refuses to step down

- No stable government forms

Effect:

- State comes under control of President (via Governor)

Important Judicial Precedents

Case	Year	Outcome
Kalyan Singh (UP)	1998	Governor Romesh Bhandari dismissed Kalyan Singh and swore in Jagdambika Pal. The High Court later reinstated Singh, insisting that majority must be proven only on the floor of the House .
S.R. Bommai Case	1994	The Supreme Court ruled that the only way to determine if a government has lost its majority is through a Floor Test , not the Governor's subjective opinion.
Nabam Rebia Case	2016	The SC clarified that the Governor cannot exercise discretion to bypass the Council of Ministers unless they have lost the confidence of the House.

What Happens After 7 May 2026?

- Assembly term ends
- Old Assembly ceases

Result:

- CM has **no House to be responsible to**
- Government becomes **constitutionally untenable**

So even if CM refuses:

- Government **cannot legally continue in full capacity**

Can CM Challenge Election Results?

Yes, legally possible.

Where?

- High Court

On what grounds?

- Rigging
- Election malpractice
- Violation of election law

But important limitation:

- Filing case **does NOT stop formation of new government**

Reason:

- Courts take time
- Governance cannot stop

When can court interfere?

Only if:

- Strong and clear proof
- Serious legal violation

Possible outcomes:

- Re-election in some seats
- Cancellation of specific results

But:

- Entire government formation is **rarely stopped**

Final Understanding :

- Constitution does not say "CM must resign immediately"
- But system ensures CM **cannot continue without majority**

So:

- Refusal to resign = **temporary political act**
- Not a sustainable constitutional position

Final

rule:

"Majority in Assembly decides government — not the CM's willingness to resign."

Cabinet Approves Increase in Supreme Court Judge Strength (2026)



Why in News?

- The **Union Cabinet** chaired by Prime Minister Narendra Modi approved a proposal to increase the number of judges in the **Supreme Court of India**.
- The proposal is to increase the strength of judges from **33 to 37** (excluding the Chief Justice of India).

Key Highlights :

Proposed Increase

- Present strength:
 - **33 judges + Chief Justice of India (CJI)**
 - Total = **34**
- Proposed strength:
 - **37 judges + CJI**
 - Total = **38**

Bill Approved by Cabinet :

Supreme Court (Number of Judges) Amendment Bill, 2026

- The Bill aims to amend:
 - **Supreme Court (Number of Judges) Act, 1956**
- Objective:
 - Increase sanctioned strength of Supreme Court judges by 4.

Constitutional Provisions

Article 124 Provides:

- Establishment of the **Supreme Court of India**
- Parliament has the power to decide the number of judges by law.

Originally:

- **1 Chief Justice of India**
- Maximum **7 other judges**

Article 136 Related to:

- **Special Leave Petition (SLP)**

Meaning:

- Allows people to directly appeal to the Supreme Court in special cases.

Impact:

- Large number of **SLPs** increase the workload of the Supreme Court.

Article 145 Gives power to Supreme Court to make rules regarding:

- Court procedures
- Practice of the court
- Formation of benches

Why Was This Increase Needed?

1. Huge Pendency of Cases

- Supreme Court currently has **80,000+ pending cases** Includes:
 - Constitutional matters
 - Civil cases
 - Criminal appeals
 - Public Interest Litigations (PILs)

2. Faster Delivery of Justice

Government's Objective:

- Reduce delays
- Improve efficiency
- Ensure **speedy justice**

Important Quote:

"Justice delayed is justice denied."

3. Need for More Constitutional Benches

- Important constitutional matters require:
 - Minimum **5-judge bench**

More judges will help:

- Simultaneous hearing of cases
- Faster disposal of matters

- Better functioning of constitutional benches
- #### 4. Low Judge-Population Ratio
- India has around:
 - **21 judges per million population** (including lower judiciary)

Compared to countries like:

- **USA → 100+ judges per million**

Historical Increase in Supreme Court Strength

Year	Amendment / Law	Strength (Excluding CJI)
1950	Constitution came into force	7
1956	Supreme Court (Number of Judges) Act	10
1960	Amendment Act	13
1977	Amendment Act	17
1986	Amendment Act	25
2008	Amendment Act	30
2019	Amendment Act	33
2026	Proposed Amendment Bill	37

Procedure to Increase Judge Strength

Step 1: Proposal by CJI

- Chief Justice of India sends proposal to government citing:
 - Rising pendency
 - Need for more judges

Step 2: Amendment in Parliament

- Parliament passes amendment to:
 - **Supreme Court (Number of Judges) Act, 1956**

Majority Required:

- **Simple Majority**

Step 3: President's Assent

- After Parliament passes the Bill:
 - The President gives approval.

Appointment of New Judges

Under Article 124(2) Appointment made by:

- **President of India**

Process:

1. **Supreme Court Collegium** recommends names
2. Sent to:
 - **Ministry of Law and Justice**
3. Then forwarded to:
 - Prime Minister
4. Finally approved by:
 - President of India

Collegium System consists of:

- Chief Justice of India
- Four senior-most Supreme Court judges

Function:

- Recommends appointment and transfer of judges

Expenditure

- Salary and facilities of new judges and staff will be paid from **Consolidated Fund of India**

Importance / Significance

Increasing judge strength will help in:

- **Faster disposal of cases**
- **Reducing backlog**
- **Better access to justice**
- **Efficient functioning of constitutional benches**
- **Strengthening judicial system**

Appointment of New Chairman for Rajya Sabha Committee on Petitions



Why in News?

Rajya Sabha MP Raghav Chadha was officially appointed as the new Chairman of the **Committee on Petitions** of the Rajya Sabha.

Origin and Historical Composition

- **Evolutionary Context:** The Committee on Petitions stands as one of the oldest committees of the Indian Parliament. It originated from a Council of State resolution moved on **15 September 1921**, which created a *Committee on Public Petitions* with the legal power to collect evidence. The panel received its modern name, the *Committee on Petitions*, in 1933.
- **Membership Scale:** When first formally constituted for the Rajya Sabha in 1952, the panel consisted of a Chairman and just four other members. To handle expanding

workloads, its total membership was increased to **ten members** in 1964, a structural setup that continues today.

Institutional Mandate and Appointment Rules

- **Statutory Status:** It operates as a permanent **Standing Committee** of the Upper House, constituted under **Rule 147** of the *Rules of Procedure and Conduct of Business in the Rajya Sabha*.
- **Nomination Framework:** All members of the panel are nominated directly by the Chairman of the Rajya Sabha, who also selects the Committee Chairman from among those members.
- **Quorum and Tenure:** The official quorum required to hold a meeting is **five members**. The committee is typically reconstituted on an annual basis to refresh its oversight capacity.

Core Functions and Investigative Powers

- **Grievance Examination:** The panel examines formal petitions referred to it by the House, reviews specific systemic complaints, and recommends targeted individual remedies or wider corrective policies.
- **Evidentiary Powers:** To fulfill its oversight duties, the committee holds the power to:
 - Collect written evidence and call for official government papers.
 - Seek formal clarifications or comments from union Ministries and Departments.
 - Examine institutional witnesses and directly hear testimonies from petitioners.
 - Suggest remedial measures to fix administrative grievances and prevent their recurrence.

Submission Format and Admissibility Procedure

- **Strict Documentation Rules:** A valid petition must be submitted in the prescribed format addressed directly to the Rajya Sabha. It must be written in respectful, temperate language, contain a clear statement of the grievance, outline the specific relief requested, and be signed or thumb-impressed by the petitioner.
- **Matters of Public Interest:** Following a major revision of the Rules in 1964, citizens can

submit petitions not only regarding active Bills or pending parliamentary business but also on matters of general public interest, subject to specific constitutional limitations.

- **The Legislative Pipeline:** To present a petition, a Member of Parliament must give advance notice to the Secretary-General. The Rajya Sabha Secretariat checks the document's admissibility, and once the Chairman admits it, the petition is presented to the House after the regular papers are laid on the Table. This presentation occurs without any floor debate, after which the matter is formally referred to the Committee for deep review.

Conferment of the Padma Awards 2026



Why in News?

- The President of India conferred the **Padma Awards for the year 2026** at the Civil Investiture Ceremony-I held at the Rashtrapati Bhavan.
- For 2026, the President approved a total of **131 Padma Awards**, which includes 2 duo cases. The total distribution consists of 5

Padma Vibhushan, 13 Padma Bhushan, and 113 Padma Shri Awards.

Breakdown of the Tiers and Major Winners

1. Padma Vibhushan (5 Recipients)

This is awarded for exceptional and distinguished service and stands as the second-highest civilian honor in India.

Winner	Field	State / Country
Shri Dharmendra Singh Deol (Posthumous)	Art	Maharashtra
Shri K T Thomas	Public Affairs	Kerala
Ms. N Rajam	Art	Uttar Pradesh
Shri P Narayanan	Literature and Education	Kerala
Shri V S Achuthanandhan (Posthumous)	Public Affairs	Kerala

2. Padma Bhushan (13 Recipients)

Conferred for distinguished service of a high order across any field. Prominent figures honored in 2026 include:

- **Art:** Malayalam actor Mammooty (Kerala), playback singer Alka Yagnik (Maharashtra), and lyricist Piyush Pandey (Posthumous, Maharashtra).
- **Public Affairs:** Former Uttarakhand Chief Minister Bhagat Singh Koshyari, Shibu Soren (Posthumous, Jharkhand), and V K Malhotra (Posthumous, Delhi).
- **Trade and Industry:** Veteran banker Uday Kotak (Maharashtra).
- **Sports:** Tennis icon Vijay Amritraj (USA).
- **Medicine:** Dr. Nori Dattatreyyudu (USA) and Shri Kallipatti Ramasamy Palaniswamy (Tamil Nadu).

3. Padma Shri (113 Recipients)

Awarded for distinguished service in any recognized field. Key highlights from the 2026 cohort include:

- **Sports:** Indian men's cricket captain Rohit Sharma, women's hockey player Savita Punia, and women's cricket captain Harmanpreet Kaur Bhullar.
- **Civil Service:** Renowned veteran officer K Vijay Kumar.

Core Institutional and Structural Facts

- **Historical Structuring:** Instituted in 1954, the awards were restructured in 1955 into three distinct, descending tiers of prestige: Padma Vibhushan, Padma Bhushan, and Padma Shri.
- **Constitutional Boundary (Article 18(1)):** Article 18(1) of the Indian Constitution

abolishes all titles and prohibits the State from conferring them on any citizen or non-citizen, providing explicit exceptions only for military and academic distinctions.

- **Judicial Clarifications:**
 - **Balaji Raghavan v. Union of India (1996):** The Supreme Court ruled that National Awards are state recognitions of merit, not personal or hereditary titles, and thus do not violate Article 18. However, they **cannot be used as a prefix or suffix** to the recipient's name.
 - **Indira Jaising v. Supreme Court of India (2017):** The apex court extended this logic to rule that the designation of 'Senior Advocate' is a professional demarcation based on proficiency, rather than a prohibited title under Article 18.
- **Evolution into 'People's Padma':** While open universally to all individuals regardless of race, occupation, rank, or gender (including foreigners, NRIs, and OCIs), policy shifts since 2014 have actively pivoted toward honoring "unsung heroes" at the grassroots level.
- **Government Servants Disqualification:** Government servants (including those working with PSUs), except doctors and scientists, are not eligible for these awards while actively in service.
- **Selection Mechanism:** The Padma Awards Committee is constituted annually by the Prime Minister and is chaired by the Cabinet Secretary. It includes the Home Secretary, Secretary to the President, and 4-6 eminent persons. The committee selects awardees based on lifetime achievement and the principle of **"excellence plus,"** rather than mere long service.
- **Statutory Caps:** The total number of awards is capped at a maximum of **120 per year** (excluding posthumous awards and non-citizen recipients like NRIs, PIOs, and foreigners).
- **Time Progression Constraint:** A higher category Padma award is normally granted

only after at least **5 years** have passed since the previous Padma award.

- **Historical Suspensions:** The conferment of these national honors has been disrupted twice in independent India's history: **1978–79** (under the Morarji Desai-led Janata Party government) and **1993–97** (due to pending constitutional litigation in the *Balaji Raghavan* case).

Assam Assembly Passes Uniform Civil Code (UCC) Bill, 2026



Why in News?

- The Assam Legislative Assembly passed the **Uniform Civil Code (UCC) Assam Bill, 2026**, making it the first state in Northeast India and the third state in the country—following Uttarakhand and Gujarat—to adopt such legislation.
- The enactment aims to establish a uniform civil framework across the state, introducing structural reforms to family and personal laws while balancing constitutional protections for indigenous communities.

Key Provisions of the Assam UCC Bill 2026

- **Ban on Polygamy and Bigamy:** The Bill strictly prohibits the practices of polygamy and bigamy. Violations will invite criminal prosecution and imprisonment of up to 7 years under Section 82 of the *Bharatiya Nyaya Sanhita (BNS), 2023*.
- **Exemption for Tribal Communities:** In line with constitutional safeguards, the Bill explicitly exempts the **Scheduled Tribes (STs)** residing in Assam from its entire ambit, ensuring their unwritten customary laws remain untouched.
- **Mandatory Registration of Live-in Relationships:** It introduces a formal legal framework for live-in relationships, making

their registration mandatory within 1 month. Failure to comply attracts a 3-month jail term or a financial fine. Notably, children born out of these unions are recognized as legally legitimate, and women deserted by their partners possess the right to claim maintenance.

- **Standardization of Marriage and Divorce:** Sets the minimum legal age of marriage at **21 years** for men and **18 years** for women. Marriage and divorce registrations are now compulsory within 60 days. This framework repeals and replaces the *Assam Compulsory Registration of Muslim Marriages and Divorces Act, 2024*.
- **Gender-Equal Inheritance:** The Bill introduces a uniform, gender-equal order of preference for intestate inheritance, ensuring fair distribution among Class-1 heirs (spouse, children, and parents) regardless of religious background.

Understanding the Uniform Civil Code (UCC)

The UCC is a comprehensive legal framework proposing to replace personal laws based on the scriptures and customs of various religious communities in India with a single, standardized set of civil laws governing every citizen. If implemented nationwide, a UCC would apply uniformly to all citizens irrespective of their religion, gender, or sexual orientation in personal matters such as:

- Marriage and Divorce
- Inheritance and Succession
- Adoption and Maintenance
- Alimony and Child Custody

Constitutional and Legal Basis

- **Article 44:** Enshrined in Part IV of the Indian Constitution under the Directive Principles of State Policy (DPSP), Article 44 explicitly states: "*The State shall endeavor to secure for the citizens a uniform civil code throughout the territory of India.*" Because it is a DPSP, it is non-justiciable, meaning it serves as a guiding policy for governance but cannot be legally enforced by the courts.
- **Current Personal Law Framework:** India currently follows a system of differentiated civil guidelines based on community identity:

- Hindus, Sikhs, Jains, and Buddhists are governed by the Hindu Code Bills (including the *Hindu Marriage Act of 1955* and *Hindu Succession Act of 1956*).
- Muslims are governed by the *Muslim Personal Law (Shariat) Application Act of 1937*.
- Christians and Parsis are governed by the *Indian Christian Marriage Act of 1872* and the *Parsi Marriage and Divorce Act of 1936*, respectively.

- **The Goa Exception:** Goa is the only Indian state that has continuously maintained a UCC, known as the *Goa Civil Code*, which is a historical legacy of Portuguese rule.

Key Judicial Pronouncements on UCC

The Supreme Court of India has repeatedly addressed the implementation of Article 44 through landmark cases:

- **Mohd. Ahmed Khan vs. Shah Bano Begum (1985):** The apex court noted with regret that Article 44 had remained a dead letter and advocated for its implementation to aid national integration and gender justice.
- **Sarla Mudgal v. Union of India (1995) & John Vallamattom v. Union of India (2003):** The Supreme Court reiterated the necessity of implementing a UCC to prevent conflicts arising from overlapping personal laws.
- **Shayara Bano v. Union of India (2017):** The Court ruled the practice of instant triple talaq unconstitutional for violating the dignity and fundamental equality of Muslim women, suggesting legislative regulation.
- **Jose Paulo Coutinho v. Maria Luiza Valentina Pereira (2019):** The Court praised Goa as a "*shining example*" where a uniform civil code is applicable to all regardless of religion, and called for its broader national application.

Arguments Surrounding the Legislation

Arguments in Favor:

- **Gender Justice:** Eradicates deeply entrenched biases against women found across various traditional personal laws, establishing a gender-neutral framework for inheritance, divorce, and alimony.

- **Positive Secularism:** Shifts India from a model of differentiated citizenship to a system where the State administers uniform civil laws for all citizens, irrespective of faith.
- **Protection for Modern Unions:** Establishes a vital legal safety net for vulnerable partners in live-in relationships by securing maintenance rights and child legitimacy.

Arguments Against:

- **Freedom of Religion:** Critics argue that the code infringes upon Article 25 (freedom of conscience and free profession, practice, and propagation of religion), as personal laws are deeply intertwined with religious faith.
- **Privacy Concerns:** Legal experts argue that mandatory registration of live-in relationships paired with punitive jail terms infringes upon individual autonomy and the Right to Privacy under Article 21, as established in the *Puttaswamy* judgment (2017).
- **Tribal Customary Disruption:** Despite exemptions, concerns remain that a standardized code changes the broader socio-cultural fabric and complicates the unwritten rules governing indigenous communities.

Way Forward

- **Codification of Existing Personal Laws:** As suggested by the 21st Law Commission of India, the state could first codify all existing personal laws to identify and amend inherent prejudices, testing them directly against fundamental rights.
- **Balancing Rights:** The state must strike a delicate balance between the directive of Article 44 and the religious protections under Articles 25-28, ensuring civil reforms emerge progressively and equitably.
- **Reviewing Live-in Clauses:** Provisions relating to the mandatory registration of live-in relationships should be evaluated to prevent administrative harassment and safeguard privacy.
- **Organic Tribal Reforms:** While Scheduled Tribes are blanket-exempted in state legislations, future steps should involve working directly with tribal councils to

organically reform patriarchal customary practices (such as women's property rights) from within.

- **Dedicated UCC Commission:** Establishing an independent, statutory Uniform Civil Code Commission to study global models, monitor state-level implementations (like Goa, Uttarakhand, and Assam), and draft a universally acceptable national template.



Indian Society & Social Justice

International Workers' Day (May Day 2026): History, Significance & Labour Rights



Why in News?

- Every year, **1st May** is observed globally as **International Workers' Day**, also known as **May Day** or **Labour Day**.
- The day is dedicated to honoring the **struggles, sacrifices, and achievements of workers and the labour movement worldwide**.

Origin of May Day

Haymarket Affair (Chicago)

- The origin of **May Day** is linked to the **Haymarket Affair in Chicago, USA**.
- Workers were demanding an **8-hour workday** during the Industrial Revolution.

- Working conditions at the time were harsh, with **10–16 hours of labour in unsafe environments**.
- A peaceful protest at **Haymarket Square** turned violent after a bomb explosion, leading to deaths and global attention.

International Recognition (1889)

- In **1889**, the **Second International** declared **1st May as International Workers' Day**.
- It was dedicated to the **Haymarket Martyrs**.
- It symbolized the global demand for:
 - **8 hours work**
 - **8 hours rest**
 - **8 hours personal life**

Theme for May Day 2026

- The **International Labour Organization (ILO)** theme is: **"Ensuring a Healthy Psychosocial Working Environment"**
- Focus areas include:
 - Workplace stress
 - Burnout
 - Mental health challenges
- It highlights the need for both **physical and psychosocial well-being at workplaces**.

May Day in India

First Celebration

- May Day was first observed in India in **1923**.
- Location: **Madras (Chennai)**

Key Organizer

- The event was led by **Malayapuram Singaravelu Chettiar**, a communist leader.
- He founded the **Labour Kisan Party of Hindustan**.

Historical Significance

- It marked the **first hoisting of the Red Flag in India**, symbolizing:
 - Labour rights
 - Socialist ideology
 - Workers' solidarity

Constitutional Provisions for Workers in India

Fundamental Rights (Part III)

Article 19(1)(c)

- Guarantees the **right to form associations or trade unions**.

Article 23

- Prohibits **human trafficking and forced labour (begar)**.

Article 24

- Prohibits **child labour below 14 years** in hazardous employment.

Directive Principles of State Policy (Part IV)

Article 39(e)

- Ensures protection of workers from **health and strength exploitation**.

Article 41

- Provides the **right to work, education, and public assistance**.

Article 42

- Ensures **just and humane working conditions and maternity relief**.

Article 43

- Promotes **living wage**, decent standard of life, and cultural opportunities.

Article 43A

- Provides for **workers' participation in management** (added by the **42nd Constitutional Amendment, 1976**).

Conclusion

International Workers' Day symbolizes the global recognition of workers' rights and their contribution to economic development. From the **Haymarket struggle** to modern concerns like **mental health and workplace well-being**, the idea of labour rights has evolved significantly. In India, constitutional provisions under **Fundamental Rights and Directive Principles** reflect a strong commitment toward ensuring **dignity, fairness, and humane working conditions for all workers**.

Pradhan Mantri Ujjwala Yojana (PMUY): 10 Years of Clean Cooking Fuel Revolution



Why in News?

- The Prime Minister highlighted that the **Pradhan Mantri Ujjwala Yojana (PMUY)** has, over the past **10 years**, transformed women from **policy beneficiaries** into the **starting point of clean energy empowerment** in India.
- The scheme is being recognised as a major milestone in advancing **energy justice, women empowerment, and public health outcomes**.

What is Pradhan Mantri Ujjwala Yojana?

About the Scheme

- Launched in **2016** by the **Ministry of Petroleum and Natural Gas (MoPNG)**
- Provides **clean cooking fuel (LPG connections)** to women from **poor households**
- Replaces traditional fuels like **firewood, coal, and cow dung**

Financial Support

- Government provides **₹1,600 per connection**
- Covers **security deposit and installation costs**
- In **2025–26**, Cabinet approved a **₹300 subsidy per 14.2 kg cylinder**
- Subsidy applicable for up to **9 refills per year**

Target Beneficiaries

- **Below Poverty Line (BPL) households**
- **SC/ST households**
- **Forest dwellers**
- Other **deprived and vulnerable sections**

Ujjwala 2.0 (Migration-Friendly Phase)

- Launched in **2021**
- Allows migrants to apply using **self-declaration of address**
- Removes dependence on ration cards or local proof of residence
- First refill and **gas stove provided free of cost**

Saturation Progress

- Over **10.54 crore LPG connections released (as of April 2026)**
- Additional **25 lakh connections approved for 2025–26**
- Aimed at achieving **universal LPG coverage**

Consumption Trends

- Average LPG usage increased from **3 refills (2019–20)**
- To **4.47 refills (2024–25)**
- Indicates **gradual adoption of clean cooking fuel**

Achievements of PMUY

Health and Safety Impact

- Reduces exposure to **indoor air pollution** from biomass fuels
- Lowers risk of:
 - Respiratory diseases
 - Eye infections
 - Lung-related illnesses
- Especially protects **women and children during cooking**

Time and Productivity Gains

- Eliminates time spent on:
 - Collecting firewood
 - Preparing dung cakes
- Enables women to engage in:
 - Income-generating work
 - Education
 - Rest and caregiving

Women Empowerment

- LPG connection is issued in the **name of the woman of the household**
- Enhances:
 - Financial autonomy
 - Household decision-making power
 - Social dignity

Energy Access Expansion

- LPG connections increased from **14.52 crore (2014)**
- To over **32 crore (2024)**
- Nearly **doubled national coverage**
- Expansion of LPG distribution network, especially in **rural and eastern India**

Behavioural Transformation

- Shift from traditional biomass to **clean fuel usage habits**
- Foundation for future transition to:
 - Induction cooking
 - Other clean energy technologies

Technology-Driven Delivery

- Based on **JAM Trinity (Jan Dhan–Aadhaar–Mobile)**
- Enables **direct benefit transfer (DBT)**

- Ensures **transparent and leakage-free subsidy delivery**

Concerns Associated with PMUY

Affordability and Refill Gap

- Initial connection is free, but **refill cost remains high**
- PMUY households average **4–5 refills annually**
- Many families stop usage after **1–2 refills**

Dependence on Imports and Price Volatility

- India imports over **50% of LPG requirement**
- Global conflicts (e.g., West Asia crises) lead to:
 - Price spikes
 - Reduced affordability despite subsidies

Fuel Stacking

- Households use **LPG alongside biomass fuels**
- LPG often used only for quick cooking tasks
- Traditional fuels still used for major cooking needs
- Health benefits remain **partially unrealised**

Last-Mile Delivery Challenges

- Difficult access in **hilly and tribal regions**
- Lack of home delivery leads to:
 - Loss of daily wages
 - Irregular refill access
- Supply gaps due to operational constraints

Ghost Connections

- Instances of:
 - Inactive connections
 - Diversion of cylinders to commercial use
- Raises concerns about **targeting efficiency**

Cultural Preferences

- Preference for food cooked on **traditional chulhas**
- Belief that wood-fired cooking enhances **taste and tradition**
- Slows full adoption of LPG

Steps Needed to Improve PMUY Outcomes

Strengthening Financial Support

- Introduce **dynamic subsidy linked to global LPG prices**
- Promote **small 5 kg cylinders** (“Chhotu cylinders”) for affordability

Improving Last-Mile Delivery

- Use **Common Service Centres (CSCs)** and **local shops as distribution points**
- Increase distributor incentives in **remote and aspirational districts**
- Expand **home delivery systems**

Integration with Clean Energy Ecosystem

- Promote **PM Surya Ghar Muft Bijli Yojana** for solar-powered induction cooking
- Expand **GOBARdhan biogas plants** for rural energy supply
- Reduce dependency on LPG for heavy cooking needs

Community Participation and Awareness

- Engage **Self Help Groups (SHGs)**
- Train women as **“Ujjwala Didis”**
- Promote awareness on:
 - Clean cooking benefits
 - Proper LPG usage
 - Safety practices

Karnataka Launches India’s First Grievance Redressal System for Gig Workers



Why in News

- Karnataka has become the **first state in India** to operationalise a **specialised grievance redressal mechanism for gig workers**
- The system aims to protect the rights and welfare of the growing **platform-based gig workforce**
- It is implemented under the **Karnataka Platform-Based Gig Workers (Social Security and Welfare) Act, 2025**
- The move is significant due to rising concerns over:
 - **Worker rights on digital platforms**

- **Payment disputes and unfair working conditions**
- Lack of structured grievance mechanisms in the gig economy

Key Features of the Initiative

1. Integrated Grievance Portal (IPGRS)

- Complaints can be filed through the **Integrated Public Grievance Redressal System (IPGRS)**
- Covers issues such as:
 - **Payment delays**
 - **Work allocation disputes**
 - **Platform-related grievances**
- Ensures **centralised complaint tracking system**

2. Mandatory Internal Dispute Resolution Committee (IDRC)

- All aggregator platforms must set up an **Internal Dispute Resolution Committee (IDRC)**
- Complaints are first handled at the platform level
- Ensures **structured internal grievance resolution**

3. Time-Bound Resolution System

- Grievances are automatically routed to the **IDRC**
- **Mandatory time-bound resolution**
- Government monitors compliance and resolution timelines

4. 1% Welfare Contribution

- Aggregator platforms must contribute **1% of earnings (subject to a cap)**
- Fund is used for **gig worker welfare schemes**
- Strengthens **social security net for informal workers**

What is a Gig Worker?

- A **gig worker** is an individual who:
 - Works outside a traditional employer-employee relationship
 - Earns through **short-term, task-based, or platform work**

Examples of Gig Work

- Ride-hailing services
- Food delivery platforms
- Freelance digital services
- On-demand logistics work

Key Trends

- Gig workforce in India (2024–25): **~12 million workers**
- Projected growth by 2029–30: **~23.5 million workers**
- Indicates rapid expansion of **platform economy**

Government Initiatives for Gig Workers

Central Government

- **Code on Social Security, 2020**
- **e-Shram Portal** for unorganised workers
- Health coverage under **Ayushman Bharat (AB-PMJAY)**

State-Level Initiatives

- **Karnataka Platform-Based Gig Workers (Social Security and Welfare) Act, 2025**
- **Rajasthan Platform Based Gig Workers (Registration and Welfare) Act, 2023**

NITI Aayog Report on India's School Education System



Why in News?

- A policy report by NITI Aayog titled **“School Education System in India — Temporal Analysis and Policy Roadmap for Quality Enhancement”** has highlighted concerns over student dropouts, low learning outcomes, infrastructure gaps, and unequal digital access across the country's schooling framework.

Key Findings of the Report

1. The “Pyramid Problem” and Student Dropouts

The structural design of the Indian school system resembles a sharp pyramid, acting as a fragmented pipeline that limits student retention.

- **Institutional Imbalance:** While India has about 7.3 lakh primary schools, the availability drops sharply to just 1.64 lakh institutions at the higher secondary level.

- **Lack of Continuity:** Only 5.4% of schools nationwide provide a continuous education from Grade 1 to 12 on a single campus, forcing most students to switch institutions multiple times.
- **The Transition Barrier:** Because the protective framework of the Right to Education (RTE) Act, 2009 concludes at age 14, and structural shifts create transition hurdles, nearly 4 out of every 10 children leave the system before finishing higher secondary education. The Gross Enrolment Ratio (GER) at the higher secondary stage stands at only 58.4%.

2. Declining Learning Outcomes and Conceptual Gaps

Even though near-universal enrolment has been achieved at the primary stage, foundational literacy and core subject understanding are declining.

- **Reading Levels:** In 2014, 74.7% of Grade 8 students could read a Grade 2 textbook. By 2024, this metrics slid down to 71.1%.
- **Mathematics:** Less than half (45.8%) of Grade 8 students can accurately solve a basic division problem.
- **Rote vs. Application:** Data from PARAKH 2024 reveals that while students score well on memorized patterns, they face an application crisis when encountering real-world problems. For example, fewer than 30% of Grade 6 students demonstrate mastery over fractions.

3. Move Toward Private Education

A growing perception gap regarding the standard of government schooling has caused a major shift in enrolments. Public school enrolment declined from 71% in 2005 to 49.24% in the 2024-25 academic year, running parallel to a major surge in low-fee private school admissions.

4. Infrastructure Disparities and Resource Inefficiencies

- **Basic Amenities:** Close to 1.19 lakh schools operate without functional electricity. Additionally, 14,505 schools lack functional water networks, and nearly 60,000 do not have hand-washing facilities.
- **Academic Facilities:** Half of the public secondary schools operate without a functional science lab.
- **The Digital Divide:** One-third of all schools still lack internet connectivity. Furthermore,

while AI and Computational Thinking are being introduced from Grade 3, the report warns against over-reliance on technology without proper teacher training, noting it could diminish independent thinking.

- **Zero-Enrolment and Small Schools:** There are 7,993 schools operating on paper with zero students enrolled (concentrated heavily in West Bengal and Telangana), draining public resources. Additionally, over 1 lakh "single-teacher" schools remain operational.

Core Recommendations of NITI Aayog

1. The "Cylindrical" Schooling Model

NITI Aayog recommends replacing the fragmented pyramid framework with composite schools that bring Grades 1 through 12 under one roof. This cylindrical design maintains academic continuity and removes the institutional transition barriers that cause early dropouts.

2. Operationalizing "School Complexes"

To optimize resource distribution under the National Education Policy 2020, the report supports clustering schools. Grouping one secondary or senior secondary school with nearby primary units and Anganwadis within a 5-10 km radius allows for the shared use of:

- Subject-specific teachers
- Science laboratories and libraries
- Sports infrastructure and learning tools

3. Strengthening Quality Assessment and Monitoring

The roadmap calls for empowering State School Standards Authorities (SSSAs) and deploying State School Quality Assessment and Assurance Frameworks to build institutional accountability and continuous evaluation tracking.

4. Implementing a "Whole-of-Society" Framework

The report suggests setting up dedicated State and District Task Forces on School Quality. These bodies would bring together state bodies, civil society groups, local communities, and academic experts to build collective responsibility for executing educational reforms.

5. Empowering School Management Committees (SMCs)

NITI Aayog stresses the need to strengthen SMCs to drive bottom-up developmental planning, ensuring

community participation and localized accountability in daily school administration.

6. Unified Digital Public Infrastructure (DPI)

To bridge remote learning gaps, the report recommends blending national digital campaigns—such as PM e-Vidya, BharatNet, and PM Gati Shakti—into an open, interoperable Digital Public Infrastructure (DPI) for education.

7. Vacancy Mapping and Administrative Recruitment

The report advises launching comprehensive vacancy mapping followed by time-bound hiring drives for vital school administration roles, including Cluster Resource Coordinators, Block Education Officers, and MIS personnel.

8. Scaling Financial Outlays

To successfully execute these structural shifts, NITI Aayog reiterates the necessity of raising India's overall educational funding to the long-standing target of 6% of GDP (which currently sits around 4.6%).

India's Socio-Economic Inequality and Inclusive Growth



Why in News?

Recent updates in India's socio-economic policies, such as the introduction of the **Viksit Bharat-Guarantee for Rozgar and Aajeevika Mission (Gramin) Act, 2025** (VB G RAM G Act, 2025) and updated Labour Codes, have brought renewed focus to the debate over rural welfare and wealth gaps.

Key Trends in Economic Disparity

- **Underreported Metrics:** While some global databases list India's Gini index at 0.25, the National Sample Survey Office's Household Consumer Expenditure Survey (HCES 2023-24) points to a higher score of 0.29. This shows that real-world consumption variance is steeper than generally reported.

- **Urban vs. Rural Consumption Gap:** Disparities remain higher within cities than in the countryside. The average monthly spending of the top 10% of urban households is 9 times higher than that of the bottom 10% of rural families.
- **Non-Food Expenditure Focus:** The country's consumer demand boom is largely centered around non-food items, revealing a distinct gap. The top 10% of urban spenders command 27% of all non-food expenditures, leaving the remaining 90% of the population with a much smaller share.
- **Class-Based Divergence:** Since the 1980s, corporate owners, managers, and white-collar professionals have seen their incomes grow out of proportion. Meanwhile, informal workers, small-scale farmers, and farm laborers have faced stagnation, widening class divisions.
- **Welfare Targeting Inefficiencies:** Studies indicate a structural overlap in beneficiary targeting. Roughly one-fourth of the wealthiest 10% of households have received benefits from the Pradhan Mantri Garib Kalyan Yojana (PMGKY), and 13% still hold Below Poverty Line (BPL) ration cards.
- **Credit-Driven Standards:** A substantial segment of households rely on credit and debt to sustain their daily living standards, signaling a vulnerable financial base behind the broader consumer boom.

Dimensions of Inequality

Inequality refers to the unequal distribution of resources, opportunities, rights, and outcomes among groups in a society. Inclusive growth means economic growth that is distributed fairly across society, ensuring that the benefits reach every section, especially the marginalized.

1. Primary Forms of Disparity

- **Economic Inequality:** Unequal distribution of income and wealth. The top 10% of earners capture 58% of national income, while the bottom 50% receive only 15%. Wealth concentration is even higher, with the richest 1% holding 40% of total wealth.
- **Social Inequality:** Differences based on caste, class, religion, gender, or ethnicity. About

46% of rural households are landless, and this landlessness is significantly higher in villages with larger Scheduled Caste (SC) and Scheduled Tribe (ST) populations.

- **Political Inequality:** Unequal access to political power and decision-making. Marginalized groups experience lower representation; for instance, women hold only about 14% of the seats in the 18th Lok Sabha (2024-2029).
- **Regional Inequality:** Disparities between different regions of a country. Maharashtra leads with a GDP of Rs 24.11 Lakh Cr, whereas Bihar remains at the bottom with high multidimensional poverty (33.76%) and a low per capita income of Rs 66,828.
- **Gender Inequality:** Unequal treatment and opportunities between men and women. Female Labour Force Participation remains low at 32-35%, and women globally earn only 61% of what men earn per working hour.

2. The Gini Index Framework

- **Definition:** Created in 1912 by Corrado Gini, this index is a standard mathematical measure used to represent the income or wealth distribution of a nation's residents.
- **The Lorenz Curve:** The index is derived from the Lorenz Curve, which plots cumulative income against cumulative recipients. The Gini coefficient measures the area between this curve and the 45-degree line of perfect equality.
- **Scale Interpretation:** The values run from 0 to 1 (or 0 to 100%), where 0 represents absolute equality and 1 represents absolute inequality.
- **India's Performance:** The nation's score improved from 28.8 in 2011 to 25.5 in 2022, placing it in the "moderately low inequality" tier. At 25.5, India exhibits lower income disparity than major global counterparts like the United States (41.8) and China (35.7).

Causes and Consequences of Inequality

1. Economic & Social Drivers

- **Jobless Growth:** Rapid expansion is fast-paced in capital-heavy areas like IT and finance, but slower in labor-absorbing sectors

like manufacturing and agriculture, locking low-income families into poverty traps.

- **Regressive Taxation Impacts:** A heavy reliance on indirect taxes, such as the Goods and Services Tax (GST), places a larger financial burden on the poor relative to their total wealth.
- **Asset and Land Imbalances:** Approximately 46% of rural households are landless, while the top 10% own 44% of rural land. Small-scale farmers lack collateral for bank credit, which deepens agrarian distress, triggers debt, and drives migration to cities.

2. Human Development & Environmental Impacts

- **The Educational Skills Gap:** High-quality private education remains expensive, while underfunded public schools often lack key resources. This creates a skills gap where youth are educated but struggle to find employment, hurting the demographic dividend.
- **Healthcare Costs:** A shortage of universal healthcare access means out-of-pocket medical emergencies push 63 million citizens into poverty each year, reducing life expectancy among poorer groups.
- **Climate Vulnerability:** The wealthiest 1% generate 41% of carbon emissions due to high consumption. However, lower-income populations suffer the most from extreme weather, facing lost livelihoods and becoming forced climate migrants.

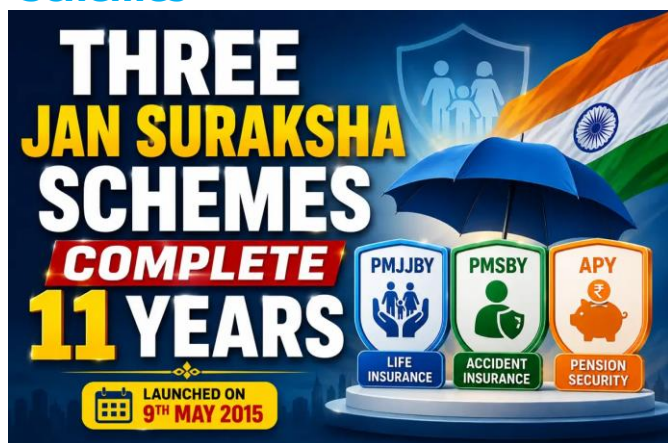
Way Forward

- **Bridging the Skills and Digital Divide:** Shift focus from basic literacy to targeted training programs that help transition informal workers and rural youth into green-tech and technical roles. Expanding high-speed infrastructure via BharatNet ensures rural schools and medical clinics share the same digital tools as urban centers, preventing a digital divide.
- **Supporting Gender Parity:** Open widespread access to childcare centers and safe public transit networks to support women's professional growth. Designing flexible work options can help bring millions of women

engaged in unpaid domestic work into the formal, paid workforce.

- **Building Rural Climate Resilience:** Use the VB GRAM G Act, 2025 to fund community-owned solar irrigation systems and water conservation projects for smallholders. Prioritize transparent price discovery and credit paths for marginal farmers to keep markets balanced and sustainable.
- **Formalizing Green Labor:** Turn the informal waste-picker sector into a protected "resource recovery" work force, providing legal and economic security to a marginalized labor force.
- **Empowering Local Institutions:** Transfer financial decision-making power from central bodies directly to local panchayats and Regional Rural Banks (RRBs). This allows local communities to implement tailored poverty-reduction solutions that generic federal policies might miss.

11 Years of India's Jan Suraksha Schemes



Why in News?

The government's flagship Jan Suraksha initiatives—Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), Pradhan Mantri Suraksha Bima Yojana (PMSBY), and Atal Pension Yojana (APY)—have completed **11 years** since their launch in 2015. Over the past decade, these programs have expanded low-cost insurance and pension coverage to crores of citizens, focusing heavily on poor, vulnerable, and unorganized sector workers.

Core Architecture of the Schemes

1. Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)

- **Objective:** A low-cost term life insurance plan that offers financial protection against death due to any cause.
- **Eligibility:** Individuals aged between **18 and 50 years** who hold a bank or post office account. Subscribers can enroll through an auto-debit facility from a single account.
- **Premium & Cover:** Requires an annual premium of **Rs 436** (less than Rs 2 per day) for a cycle running from 1 June to 31 May. It pays out **Rs 2 lakh** to the nominee upon the subscriber's death.
- **Progress:** As of April 2026, PMJJBY recorded over **27.43 crore** cumulative enrolments and settled claims worth Rs 21,512.50 crore for more than 10.75 lakh claims. Women account for 12.72 crore registrations, while 8.09 crore come from PMJDY account holders.

2. Pradhan Mantri Suraksha Bima Yojana (PMSBY)

- **Objective:** An accident insurance scheme that provides financial aid in cases of accidental death or permanent disability.
- **Eligibility:** Individuals aged between **18 and 70 years** with a bank or post office account.
- **Premium & Cover:** Charges an annual premium of **Rs 20** via auto-debit. It provides **Rs 2 lakh** for accidental death or total disability, and **Rs 1 lakh** for partial disability (such as losing one eye or one limb).
- **Progress:** As of April 2026, it crossed **58.09 crore** cumulative enrolments, settling claims worth Rs 3,667.52 crore for over 1.84 lakh claims. Female enrolments stand at 27.45 crore, with 19.30 crore coming from PMJDY accounts.

3. Atal Pension Yojana (APY)

- **Objective:** Designed to provide old-age income security, focusing primarily on workers in the informal and unorganized sectors. It is managed by the Pension Fund Regulatory and Development Authority under the National Pension System.
- **Eligibility:** Open to bank account holders aged between **18 and 40 years** who do not

pay income tax. Contributions can be scheduled monthly, quarterly, or half-yearly.

- **Benefits:** Provides a guaranteed minimum monthly pension ranging from **Rs 1,000 to Rs 5,000** after turning 60 years old. If the subscriber passes away, the pension goes to the spouse. After both pass, the accumulated corpus goes to the nominee.
- **Progress:** Enrolments have crossed **9.04 crore** individuals as of April 2026, with women making up nearly 49% of the total user base.

Strategic Significance

- **Democratizing Insurance Access:** Keeping annual premiums at accessible rates (Rs 20 or Rs 436) moves financial security from an expensive service to a basic option for low-income families, preventing a fallback into poverty during crises.
- **JAM Trinity Integration:** Merging these plans with Jan Dhan bank accounts through an automated, system-driven debit process removes intermediaries, reduces administrative leakage, and maintains high structural transparency.
- **Digital Onboarding Updates:** Shifting operations to the central Jan Suraksha Portal has simplified the documentation timeline, allowing families to access financial aid quickly.
- **Mobilizing Domestic Savings:** Collecting micro-savings and small premiums builds a large pool of long-term domestic capital for banks, insurance providers, and pension funds, reducing reliance on external foreign capital.

Existing Structural Challenges

- **Inflation and Stagnant Cover:** The real value of a Rs 2 lakh cover has been eroded by inflation over the past 11 years, making it increasingly tight to cover long-term rehabilitation or full family maintenance.
- **Pension Inadequacy:** A fixed retirement payout capped at Rs 5,000 per month will face severe purchasing power limits decades

from now, making it hard to match rising healthcare and living costs for senior citizens.

- **Auto-Debit Failures and Policy Lapsation:** Since premiums are deducted automatically once a year, daily wage earners or small-scale farmers with irregular cash flows face issues. If their account lacks a sufficient balance on deduction day, the policy lapses without the holder realizing they are uncovered.
- **Rigid Contribution Rules:** APY's strict periodic contribution timelines do not align well with the volatile income patterns of gig workers and agricultural laborers, leading to drop-outs.
- **Documentation Red Tape:** Sifting through local administrative channels to procure reports or certificates after a crisis can be tough for rural families. Small discrepancies in name spellings across different papers frequently cause delays or rejections.

Way Forward

- **Dynamic Indexing:** Transition from fixed-sum benefits to inflation-linked models where premiums and payouts adjust periodically against the Consumer Price Index (CPI).
- **Smart Technical Nudges:** Use multi-language automated alerts to warn users about low account balances ahead of auto-debit deadlines, reducing policy lapses.
- **Proactive Ground Support:** Empower local banking correspondents (Bank Mitras) to track local changes and help grieving families handle documentation directly.
- **Flexible Contribution Options:** Introduce harvest-aligned or variable payment schedules for APY to better match the uneven cash flows of agricultural laborers and informal workers.
- **Universal Portal Integration:** Bundle these micro-insurance and pension schemes directly with platform worker registries like the e-Shram portal, exploring shared premium models between digital aggregators and state funding.

Silver Jubilee of Pradhan Mantri Gram Sadak Yojana



PRADHAN MANTRI GRAM SADAK YOJANA

Why in News?

- The Union Ministry of Rural Development celebrated the Silver Jubilee (**25 years**) of the Pradhan Mantri Gram Sadak Yojana (PMGSY) in Bhairunda, Madhya Pradesh.
- The event was highlighted by the official national rollout of **PMGSY-IV** to expand rural transport infrastructure and ensure last-mile road access.

What is the Pradhan Mantri Gram Sadak Yojana (PMGSY)?

- **Core Objective:** Launched in 2000, PMGSY is a Centrally Sponsored Scheme aimed at providing stable, all-weather road links to isolated rural habitations. It serves as a major driver for poverty alleviation and local economic growth.
- **Funding Splits:** The financial ratio between the Centre and States is fixed at **60:40 for plain terrains**, and **90:10 for North-Eastern states, Himalayan regions, and Union Territories**.
- **Three-Tier Quality Assurance:**
 - **First Tier:** Continuous quality verification by the local State executing agency.
 - **Second Tier:** Independent quality audits managed by State Quality Monitors (SQM).
 - **Third Tier:** Independent checks conducted by National Quality Monitors (NQM) under the National Rural Infrastructure Development Agency (NRIDA).

- **Live Monitoring:** Project updates and billing transparency are tracked through the Online Management, Monitoring, and Accounting System (**OMMAS**).

Phased Evolution of the Program

1. Phase-I (2000)

The foundation layout focused entirely on building new all-weather roads for unconnected settlements across the country.

2. Phase-II (2013)

Shifted the strategy toward upgrading and strengthening the existing rural road network to improve transit efficiency between villages and rural markets.

3. RCPLWEA (2016)

The Road Connectivity Project for Left Wing Extremism Affected Areas was deployed as a targeted vertical across 44 security-sensitive districts. It works to improve the movement of security forces and advance social development in isolated sectors.

4. Phase-III (2019)

Aimed at upgrading **1,25,000 km** of key rural links to smoothly connect local communities with Gramin Agricultural Markets (GrAMs), medical centers, and schools. By December 2025, **83%** of this target (**1,01,623 km**) was completed. Work deadlines have been extended to March 2028 for plain routes and March 2029 for complex mountain bridges.

Details of PMGSY Phase-IV (2024-2029)

- **Targets:** This phase aims to extend durable road lines to **25,000** newly identified unconnected rural habitations.
- **Scale and Outlay:** Plans involve building **62,500 km** of rural roads backed by an allocated budget of **Rs 70,125 crore**.
- **Eligibility Baselines:** Road construction will target areas based on Census 2011 figures:
 - Habitations with **500+ residents** in plain areas.
 - Habitations with **250+ residents** in North-Eastern and Himalayan States/UTs.
 - Special category pockets including Schedule V Tribal areas, Aspirational Districts/Blocks, and desert regions.

- **Tribal Policy Integration:** PMGSY-IV works directly with the Dharti Aaba Janjatiya Gram Utkarsh Abhiyan and PM-JANMAN to prioritize connectivity for tribal groups.
- **Eco-Friendly Directives:** The phase mandates the use of green building technologies—such as waste plastics, cell-filled concrete, fly ash, and cold mix technology—to minimize carbon footprints, particularly across the fragile Himalayan ecosystem.
- **Smart Engineering Mapping:** Road alignments are being plotted using the new PMGSY Gram Sadak Survey App along with the PM Gati Shakti portal to design data-driven layouts and prevent infrastructure overlap.

National Significance of Rural Roads

- **Closing the Development Gap:** Over a 25-year timeline, the rollout of rural roads has directly supported global targets like SDG 9 (Industry, Innovation, and Infrastructure) and SDG 1 (No Poverty) by making medical care, education, and job hubs accessible.
- **Boosting Local Economies:** The initiative has linked **1,63,339** habitations under its primary run. Connecting farms to local wholesale spots minimizes transport losses for perishable produce, helping boost agrarian profits and enabling local self-help networks.
- **Empowering Communities:** Independent reviews from NITI Aayog and the World Bank show that standard rural roads link directly with higher school attendance for girls and drop maternal mortality rates by enabling fast emergency travel.
- **Security Stabilization:** Expanding transit routes in previously isolated areas has helped reduce internal security issues, moving closer toward a peaceful internal landscape.
- **Recycled Resource Processing:** More than **1.24 lakh km** of road tracks have been successfully laid down by blending waste plastic, fly ash, and recycled construction materials into the asphalt mix.

Rural Doctor Shortages and Deployment Flaws in India



Why in News?

Despite approving **11,682 new MBBS seats** and **8,967 postgraduate (PG) seats** for the 2025-26 academic year, India's public healthcare framework continues to face severe medical manpower shortages in rural regions. This persistent crisis is largely driven by inefficient deployment policies and weak structural incentives.

Key Realities of the Rural Healthcare Deficit

1. Severe Shortfalls in Specialist Care

Despite a steady rise in medical postgraduate seats over the last decade, community infrastructure lacks necessary specialized personnel.

- **The Vacancy Crisis:** The total vacancy rate for core specialists across rural Community Health Centres (CHCs) stands at an alarming **79.9%**, leaving a consistent shortfall of roughly **17,500 specialists** nationwide.
- **State-Level Statistics:** The deficiency is highly concentrated across several major states, which report extreme vacancy percentages:
 - **Madhya Pradesh:** 94% shortage
 - **Gujarat:** 88.1% shortage
 - **Tamil Nadu:** 85.2% shortage
 - **Bihar:** 80.9% shortage
 - **Rajasthan:** 80.3% shortage
 - **Uttar Pradesh:** 74.4% shortage

2. Operational Gaps in Community Health Centres (CHCs)

- **Team Deficits:** To run properly, a standard CHC requires a core team of five distinct specialists: a Physician, a Surgeon, an Obstetrician, a Paediatrician, and an Anaesthetist.
- **Hollow Infrastructure:** Due to acute specialized manpower shortages, current

staffing levels are only sufficient to fully operationalize **882 out of 5,491** existing CHCs.

- **The PHC Downgrade:** While states continue to construct new CHC buildings to claim central government funding, a lack of doctors forces these facilities to function merely as basic Primary Health Centres (PHCs).

3. Faculty Shortages in Premier Institutions

The specialist deficit impacts medical education as well. Even among the country's premier medical institutes, **11 out of 18 operational AIIMS** report nearly **40% vacancies** in their teaching and research faculties, directly threatening the training quality of future specialists.

4. Flawed Policy Objectives

- Central healthcare budgets consistently prioritize physical infrastructure (constructing buildings) over vital daily operational needs like medicine supplies, diagnostic tools, ambulance networks, and competitive salaries.
- Furthermore, there is no defined policy that links the expansion of PG medical seats to mandatory placement in public health facilities.
- Additionally, **27 out of 43 newly approved medical colleges** belong to the private sector, which carries no legal obligation to serve rural or public health networks.

Causes and Consequences of the Rural Doctor Shortage

1. Core Causes

- **Logistical Disparities:** Rural clinics frequently lack advanced medical equipment, basic diagnostic utilities, and reliable stocks of essential medicines.
- **Professional Isolation:** Doctors in remote areas experience a lack of peer mentorship, poor connectivity to medical advancements, and limited options for continuing medical education or career progression.
- **Substandard Living Conditions:** Remote posts often feature poor-quality staff quarters, unstable power grids, lack of clean water, and a shortage of quality schooling options for doctors' children.

- **Economic Misalignment:** Salaries in the public rural sector are significantly lower than private urban practices. High upfront "capitation fees" paid during private medical education create an immediate financial pressure on graduates to seek high-paying city roles.
- **Population Overload:** A single rural doctor often manages an overwhelming population footprint, sometimes reaching a ratio of **1:200,000** in underserved CHCs without any supporting specialist team.

2. Resulting Consequences

- **Functional Paralysis:** Many rural healthcare centers exist purely as "hollow shells"—the buildings are physically present, but they remain locked or unstaffed.
- **Skill Stagnation:** Facing a lack of functional operating theaters and diagnostic tools, doctors cannot perform surgeries or precise diagnoses, causing their clinical skills to decline and fueling a continuous brain drain toward cities.
- **Family Attrition:** Qualified professionals routinely resign or remain absent without authorization due to their unwillingness to relocate families to areas lacking basic amenities.
- **Medical Indebtedness:** Because local public specialist services are unavailable, rural patients are forced to take high-interest private loans to afford expensive medical care in urban centers.
- **Burnout and Local Conflict:** Overburdened rural staff faces long wait times and strained patient communication, which frequently leads to workplace burnout and instances of public violence against doctors.

Way Forward

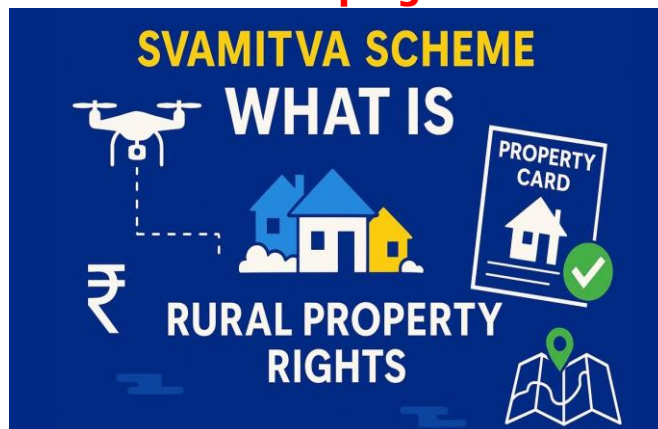
- **Zonal Compensation Allowances:** Adopt structured human resource models like Chhattisgarh's Rural Medical Corps Scheme, where medical personnel receive tiered financial bonuses based on local geographical difficulty (e.g., "Normal," "Difficult," and "Most Difficult" zones).
- **Educational Incentives:** Link rural public service directly with priority quotas for

postgraduate seat allocations or grant dedicated grace marks in PG entrance examinations for candidates who complete remote terms.

- **Team-Based Postings:** Deploy doctors in complete, coordinated specialist teams rather than single isolated postings. This manages daily workloads, reduces stress, and improves public trust.
- **Upgrading Live-In Infrastructure:** Prioritize the immediate construction of secure, quality staff housing and ensure access to good local schools to encourage long-term medical staff retention.
- **Digital Support Integration:** Maximize the use of the e-Sanjeevani telemedicine platform to link rural CHCs directly with tertiary experts, reducing the professional isolation experienced by rural practitioners.
- **Enforcing Long-Term Service Bonds:** Require candidates occupying government-subsidized PG medical seats to provide a mandatory long-term service undertaking (e.g., up to a 10-year bond) to serve in specified public infrastructure upon graduation.
- **Developing High-Quality First Referral Units (FRUs):** Instead of building numerous understaffed, sub-optimal centers, focus on fully equipping and operationalizing **2 to 3 CHCs per district** to serve as high-quality FRUs.
- **Mid-Level Provider Training:** Provide advanced specialty training to regional nursing staff willing to locate to remote zones, empowering them to manage primary care and emergency stabilization.
- **Dedicated Public Health Cadre:** Form a distinct administrative "Public Health Cadre" to handle daily hospital logistics, allowing practicing doctors to focus entirely on clinical patient care.

Crux of The Hindu & Indian Express

Indian Society & Social Justice
SVAMITVA Scheme Emerging as a Model for Developing Countries



Why in News?

- The **Ministry of Panchayati Raj** released findings from an evaluation study conducted by **Indian Institute of Management Ahmedabad on the SVAMITVA Scheme**.
- The study was presented before the **World Bank** as a successful model of rural land governance.
- **Officials believe the scheme can become a model for other developing countries.**

About SVAMITVA Scheme

Full Form

- SVAMITVA stands for:
 - **Survey of Villages and Mapping with Improved Technology in Village Areas.**

Ministry

- It is a **Central Sector Scheme** of the Ministry of Panchayati Raj.

Launch

- The scheme was launched nationwide on:
 - **24 April 2021**
 - **National Panchayati Raj Day**
- It was launched after completion of the pilot phase during 2020–21 in 9 states.

Main Objective

- To provide legal ownership records to people living in rural inhabited areas.

- To strengthen rural land governance through accurate mapping and property records.

Key Features of the Scheme

Drone-Based Survey

- The scheme uses:
 - **Drone technology**
 - Aerial surveys
 - Continuously Operating Reference Station (CORS) network
- This helps create accurate maps of rural residential areas.

Property Cards

- Property owners receive:
 - Legal ownership cards
 - Property cards
 - Title deeds
- These documents act as formal proof of ownership.

Digital and Geo-Referenced Records

- The scheme creates:
 - Digitally verifiable property records
 - Geo-referenced land records
- This replaces informal and disputed land claims.

Coverage and Progress

Financial Support

- Central funding of more than:
 - **₹472 crore has been provided up to FY26.**
- The scheme has been extended till:
 - September 30, 2026.

Survey Coverage

- Drone surveys have been conducted in:
 - 3.3 lakh villages
- About:
 - 70,000 square kilometres of abadi land has been covered.

Growth in Property Cards

- Property card distribution increased from:
 - 7,440 villages in FY21 to
 - 1.89 lakh villages by FY26.
- Around:
 - 3.14 crore property cards have been prepared.

- The government estimates the number may reach:

- 4 crore by September 2026.

States with Saturated Drone Survey

Drone survey has been saturated in:

- Andhra Pradesh
- Madhya Pradesh
- Uttar Pradesh
- Chhattisgarh
- Kerala
- Assam
- Arunachal Pradesh
- Odisha
- Jammu and Kashmir
- Delhi
- Mizoram
- Ladakh

The scheme has also been saturated in:

- Haryana
- Uttarakhand
- Puducherry
- Goa
- Tripura
- Dadra and Nagar Haveli and Daman and Diu
- Lakshadweep
- Andaman and Nicobar Islands

Importance of the Scheme

Formalisation of Rural Property Rights

- Informal land claims and disputes are being replaced by:
 - Legally recognised
 - Digitally verifiable property documents.

Economic Potential

- The estimated monetised value of mapped abadi land is:
 - Around ₹135 lakh crore.

Reduction in Property Disputes

- Accurate land records can reduce:
 - Property disputes
 - Legal cases related to land ownership.

Improved Access to Credit

- Property cards can be used as collateral for loans.
- According to the government:

- 10,913 loans worth ₹1,679 crore have been sanctioned using SVAMITVA property cards.

Increased Loan Access

- The IIM Ahmedabad study found that:
 - Loan amounts increased by ₹22,129 annually per parcel after SVAMITVA surveys.

Women's Empowerment

- The scheme encourages inclusion of women as recognised property owners in rural areas.

Better Rural Planning

- Accurate GIS maps help in:
 - Gram Panchayat Development Plans (GPDP)
 - Property tax determination
 - Infrastructure planning.

Eligibility and Exclusions

Eligibility

- A person must own property in a rural inhabited (abadi) area.

Exclusion

- Agricultural land is not covered under the scheme.

Implementing Agencies

The scheme is implemented by:

- Survey of India
- National Informatics Centre Services Inc. (NICSI) as a technology partner.

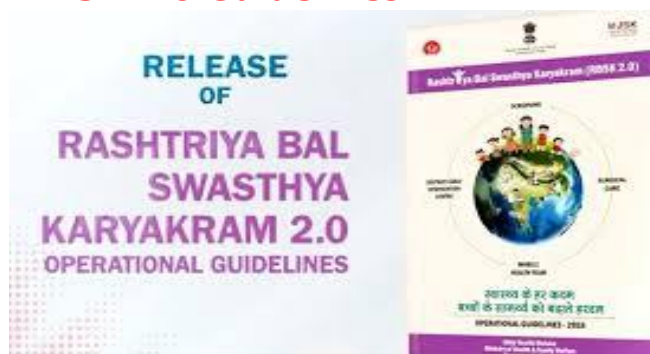
At the state level:

- Revenue Department/Land Records Department acts as the nodal department with support from Panchayati Raj Departments.

Conclusion

- The SVAMITVA Scheme is becoming an important reform in rural land governance in India.
- By using drone technology and digital property records, the scheme is improving:
 - Legal ownership security
 - Access to finance
 - Rural planning
 - Reduction in disputes
- The scheme is now being viewed as a possible model for other developing countries as well.

Union Health Ministry Releases RBSK 2.0 Guidelines



Why in News?

- The Ministry of Health and Family Welfare released the **Rashtriya Bal Swasthya Karyakram (RBSK) 2.0 Guidelines**.
- The guidelines were released during the **National Summit on Good Practices and Innovations in Public Healthcare Service Delivery**.
- The revised framework aims to strengthen child healthcare services across India.

What is RBSK?

- Rashtriya Bal Swasthya Karyakram (RBSK) is a flagship child health screening programme of the Government of India.
- It focuses on:
 - Early identification
 - Early diagnosis
 - Early treatment of health conditions in children
- The programme covers children from:
 - Birth to 18 years of age

Main Objective of RBSK 2.0

- To strengthen and expand child health services in India.
- To address both traditional and emerging child health challenges.
- To ensure:
 - Early detection of diseases
 - Timely treatment
 - Holistic growth and development of children

The 4Ds Approach under RBSK

The programme continues its focus on the established **4Ds approach**:

- **Defects at Birth** : Identification of congenital abnormalities present at birth.

- **Diseases** : Detection of childhood diseases requiring medical attention.
- **Deficiencies** : Identification of nutritional deficiencies and related health problems.
- **Developmental Delays** : Detection of physical, cognitive and developmental delays in children.

New Areas Added in RBSK 2.0

The revised guidelines broaden the programme scope by including:

- Non-communicable diseases (NCDs)
- Mental health conditions
- Behavioural concerns
- Developmental disorders
- Risk factors for:
 - Diabetes
 - Hypertension

Lifecycle-Based Approach

- RBSK 2.0 strengthens the lifecycle-based approach.
- The programme now provides a continuous healthcare framework for children from:
 - Birth to 18 years

Focus Areas

- Preventive care
- Promotive care
- Curative care

The aim is not only survival of children, but also their:

- Healthy growth
- Mental well-being
- Overall development

Expanded Screening Services

- Screening services will continue through:
 - Mobile Health Teams
 - Anganwadi Centres
 - Schools

Purpose

- Universal outreach
- Early identification of health problems
- Timely intervention

Strengthened Referral System

The guidelines focus on improving referral linkages and continuity of care.

Key Features

- Clear referral pathways from:
 - Community-level screening
 - To hospital-based diagnosis and treatment

- A referral tracking system will ensure:
 - Follow-up of identified children
 - Reduced treatment dropouts
 - Timely healthcare intervention

Digitalization under RBSK 2.0

A major focus of the revised guidelines is digital health systems.

Digital Features Introduced

- Digital health cards
- Real-time data systems
- Integrated digital platforms for:
 - Tracking
 - Monitoring
 - Service delivery

Expected Benefits

- Better programme efficiency
- Improved accountability
- Evidence-based decision making
- Improved monitoring at all levels

Multi-Sectoral Convergence

The guidelines promote coordination among different sectors, including:

- Health sector
- Education sector
- Women and Child Development system

Role of Institutions

- Schools
- Anganwadi Centres
- Community platforms

These institutions will act as important centres for:

- Screening
- Awareness generation
- Follow-up care

Importance of RBSK 2.0

- Helps identify diseases and developmental issues at an early stage.
- Timely intervention can reduce long-term health complications.
- Early treatment helps reduce serious illnesses in future.
- Covers physical, mental and behavioural health of children.
- Community-level outreach ensures wider healthcare access.
- Supports India's push towards technology-driven healthcare systems.

Conclusion

- RBSK 2.0 marks a major upgrade in India's child healthcare programme.
- The revised guidelines aim to provide:
 - Comprehensive screening
 - Better referral systems
 - Continuous follow-up care
 - Digital health support
- The initiative reflects the government's commitment towards accessible, equitable and quality healthcare for every child in the country.

Old Age Pension under NSAP Eroded Due to Inflation: Rural Development Ministry Study (2026)



Why in News

- A recent evaluation study commissioned by the **Union Ministry of Rural Development** has found that the **Centre's fixed old age pension under NSAP** has been significantly eroded due to **inflation**.
- The study highlights that the central contribution of **₹200–₹500 per month** under the **National Social Assistance Programme (NSAP)** has remained unchanged since **2012**.
- It states that the **real value of pensions has declined by nearly 45%**, reducing the purchasing power of beneficiaries.
- The report is titled:
 - **"Impact Assessment and Evaluation of the National Social Assistance Programme (NSAP)"**

- The study was conducted by:
 - **Academy of Management Studies (AMS)**, a Delhi-based research and consulting firm
- It covered multiple states including:
 - **Assam, Andhra Pradesh, Telangana, Uttar Pradesh, Bihar, Haryana, Gujarat, Jammu & Kashmir, Tamil Nadu, and Chhattisgarh**

Key Findings of the Study :

Impact of Inflation on Pension Value

- The study found that **inflation has significantly reduced the real value of fixed cash transfers** under NSAP.
- It stated that:
 - **₹200 pension in 2012** would now need to be around **₹353** to maintain the same purchasing power.
- It further noted that:
 - With **CPI rising from 100 (2012) to 191 (2024)**, there has been a **91% cumulative increase in prices**.
- Accordingly, pension amounts should have been revised to:
 - **₹382 instead of ₹200**
 - **₹955 instead of ₹500**

Erosion of Real Value :

- The study highlighted that:
 - Average inflation of around **5% annually (2010–2024)** has reduced the value of fixed pensions.
- It concluded that:
 - The **real value of central pension support has fallen by nearly 45%**.
- It also noted that:
 - There has been **no revision in pension amounts since 2012**, despite rising consumption expenditure.

Economic Context :

- The study observed that:
 - India has made **rapid economic progress** in recent years.
 - India has become the **4th largest economy in the world**.
- However, it stated that:
 - Social security support has not kept pace with **economic growth and inflation trends**.

National Social Assistance Programme (NSAP) :

About NSAP

- The **National Social Assistance Programme (NSAP)** was launched in **1995**.
- It is a **central sector social welfare scheme** aimed at providing financial assistance to vulnerable groups.
- It covers:
 - **Elderly persons**
 - **Widows**
 - **Persons with disabilities**
 - **Poor families**

Schemes under NSAP :

NSAP currently includes **five major schemes**:

- **Indira Gandhi National Old Age Pension Scheme (IGNOAPS)**
- **Indira Gandhi National Widow Pension Scheme (IGNWPS)**
- **Indira Gandhi National Disability Pension Scheme (IGNDPS)**
- **National Family Benefit Scheme (NFBS)**
- **Annapurna Scheme**

Details of Major Schemes :

Indira Gandhi National Old Age Pension Scheme (IGNOAPS)

- Under **IGNOAPS**, the Centre provides:
 - **₹200 per month** to individuals aged **60–79 years**
 - **₹500 per month** to individuals aged **80 years and above**
- The study reports that more than:
 - **221 lakh beneficiaries** are currently covered

Indira Gandhi National Widow Pension Scheme (IGNWPS) :

- Under **IGNWPS**, the Centre provides:
 - **₹300 per month** to widows aged **40–79 years**
 - **₹500 per month** to widows aged **80 years and above**
- The study states that more than:
 - **67 lakh beneficiaries** are covered

Indira Gandhi National Disability Pension Scheme (IGNDPS) :

- Under this scheme, financial assistance is provided as:
 - **₹300 per month** to persons with **severe or multiple disabilities (18–79 years)**
 - **₹500 per month** to beneficiaries aged **80 years and above**

- The study notes that more than:
 - **8.8 lakh beneficiaries** are covered

National Family Benefit Scheme (NFBS) :

- Under **NFBS**, a one-time assistance of:
 - **₹20,000** is provided
- It is given to families in case of death of a **primary breadwinner aged 18–59 years**.
- The study recommends that:
 - The amount should be revised to approximately **₹38,200 (nearly ₹40,000)**

Annapurna Scheme :

- Under the **Annapurna Scheme**, eligible senior citizens who are not receiving pensions are provided:
 - **10 kg of food grains per month free of cost**
- This ensures food security for uncovered elderly beneficiaries.

Regional Performance and Outcomes :

- The study observed that states providing **higher top-ups** to central pensions showed:
 - Better **income stability**
 - Improved **well-being of beneficiaries**
- Such states include:
 - **Andhra Pradesh**
 - **Telangana**
 - **Haryana**
- It concluded that state-level supplementation improves the effectiveness of NSAP.

Key Recommendations of the Study :

National Floor Pension (NFP)

- The study recommended the introduction of a **National Floor Pension (NFP)** similar to the:
 - **National Floor Level Minimum Wage**
- The objective is to ensure:
 - A **minimum guaranteed pension across all states**

Inflation Indexation :

- The study recommended that the **NFP should be linked to the Consumer Price Index (CPI)**.
- This would ensure:
 - **Automatic adjustment with inflation**
 - **Annual revision based on cost of living**

State Top-Ups :

- The study recommended that states should:
 - Provide **additional top-ups** over the central pension

- Follow a **uniform and transparent mechanism**
- This would help reduce:
 - **Regional disparities in pension benefits**

SEHAT Mission: Linking Agriculture and Health (2026)



Why in News

- Union Ministers **Shri JP Nadda** and **Shri Shivraj Singh Chouhan** launched the **SEHAT Mission** in **New Delhi** on **11 May 2026**.
- The mission is a joint initiative of:
 - **ICAR (Indian Council of Agricultural Research)**
 - **ICMR (Indian Council of Medical Research)**
- It aims to integrate **agriculture, nutrition, and public health** under the vision:
 - **“Healthy Food, Healthy Farms and a Healthy India”**

About SEHAT Mission

Full Form

- **SEHAT** stands for **Science Excellence for Health through Agricultural Transformation**.

Objective

- To integrate **agriculture and health systems** for:
 - **Nutrition improvement**
 - **Disease prevention**
 - **Evidence-based policymaking**
- To promote **preventive healthcare** through food systems.

Key Features

Agriculture–Health Integration

- Establishes linkage between:
 - **Farm production**
 - **Nutrition outcomes**

- **Public health systems**

Nutrition-Focused Agriculture

- Promotes:
 - **Bio-fortified crops**
 - **Nutri-rich traditional crops (millets: ragi, bajra, jowar)**
- Aims to reduce:
 - **Hidden hunger**
 - **Micronutrient deficiencies**

Integrated Farming Systems

- Encourages diversification through:
 - **Crop farming**
 - **Horticulture**
 - **Animal husbandry**
 - **Fisheries**
 - **Beekeeping**
- Aims to improve:
 - **Nutrition security**
 - **Farmer income**

Health Focus

- Targets reduction of:
 - **Non-communicable diseases (NCDs)** such as:
 - **Diabetes**
 - **Hypertension**
- Promotes **food-based preventive healthcare**

Farmer Health and Safety

- Focuses on:
 - Reducing **pesticide exposure risks**
 - Promoting **safe agricultural practices**

One Health Approach

- Integrates:
 - **Human health**
 - **Animal health**
 - **Environmental health**

Significance

Public Health

- Addresses:
 - **Malnutrition**
 - **Lifestyle diseases**
- Promotes **preventive healthcare** through diet

Agriculture Sector

- Encourages shift from:
 - **Food security** → **Nutrition security**
- Promotes **scientific crop planning**

Policy Integration

- Strengthens coordination between:
 - Agriculture and health ministries
- Promotes evidence-based policymaking

Centre and West Bengal Sign MoU for PM SHRI Schools Scheme



Why in News?

- The Ministry of Education and the West Bengal government signed an **MoU (Memorandum of Understanding)** to implement the: **PM SHRI Schools Scheme**
- With this agreement, West Bengal officially joined the Centre's flagship school transformation programme aligned with: **National Education Policy (NEP) 2020**

Key Highlights

MoU Signed Between

Representatives of:

- Central Government
- West Bengal Government

Signed By:

- **Sanjay Kumar**
 - Secretary, Department of School Education and Literacy (**DoSEL**)
- **Dheeraj Sahu**
 - Additional Secretary
- **Binod Kumar**
 - Additional Chief Secretary, West Bengal

What is PM SHRI Scheme?

Full Form

Pradhan Mantri Schools for Rising India (PM-SHRI)

Launch Year

- Launched in:
 - **September 2022**

Ministry

Implemented under:

- Ministry of Education

Main Objective

The scheme aims to:

- Develop over **14,500 model schools**
- Transform existing government schools into:
 - Modern
 - Inclusive
 - High-quality institutions

Alignment with NEP 2020

- The scheme reflects the vision of **National Education Policy (NEP) 2020**

Focus Areas:

- Holistic education
- Skill development
- Experiential learning
- Technology integration
- Improved learning outcomes

Purpose of PM SHRI Schools

PM SHRI schools will act as Model Schools

These schools will:

- Demonstrate best teaching practices
- Guide nearby schools
- Promote innovation in education

Key Features of PM SHRI Schools

1. Enhanced Infrastructure

Schools will get:

- Modern laboratories
- Libraries
- Art rooms
- Sports facilities

2. Technology Integration

Focus on:

- Smart classrooms
- Digital learning tools
- ICT-based education

3. Holistic Learning

Includes:

- Play-based learning
- Activity-based learning
- Flexible teaching methods

4. School Quality Assessment Framework (SQUAF)

Purpose:

- Regular evaluation of schools
- Maintain quality standards

Duration of Scheme

Time Period

- From:
 - **2022–23 to 2026–27**

- Total duration:
 - 5 years

Funding Pattern of PM SHRI Scheme

General States & UTs with Legislature

Funding Ratio:

- 60 : 40

Contribution:

- 60% → Central Government
- 40% → State Government

Northeastern & Himalayan States

Including:

- Jammu & Kashmir

Funding Ratio:

- 90 : 10

Contribution:

- 90% → Centre
- 10% → State

Union Territories Without Legislature

Funding:

- 100% funded by Central Government

Current Status of PM SHRI Schools

Schools Selected So Far

- Around:
 - 13,091 PM SHRI schools have already been selected across India.

Why Was West Bengal Important?

Earlier Opposition

- The previous All India Trinamool Congress (TMC) government led by Mamata Banerjee had refused to sign the MoU.

Main Reasons:

- Differences over:
 - Scheme branding
 - Implementation structure

Political Context

Recent Development

- The Bharatiya Janata Party (BJP) formed government in West Bengal after Assembly elections.
- After this political change, the state joined the PM SHRI scheme.

States Yet to Join

After West Bengal joined:

- Remaining states yet to sign the MoU:
 - Kerala
 - Tamil Nadu

Importance of PM SHRI Scheme

Educational Significance

The scheme will help in:

- Improving school infrastructure
- Better learning outcomes
- Modernising government schools
- Promoting digital education
- Implementing NEP 2020 effectively

The Idu Mishmi of Arunachal Pradesh: Conservation Rooted in Cosmology and the Challenge of Change



Why in News?

- A recent discussion highlights the **Idu Mishmi tribe of Arunachal Pradesh** and their **unique conservation practices rooted in cosmology**, and examines how these systems are affected by **modern development, cultural change, and religious conversion**.

About the Idu Mishmi :

The **Idu Mishmi** are one of the tribal communities of India living mainly in:

- Dibang Valley
- Lower Dibang
- Lohit districts of **Arunachal Pradesh**

Their region lies in a globally significant **biodiversity hotspot**, where cultural traditions are closely linked with ecological systems.

India is home to:

- Over **104 million indigenous people**
- Across **705 ethnic groups**

Core Idea: Conservation Through Cosmology

For the Idu Mishmi, conservation is not a separate activity but is embedded in:

- Language
- Oral traditions

- Rituals
- Everyday life

The forest is not external to the village but is part of lived cultural existence.

Conservation is expressed through:

- Restraint
- Ritual practices
- Continuous negotiation with nature

1. Hunting as a Regulated Practice

- Hunting among the Idu Mishmi is not unrestricted.

Key Practices:

- Guided by principles known as **Aangii**
- Ritual specialists interpret:
 - Dreams
 - Animal calls
 - Symbolic signs

Restrictions:

- Hunting is avoided if signs are unfavourable
- Pregnant animals are not killed
- Breeding seasons are avoided
- Waste is socially condemned

Spiritual Belief:

- Forest deities such as **Shyoto** are believed to oversee ecological conduct

Thus, conservation emerges through **moral and spiritual limits** rather than formal rules.

2. Sacred Geographies

- Certain forest areas are considered sacred and protected through belief systems.

Key Features:

- Inhabited by powerful spirits
- Protected as ancestral land
- Boundaries preserved through oral traditions

Example: Athu-Popu

- High-altitude sacred site near Kayala Pass (~3500 m)
- Considered a transitional space for souls after death
- Protected through ritual memory and ancestral narratives

These beliefs ensure **long-term ecological preservation**.

3. Ethic of Sufficiency in Resource Use

- The Idu Mishmi are not strict preservationists; they use natural resources but with restraint.

Practices:

- Shifting cultivation with regeneration cycles
- Grazing for cattle (Gayal)
- Selective timber extraction
- Social disapproval of overexploitation

Core Principle:

- Use resources **only as needed**
- Allow **natural regeneration**

Overuse is seen as irresponsibility rather than efficiency.

4. Festivals as Ecological Institutions

Festivals play a major role in reinforcing ecological ethics.

Important Festivals:

- **Reh Festival** (February)
- **Ke-Meh-Ha** (post-harvest festival)

Functions:

- Ritual offerings to deities (e.g., Maselo-Zinu)
- Gratitude for natural abundance
- Ensuring crops are consumed only after ritual acknowledgment

Ecological Role:

- Align human activities with seasonal cycles
- Transmit ecological knowledge through:
 - Songs
 - Rituals
 - Social norms

5. Everyday Transmission of Ecological Knowledge

Ecological knowledge is passed through:

- Observation
- Participation in daily life
- Community norms

Children learn:

- Plant uses and medicinal knowledge
- Animal breeding cycles
- Protected natural spaces

This creates **informal but strong environmental education systems**.

6. Human–Nature Relationship: “Forest as Family”

In Idu cosmology:

- Humans and tigers are considered siblings
- Tigers are the elder brother who stayed in the forest

Conservation Impact:

- Killing tigers is prohibited
- Protection extends to other species
- Conservation is rooted in **kinship-based morality**

Thus, nature is not a resource but a **living relative**.

7. Rethinking Conservation Balance

The Idu system is based on social and moral norms:

- Take, but do not waste
- Use, but allow regeneration
- Build, but respect sacred spaces

Conservation is not codified law but:

- Community-enforced ethics
- Social accountability
- Cultural restraint

8. Pressures of Change

The Dibang Valley is undergoing transformation due to:

- Road expansion
- Hydropower projects
- Market integration
- Migration
- Educational and employment mobility

Impacts:

- Commercialisation of forest resources
- Changing livelihoods
- Shift away from traditional systems

9. Cultural and Religious Transition

A growing number of Idu Mishmi people are converting to Christianity.

Reasons:

- Access to education
- Institutional support
- Wider social integration

Impact on Conservation Ethic:

- Decline in belief in forest spirits
- Reduced ritual-based restrictions
- Erosion of sacred geography concepts
- Shift from collective taboo to individual ethics

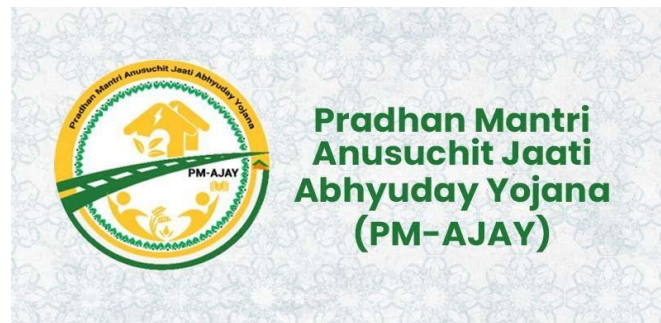
Key Concern

The core question raised is:

If conservation is rooted in cosmology, what happens when that cosmology changes?

- Ritual authority may weaken
- Sacred sites may lose meaning
- Ecological restraint may shift from belief to regulation

Union Minister Launches PM-AJAY Portal and AJAY Mobile App for SC Welfare Schemes



Why in News?

- On **26 May 2026**, Union Minister for Social Justice and Empowerment launched the **PM-AJAY Portal** and **AJAY Mobile App** to strengthen and digitize the implementation of welfare schemes for Scheduled Castes (SCs).

Objective of the Initiative

The initiative aims to:

- Shift from **paper-based workflow** to **end-to-end digital processing**
- Enable **real-time monitoring**
- Improve **transparent governance**
- Ensure **milestone-linked fund flow**
- Strengthen **field-level implementation and reporting**

About PM-AJAY Scheme

- The **Pradhan Mantri Anusuchit Jaati Abhyuday Yojna (PM-AJAY)** is implemented by the Department of Social Justice and Empowerment for the socio-economic development of SC communities.

It includes multiple components:

- Adarsh Gram Component
- Grant-in-Aid (GIA) Component
- Hostel Component

PM-AJAY Portal: Key Features

- The PM-AJAY Portal acts as a **central digital command system** for scheme implementation.

Major Functions:

- Real-time monitoring of scheme progress
- Transparent governance system
- Milestone-linked fund flow mechanism
- National, state, and district-level dashboards
- Monitoring of **50 socio-economic indicators**

- Coverage across **10 developmental domains**
- Automated tracking of Village Development Plans (VDPs)

AJAY Mobile App: Key Features

- The **AJAY Mobile App** provides mobile-based access for field-level implementation and monitoring.

Functions include:

- Village-level planning and implementation
- Real-time reporting
- Geo-tagging of activities
- Photo uploads and inspections
- Notifications and alerts
- Unified login system
- Role-based access control

Users of the App:

- Ministry officials
- State and district authorities
- Implementing agencies
- Inspection officers
- Hostel administrators
- Field functionaries

Integrated Components

The mobile app integrates:

1. Adarsh Gram Component

- Taken from PMAGY portal
- Focus on model village development

2. Grant-in-Aid (GIA) Component

- Supports skilling and employment
- Works as centralized MIS for financial tracking

3. Hostel Component

- Supports SC student accommodation facilities

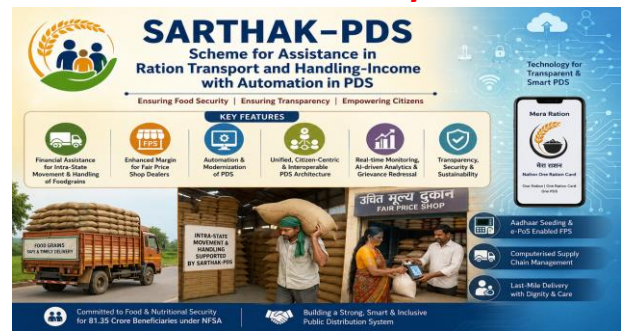
Significance of the Portal & App

- Ensures **transparent and accountable governance**
- Improves **efficiency in welfare delivery**
- Enables **real-time tracking of schemes**
- Strengthens **coordination between Centre, States, and field units**
- Reduces dependence on manual and desktop-based systems
- Enhances **beneficiary-centric service delivery**

Conclusion

The launch of the PM-AJAY Portal and AJAY Mobile App marks a significant step towards **digital governance in SC welfare schemes**, ensuring faster implementation, better monitoring, and improved transparency in socio-economic development initiatives for Scheduled Castes.

Cabinet Approves SARTHAK-PDS Scheme to Modernize Food Security



Why in News?

- The Cabinet Committee on Economic Affairs (CCEA) approved the **SARTHAK-Public Distribution System Scheme** with a financial outlay of **₹25,530 crore** for the period **2026–31**.
- The initiative is designed to modernize India's Public Distribution System (PDS) by integrating advanced technologies like Artificial Intelligence (AI), Machine Learning (ML), Blockchain, and Natural Language Processing (NLP) while strengthening the enforcement of the **National Food Security Act (NFSA), 2013**.

What is the SARTHAK-PDS Scheme?

SARTHAK-PDS stands for **"Scheme for Assistance in Ration Transport and Handling-Income with Automation in PDS."** It acts as an umbrella program that merges two pre-existing central schemes:

1. Assistance for intra-state movement and Fair Price Shop (FPS) dealer margins under the NFSA.
2. SMART PDS (focused on technology-driven public distribution reforms).

Strategic Objectives:

- **Technology-Driven Reform:** Deploy AI, ML, Blockchain, and NLP tools to enable real-time tracking, intelligent monitoring, and data analytics across the entire foodgrain supply chain.
- **Reduction of Leverages:** Improve operational transparency, minimize the diversion of essential commodities, and tighten supply-chain monitoring alongside secure beneficiary authentication.
- **Citizen-Centric Governance:** Build an interoperable, unified PDS architecture while

upgrading public grievance redressal mechanisms and feedback loops.

- **Strengthening Last-Mile Logistics:** Provide direct financial assistance for intra-state transportation and foodgrain handling, while improving FPS dealer margins to ensure the viable operation of ration shops.
- **Data-Driven Monitoring:** Establish dedicated State Command and Control Centres to facilitate predictive analytics and real-time administrative decision-making.

Architecture of India's Public Distribution System

The PDS is India's largest food security safety net. Subsidized foodgrains are distributed to eligible households through a network of **Fair Price Shops (FPS)** under the joint responsibility of the Central and State Governments.

- [Central Government / FCI] : (Procurement, Bulk Storage, and Allocation)
- [State Governments / UTs] : (Identification, Ration Cards, and Local Transport)
- [Fair Price Shops (FPS)] → [Eligible Beneficiaries (AAY & PHH)]

The National Food Security Act (NFSA), 2013

The NFSA legally entitles a large portion of the population to receive subsidized foodgrains through the Targeted Public Distribution System (TPDS):

- Covers up to **75% of the rural population** and up to **50% of the urban population**.
- Based on Census 2011 parameters, this encompasses approximately **81.35 crore beneficiaries**.

Categories of Beneficiaries:

- **Antyodaya Anna Yojana (AAY) Households:** Representing the poorest segment of society, these households are entitled to **35 kg of foodgrains per month**. This includes households headed by widows, elderly, or disabled individuals without social support, primitive tribal groups, landless agricultural laborers, and marginal artisans.
- **Priority Households (PHH):** Identified directly by State Governments and Union Territory administrations based on localized socio-economic criteria, these beneficiaries are entitled to **5 kg of foodgrains per person per month**.

PMGKAY Free Foodgrain Distribution: To ease the financial burden on vulnerable families, the government transitioned to providing free foodgrains under the NFSA starting 1 January 2023. This arrangement under the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) has been extended for five years from **1 January 2024**, backed by an estimated **₹11.80 lakh crore** central investment.

Key Digital Portability Tools:

- **One Nation One Ration Card (ONORC):** Nationwide portability allowing beneficiaries to claim their foodgrain entitlements from any operational FPS in the country. The system uses biometric authentication via electronic Point of Sale (ePoS) devices.
- **Mera Ration 2.0:** A mobile application providing beneficiaries with real-time access to entitlement breakdowns, direct FPS tracking, and transaction histories.
- **Anna Mitra App:** Designed to optimize field operations by aiding distribution officials and FPS dealers with inventory management, spot inspections, compliance logs, and localized data verification.

Major Issues Associated with the PDS

- **Leakages and Diversion:** Pilferage, ghost beneficiaries, and duplicate ration cards continue to impact supply efficiency. A November 2024 assessment indicated that roughly **28% of foodgrains** allocated through the system fail to reach intended households.
- **Exclusion Errors:** Documentation deficits continue to exclude vulnerable populations. Reports from 2022 estimated that over **90 million eligible individuals** remained outside the legal safety net of the TPDS due to structural tracking gaps.
- **Infrastructure and Connectivity Gaps:** Storage losses, lack of modern warehousing, and transport bottlenecks create regional variations. Remote tribal zones can experience inventory stock-outs due to transit delays, while urban hubs maintain regular supplies. Furthermore, ePoS transactions frequently face disruptions in rural areas due to weak internet connectivity or biometric mismatches.
- **Fiscal Burden:** Rising costs associated with procurement, long-term storage, and nationwide transportation place constant

pressure on the central government's fiscal resources.

Measures to Strengthen the Distribution Framework

1. Digital and Technological Upgrades

- **AI-Driven Anomaly Detection:** Apply machine learning models to live e-POS transaction registries to automatically identify suspicious patterns, such as sudden bulk withdrawals or repetitive ghost logs.
- **Multi-Modal Biometrics:** Integrate alternative scanning systems (such as iris scanning or face recognition alongside standard fingerprints) to lower authentication failure rates for manual laborers and elderly citizens.

2. Supply-Chain and Logistics Fortification

- **GPS Fleet Tracking:** Mandate real-time GPS tracking on all transport vehicles moving grains from Food Corporation of India (FCI) depots to retail outlets to prevent unauthorized transit offloading.
- **Census Data Synchronization:** Update existing beneficiary rolls by cross-linking the PDS database with contemporary records like the *e-Shram portal* to include vulnerable families who emerged post-2011.
- **FPS Business Diversion:** Transition ration shop dealers into multi-service kiosks (offering banking correspondences or utility bill collection services) to improve their financial viability and decrease incentives for leakages.

3. Nutrition, Buffer, and Cash Alternatives

- **Universal Fortification Monitoring:** Maintain strict chemical and batch testing during the blending phase of Fortified Rice Kernels (FRK) to guarantee statutory requirements for Iron, Folic Acid, and Vitamin B12 are met.
- **Targeted Direct Benefit Transfer (DBT):** Expand optional cash transfers in major urban centers featuring deep banking penetration and high retail market availability, reducing physical handling, freight, and warehousing overheads.
- **Strategic Buffer Sells:** Use the Open Market Sale Scheme (OMSS-D) to release excess central pool stocks during inflationary pressures, helping stabilize market pricing while reducing storage spoilage.

Conclusion

The SARTHAK-PDS scheme represents a major shift from a purely manual distribution network to an automated, data-driven food security framework. By embedding AI, blockchain, and real-time processing grids into the supply chain, the program seeks to maximize transparency and structural compliance under the NFSA. Achieving long-term success will rely on balancing technological efficiency with digital inclusion, rural accessibility, and smooth coordination between central and state agencies.



India's Fiscal Outlook: Rising State Stress and Fiscal Discipline Concerns



Why in News?

- The **Ministry of Finance's Monthly Economic Review (April 2026)** highlights that several **Indian states with revenue deficits and high debt burdens** may face **fiscal stress**, reduced flexibility in responding to economic shocks, and potential violations of the **"golden rule" of fiscal financing**.

Key Highlights of India's Fiscal Outlook

1. Union Government Position

- The Union government maintains a **cautious fiscal stance** supported by conservative assumptions of **tax buoyancy (0.8)**.
- An **Economic Stabilisation Fund** has been created to act as a buffer against external shocks without disturbing **fiscal deficit targets**.
- This provides short-term resilience against global uncertainties.

2. State-Level Revenue Stress

- Out of 18 major states, **9 states are in revenue deficit**, including:

- Himachal Pradesh (-2.4%)
- Punjab (-2.2%)
- Kerala (-2.1%)
- Andhra Pradesh (-1.1%)
- Rajasthan (-1.1%)
- Haryana (-0.9%)
- Karnataka (-0.7%)
- Maharashtra (-0.7%)
- Chhattisgarh (-0.3%)

3. Interest Burden on States

- High debt servicing reduces fiscal flexibility for many states.
- **Punjab** faces the highest stress, spending **22.8% of revenue receipts on interest payments**.

4. Fiscal Deficit vs Investment Spending

- Around **13 states budget fiscal deficits of 3% or more of GSDP**.
- However, in some cases like **Odisha**, higher fiscal deficit reflects **capital investment-driven spending (6.5% of GSDP)** rather than fiscal stress.
- This shows that deficits are not always negative if directed toward **asset creation**.

5. Revenue Surplus States

- Eight states show **revenue surplus**, including:
 - Odisha (3%)
 - Jharkhand (2.5%)
 - Uttar Pradesh (1.6%)
 - Goa (1.3%)
 - Gujarat (0.8%)
 - Uttarakhand (0.6%)
 - Telangana (0.3%)
 - Bihar (0.1%)

6. Impact of 16th Finance Commission

- FY 2026–27 marks the beginning of the **16th Finance Commission cycle**.
- Concerns include:
 - Changes in **tax devolution formula**
 - Removal of **Revenue Deficit Grants**
- This may increase fiscal uncertainty for states.

7. Rising Debt Risks

- State liabilities are estimated at **35–45% of GSDP**.
- Stressed states may demand:
 - Higher central transfers
 - Relaxation of borrowing limits
- This complicates the Centre's own **fiscal consolidation efforts**.

Concerns in India's Fiscal Outlook

1. Union Government Concerns

- Risk of fiscal deficit exceeding target of **4.3%**, potentially reaching **4.5%** due to emergency spending.
- **GDP growth slowdown** (IMF estimate: ~6.5%) may reduce tax revenue collection.
- Rising **energy import costs** due to crude oil prices (~USD 113–115/barrel) increase subsidy burden.
- Higher **fertilizer and petroleum subsidies** drain the **Economic Stabilisation Fund**.
- **Global disruptions** (e.g., shipping routes) increase inflation and logistics costs.

2. State Government Concerns

- Rising oil prices may force cuts in **VAT rates**, reducing state revenue.
- **Cost-push inflation** reduces consumer spending, affecting **SGST collections**.
- Several states are violating the **"golden rule"** of **fiscal policy** by using borrowing for **revenue expenditure** instead of capital creation.
- Increasing dependence on the Centre may lead to demands for:
 - Higher transfers
 - Relaxation of fiscal limits

Golden Rule of Fiscal Financing

Meaning

- The **golden rule** states that governments should borrow only for **capital expenditure**, not for **current expenditure**.
- Current spending (salaries, subsidies) should be financed through **current revenue**, not debt.

Core Principle

- Current taxpayers pay for current services.
- Future generations repay debt only for **assets they benefit from**.

Why It Matters

1. Intergenerational Equity

- Prevents shifting the burden of today's consumption to future generations.
- Ensures fairness in public borrowing.

2. Economic Growth

- Capital expenditure has a high **fiscal multiplier**.
- Infrastructure spending boosts **jobs, productivity, and GDP growth**.

3. Fiscal Discipline

- Prevents excessive borrowing for populist or short-term schemes.
- Reduces risk of **unsustainable debt accumulation**.

Measures Needed to Strengthen Fiscal Outlook

1. Strategies for the Union Government

- Strengthen **energy diplomacy (G2G agreements)** with countries like Russia, Brazil, and Guyana to reduce crude import costs.
- Prioritise **capital expenditure** in high-multiplier sectors such as:
 - Green Hydrogen
 - Semiconductors
- Ensure **monetary–fiscal coordination** with RBI to maintain exchange rate stability and control imported inflation.

2. Strategies for States

- Diversify revenue sources beyond **VAT on petroleum products**.
- Strengthen **excise and stamp duty collections** through digitisation.
- Promote **green energy transition** through:
 - Electric vehicles (EVs)
 - Solar-powered irrigation systems
- Adhere strictly to **FRBM targets (≤3% fiscal deficit)** and avoid off-budget borrowings.
- Focus on **productive borrowing** linked to job creation and revenue generation.
- Improve governance to access **performance-linked Finance Commission grants (20%)**.

RBI Gold Reserves – Repatriation of Gold to India



Why is this in the News?

The **Reserve Bank of India (RBI)** has shifted a large amount of India's **gold reserves back to India** from foreign storage locations like:

- **Bank of England (BoE)**
- **Bank for International Settlements (BIS)**

In 2025–26 alone, RBI moved around **104.23 metric tonnes (MT)** of gold to India.

This reflects a broader global trend where countries are **bringing gold back home for safety and strategic control**.

Key Highlights of RBI Gold Movement

1. Large-Scale Gold Repatriation

- RBI transferred **104.23 MT of gold in 2025–26**
- This continues a **3-year trend of gold being brought back to India**

2. 3-Year Trend of Gold Transfers

- 2025–26: **168.06 MT**
- 2024–25: **107.21 MT**
- 2023–24: **103.68 MT**

This shows a consistent strategy of **increasing domestic gold storage**.

3. Decline in Foreign Storage Dependency

- Around **197.67 MT of gold** still remains in:
 - Bank of England
 - BIS (Bank for International Settlements)

However, India is reducing dependence on foreign vaults, especially in **London and New York**.

4. Rise in Domestic Gold Holdings

- As of March 2026:
 - **77% of RBI's gold is stored in India**
 - In March 2023, it was only **38%**

This is a major shift towards **domestic storage of gold reserves**.

5. Geopolitical Reason for the Shift

A key reason for this trend is global uncertainty, especially after:

- **Russia-Ukraine conflict (2022)**
- Freezing of Russian foreign currency reserves by Western countries

This led central banks to realize:

- Foreign assets can be **restricted or frozen during crises**

So countries prefer:

- **"Safe and domestic storage" of gold**

6. Gold in India's Forex Reserves

As of 2025–26, India's foreign exchange reserves consist of:

- **Foreign Currency Assets:** ~80.0%
- **Gold Reserves:** ~16.7%
- **Special Drawing Rights (SDRs):** ~2.4%
- **Reserve Position in IMF:** ~0.9%

Key point:

- Gold's share has increased from **11.7% to 16.7%**
- This rise is due to:
 - Higher gold holdings
 - Increase in global gold prices

7. Legal Framework – RBI Act, 1934

The **RBI Act, 1934** allows the central bank to:

- Hold foreign exchange assets
- Buy and manage:
 - Foreign government securities
 - Deposits with foreign central banks
 - Gold and other approved assets

This forms the legal basis of India's **foreign exchange management system**.

8. Global Trend in Gold Buying

According to the **World Gold Council**:

- RBI's total gold reserves increased by only **10% (~86 MT)** in 3 years
- But many countries are aggressively buying gold:
 - **Poland**
 - **Uzbekistan**
 - **China**

Reason:

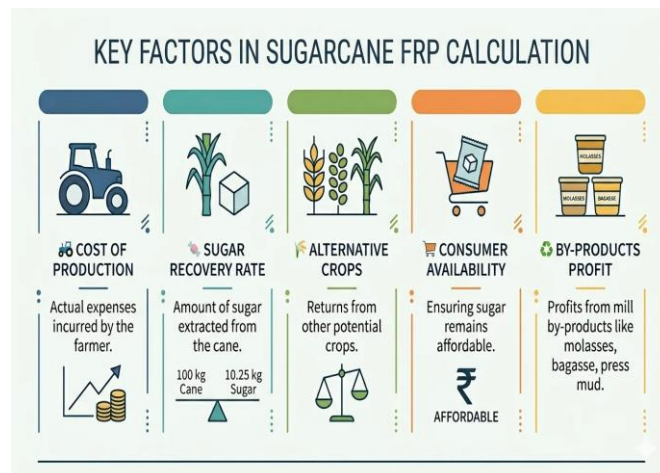
- To reduce dependence on **US dollar-based reserves**
- To protect against **geopolitical risks and sanctions**

Important Concept: Why Countries Store Gold Domestically?

Countries prefer keeping gold at home because:

- It ensures **full control over assets**
- Reduces risk of **foreign freezing or seizure**
- Improves **financial sovereignty**
- Enhances **crisis resilience**

Sugarcane FRP Hike for 2026-27 Season



Why in News?

The Cabinet Committee on Economic Affairs (CCEA) has approved an increase in the Fair and Remunerative Price (FRP) of sugarcane to Rs 365 per quintal for the upcoming 2026-27 marketing season.

What is Fair and Remunerative Price (FRP)?

- **Core Concept:** The FRP is the minimum price that sugar mills are legally required to pay to farmers for the sugarcane bought from them.
- **Legal Obligation:** Unlike the Minimum Support Price (MSP)—which serves as a recommendatory floor price for government buying—the FRP is a mandatory statutory requirement. It is enforced under the **Sugarcane (Control) Order, 1966**. This means failing to clear FRP dues constitutes a direct legal violation that can lead to penalties for the mill owners.
- **How it is Calculated:** The CCEA finalizes the FRP based on detailed cost and pricing reports submitted by the Commission for Agricultural Costs and Prices (CACP).

Comparison: FRP vs. MSP vs. SAP

Understanding the differences between the Central government's pricing systems and state-level modifications is vital for agricultural policy:

Feature	Fair & Remunerative Price (FRP)	Minimum Support Price (MSP)	State Advised Price (SAP)
Target Crop	Only Sugarcane.	22 mandated crops (such as Cereals, Pulses, and Oilseeds).	Sugarcane (applied only in specific states).
Legal Status	Statutory and completely mandatory for mills to clear.	No direct legal guarantee; functions as a government fallback price.	Mandatory for mills operating within that specific state.
Who Pays	Private and Cooperative Sugar Mills.	The Government (only if they actively procure the yield).	Sugar Mills.
Fixing Authority	Central Government (CCEA).	Central Government (CCEA).	Individual State Governments (such as Uttar Pradesh, Punjab, and Haryana).

Key Difference: State Advised Prices (SAP) are generally fixed higher than the Central government's FRP by specific state authorities due to local political and economic factors. Mills in those regions are legally required to pay the higher SAP rate to farmers.

India's Agricultural Trade and Export Resilience



Why in News?

- India's farm sector showed strong **resilience against steep US tariff hikes**, posting a **2.3% year-on-year growth** in 2025-26.
- Agricultural exports climbed to **USD 53.1 billion**, easily beating the country's overall merchandise export growth.

Current Status of India's Agricultural Trade

- **Beating General Exports:** The 2.3% rise in farm shipments was much stronger than India's overall merchandise export growth, which grew by a tiny **0.9% (USD 441.7 billion)**.

- **Near-Record Shipments:** Total exports finished just under the historic peak of **USD 53.2 billion** from 2022-23. This performance was driven by heavy demand from the **UAE and Saudi Arabia**, proving the global competitiveness of Indian agriculture.
- **Shrinking Trade Surplus:** While India remains a net exporter of farm goods, its agricultural trade surplus is getting smaller. The surplus dropped from **USD 27.7 billion** in 2013-14 to **USD 12.7 billion** in 2025-26 because of a steady rise in structural imports.
- **A Bright Spot:** Even with a shrinking surplus, agriculture remains a positive highlight compared to the constant trade deficits seen in sectors like electronics and energy.

Impact of US Tariffs on Indian Trade

- **Volatile Tariff Cycles:** The US rolled out an unpredictable tariff plan, starting at **25%** in August 2025, climbing to a peak of **50%**, and eventually settling between **10% and 18%** by early 2026.
- **Hit to High-Value Goods:** These duties hurt valuable Indian exports to the US, particularly **pharmaceuticals, readymade clothing, and gems and jewelry**.
- **Farm Export Drop:** Within the agricultural sector, shipments to the US shrank notably across **marine products, spices, basmati rice, and processed fruits or vegetables**.

How India Maintained Export Growth

- **Record Seafood Sales:** Despite losing ground in the US, overall **marine product exports rose 13.9% to clear USD 8.4 billion**, thanks to booming demand for frozen shrimp in Southeast Asia.
- **Buffalo Meat Surge:** Shipments of buffalo meat **jumped 25.6%**, backed by large orders from Vietnam, Egypt, and Saudi Arabia.
- **Coffee Milestone:** For the first time, **coffee exports cleared USD 2 billion**. A severe harvest shortfall in top producers Brazil and Vietnam allowed Indian Robusta beans to fetch premium prices in European and Russian markets.

- **Fresh Produce Expansion:** Fresh fruits and vegetables, like grapes and pomegranates, found strong buyers in the **UAE, Iraq, and the Netherlands**, keeping the export base diversified.

Concerning Trends in Agricultural Trade

1. Import Dependencies and Drainage

- **The Edible Oil Drain:** India still imports nearly **60% of its cooking oil**. This bill rose to a heavy **USD 19.56 billion (169.4 lakh tonnes)** in 2025-26, creating a major drain on foreign exchange reserves.
- **Persistent Pulses Deficit:** Because of domestic supply shortages, India had to import about **59.6 lakh tonnes of pulses** to meet local food and nutritional needs.
- **The Cotton Reversal:** In a major structural change, India turned from a net exporter into a **net importer of raw cotton**, with imports reaching **USD 1.9 billion**. This is blamed on flat domestic yields and a lack of new seed technologies after the early success of Bt cotton.
- **Rising Fruit Imports:** Driven by rising middle-class incomes, fresh fruit imports (like apples, kiwis, and dates) topped **USD 3.5 billion**, with the US ironically acting as India's biggest supplier.

2. Export Barriers and Weaknesses

- **Strict Quality Barriers:** Developed nations are using tight **Sanitary and Phytosanitary (SPS) rules** and Maximum Residue Limits (MRLs) as non-tariff trade barriers. This has led to **European bans on Indian Basmati rice and tea** due to pesticide traces, alongside **US FDA alerts on Indian spices and shrimp**.
- **Unfair Global Subsidies:** Rich nations heavily subsidize their farming sectors. For instance, the **US gives USD 40,000 to USD 61,286 per farmer annually**, while **India provides just USD 282 to USD 300**. This keeps global commodity prices artificially low and hurts Indian competitiveness.
- **WTO Subsidy Disputes:** Nations like the US, Canada, and Australia are fighting India's

Minimum Support Price (MSP) system at the WTO. They claim it breaks the **10% Amber Box ceiling** for developing countries. India defends this under Special and Differential Treatment, arguing the 1986-88 price baseline used for calculations is totally outdated.

- **Low Share of Processed Goods:** Value-added processed items make up only **20.4%** of India's total farm exports. The country relies heavily on raw primary commodities due to weak food processing setups, poor cold chain logistics, and lack of export-grade standardization.
- **Local Logistics Bottlenecks:** Small farm sizes, low mechanization, and **high domestic transport costs** prevent Indian agriculture from achieving good economies of scale.
- **Geopolitical Trade Cracks:** The successful export of G9 bananas from Andhra Pradesh's Rayalaseema region to Dubai and the Gulf has been **hit hard by conflicts in West Asia**. Blocked shipping lanes and stuck cargo have triggered bad price crashes for local growers.

Way Forward

- **Boosting Local Oilseed Crops:** India must run the **National Mission on Edible Oils (NMEO-OP)** with much more focus to cut down the expensive yearly import bill and reach self-sufficiency.
- **New Seed Tech for Cash Crops:** The country needs to quickly approve next-generation, **climate-resilient, high-yielding seeds** for crops like cotton to win back its status as a top global exporter.
- **Focusing on Value Addition:** Strengthening the food processing industry will help change the export mix from raw farm goods to **processed packaged foods**, bringing in better income and protecting farmers from global price crashes.
- **Signing Smart Free Trade Agreements (FTAs):** Finalizing long-term FTAs will give Indian farm goods **duty-free market access** and shield them from sudden protectionist tariff shocks in the future.

Financial Inclusion Transformation via DPI and AI



Why in News?

India is experiencing a major shift in its financial inclusion landscape. The country is moving past basic bank account access to build a technology-driven ecosystem powered by combining **Digital Public Infrastructure (DPI)** with **Artificial Intelligence (AI)**.

How Technology Drives Financial Inclusion

- **The JAM Trinity Foundation:** The combination of Jan Dhan bank accounts (**58.16 crore**), biometric identity verification (**over 144 crore** issued), and wide mobile connectivity (**125.87 crore** users) forms a unique financial identity. This ensures geographical location no longer blocks access to services.
- **Expanding Digital Payment Rails:** The **Unified Payments Interface (UPI)** has made digital payments accessible to everyone, making up **81%** of total retail transaction volumes. Concurrently, the **Direct Benefit Transfer (DBT)** model has saved the public exchequer **Rs 4.31 lakh crore** by eliminating leakages and duplicate beneficiaries.
- **AI-Powered Language Inclusion:** Through the **BHASHINI** project, the RBI and the Digital India BHASHINI Division are working on "**Banking BHASHINI**". This domain-specific language model provides financial services in all **22 scheduled regional languages**, removing literacy and language barriers.
- **Regulatory Sandbox Success:** The RBI Regulatory Sandbox provides a safe space to test fintech solutions like digital KYC and cybersecurity tools. A prime example is **MuleHunter.AI**, which detects **mule accounts** in real time to stop cybercrime.

- **What is a Mule Account?** A bank account used by criminals to receive and move stolen or illegal funds collected from scams, phishing, or illicit trafficking.
- **Support for Informal Labor:** The **Digital ShramSetu Mission** uses AI and Blockchain tools to assist **49 crore informal workers**, offering them a platform for real-time skill checks and easier access to basic financial security.
- **Frictionless Credit via ULI:** The **Unified Lending Interface (ULI)** operates as a shared digital highway for credit markets. It uses secure APIs to analyze an applicant's "**digital footprint**" to judge creditworthiness, aiming to fill a **USD 130-170 billion credit gap** for small businesses (MSMEs).
- **Consent-Based Data Architecture:** The **Account Aggregator (AA) system** allows citizens to share their financial records securely between institutions. This setup cuts down on paperwork and speeds up loan processing for over **25.29 crore linked users**.
- **What is the Account Aggregator Framework?** A secure DPI that lets individuals quickly share financial data (like statements or tax history) across entities digitally, operating purely on explicit user consent.

Understanding Digital Public Infrastructure (DPI)

Overview

DPI is a shared core digital network that allows a country to deliver vital public and corporate services to its population on a massive scale. Just like physical roads, railways, or power grids support industrial growth, DPI serves as the invisible digital highway system needed to run a modern economy.

The 3 Core Pillars of DPI

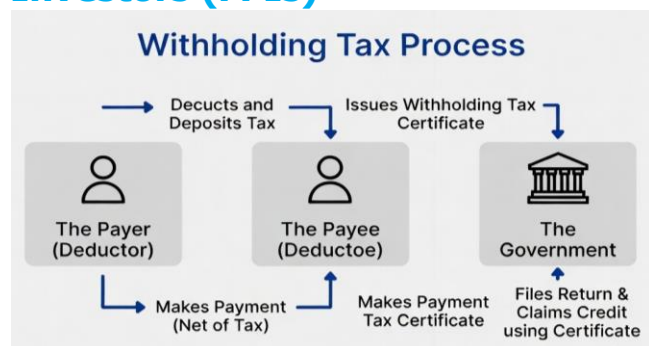
- **Digital Identity:** A secure, unique digital ID that verifies who a person is, cutting down identity fraud and making sure welfare benefits reach the correct recipient.
- **Real-Time Payments:** A fast, low-cost, connected payment network that links commercial banks, mobile wallets, and retail merchants instantly.
- **Data Exchange / Consent Layer:** A secure framework that lets individuals and

businesses share personal data files safely, digitally, and solely with explicit approval.

Main Characteristics of DPI

- **Interoperability:** Different platforms can communicate seamlessly with each other (e.g., across various UPI apps).
- **Open Source and APIs:** Uses open code and interfaces to prevent monopolies and encourage market competition.
- **Scalable and Low-Cost:** Built to handle billions of transactions quickly and affordably.
- **Public-Private Partnership (PPP) Model:** The government builds and monitors the underlying framework tracks, while private companies innovate and build user-friendly apps on top.

Proposal to Reduce Withholding Tax (WHT) on Foreign Portfolio Investors (FPIs)



Why in News?

- The government is looking into a major cut in the **Withholding Tax (WHT)** on **Foreign Portfolio Investors (FPIs)**. The plan is to drop it from **20% back to the old concessional rate of 5%**.
- This move aims to stop the heavy capital outflows that have shrunk India's foreign exchange reserves by almost **USD 38 billion** since March 2026.

Causes and Impact of High Tax Rates

- **Lower Returns:** A high 20% WHT reduces the net, risk-adjusted returns for foreign investors, making it harder for them to compound long-term gains.
- **Cash Flow and Paperwork:** The high rate creates quick liquidity bottlenecks for funds and adds to their administrative workload, as

they have to file complex paperwork to claim relief under **Double Taxation Avoidance Agreements (DTAA)**.

Significance of the Tax Reduction

- **Better Investment Appeal:** Lowering the tax rate instantly boosts post-tax returns for foreign funds. This makes Indian debt and financial assets much more attractive on the global stage.
- **Global Index Integration:** A competitive tax structure supports India's integration and weight in global bond indices.
- **Massive Expected Inflows:** Experts believe this policy shift could unlock **USD 45 to 50 billion** in stable, long-term investments over the next 2 years from global pension funds and endowments.

Understanding Withholding Tax (WHT)

- **What it is:** WHT—commonly known as **Tax Deducted at Source (TDS)** in India—is an advance tax cut directly from an investor's earnings before the final payment is sent to them.
- **Application on FPIs:** For foreign investors, this tax mainly applies to the **interest earned on government securities** and specific rupee-denominated corporate bonds. It helps the government collect taxes early and lowers tax evasion risks.
- **International Scope:** International WHT is the tax a local payer subtracts from payments sent to a non-resident earner living abroad. It is a standard global tool that allows governments to collect revenue generated inside their home borders.

EU Re-Includes India in Seafood Export Draft List



Why in News?

- The **European Union** has re-included India in its updated draft list for **aquaculture exports**. This decision ensures that seafood shipments will continue to flow without interruption to one of India's biggest global buyers.
- The new draft addresses and fixes the previous exclusion of India under **Implementing Regulation (EU) 2024/2598**.

Regulatory Compliance Actions

- **Meeting Strict Standards:** The re-inclusion happened because India closely followed **Delegated Regulation (EU) 2023/905**. This rule states that all imported animal products must be completely free from growth-promoting antimicrobials and antibiotics kept only for human medical care.
- **National Monitoring Networks:** India relies on strong tracking tools to prove its compliance. This includes the **National Residue Control Programme (NRCP)** and the **Post Harvest Testing Programme**, which constantly test for forbidden substances and drug residues.
- **Institutional Support:** The decision recognizes the ongoing work done by the Department of Commerce. Organizations like the **Marine Products Export Development Authority (MPEDA)** and the **Export Inspection Council (EIC)** have heavily upgraded quality checks and pushed for cleaner farming practices.
- **Trade Value:** The EU stands as India's **3rd-largest seafood market**, buying **18.94%** of the country's total fish exports. This trade was worth **USD 1.593 billion** in 2025-26, with farmed shrimp acting as the top product.

Current Landscape of Indian Aquaculture

- **Global Position:** India ranks as the **2nd-largest fish producer in the world** right behind China, generating about **8%** of global fish production.
- **Economic Share:** The fisheries industry makes up **7.43%** of India's total Agricultural Gross Value Added (GVA). Seafood exports hit a historic high of **Rs 62,408 crore** in fiscal year 2024-25, led by massive frozen shrimp orders from the US and China.

- **Production Boom:** Over the past ten years, India's fish production has almost doubled. Output reached **197.75 lakh tonnes** in 2024-25, with inland fish farms supplying roughly **75%** of that total.
- **Top States:** **Andhra Pradesh** leads the country as the biggest fish producer, followed by West Bengal, Uttar Pradesh, and Gujarat.

Main Government Support Initiatives

The state assists the sector through targeted development plans:

- **Pradhan Mantri Matsya Sampada Yojana (PMMSY):** Focuses on ecologically sustainable growth and modernizing the supply chain.
- **Fisheries and Aquaculture Infrastructure Development Fund (FIDF):** Provides concessional financing to construct cold storage units, harbors, and modern fish markets.
- **Pradhan Mantri Matsya Kisan Samridhi Sah Yojana:** Works to formalize the unorganized fisheries sector, offering digital identities and insurance cover to traditional fishers.

India's Blanket Sugar Export Prohibition



Why in News?

The **Directorate General of Foreign Trade (DGFT)** has updated the export rules for all categories of sugar, shifting them from "Restricted" to "**Prohibited**" until **30 September 2026**. This total freeze on outbound sales covers raw, white, and refined sugar. It represents an aggressive policy move to protect local supply lines against brewing weather and political risks.

Reasons for the Total Export Freeze

- **Long Crop Cycle vs. El Niño:** Global weather forecasts indicate a moderate-to-strong El Niño stretching through late 2026. This setup threatens the upcoming monsoon seasons. Because sugarcane takes a long time to grow—**11 to 12 months** in North India and **15 to 18 months** for specialized crops in Maharashtra—moisture stress right now will heavily shrink the country's harvest two years later. The state is locking down current supplies to build an advance multi-year buffer.
- **Fertilizer Supply Threats:** Growing sugarcane requires heavy water and chemical inputs. Conflict escalations in West Asia put vital sea routes and chokepoints at risk, threatening to disrupt global shipments of nitrogen and phosphate fertilizers. Local input shortages would directly slash future cane yields and factory sugar recovery rates.
- **Inflation Tracking:** Sugar holds a significant weight in the Consumer Price Index (CPI). Amid global food and fuel price volatility, this ban blocks speculative hoarding and stops local retail price spikes.
- **Stock Inventory Gaps:** Mills must submit monthly digital stock ledgers to dictate their local sales quotas. The government implemented this ban partly due to suspected gaps between declared virtual logs and physical sugar stocks kept in mill warehouses.
- **Allowed Quota Exemptions:** The ban does not apply to a minor, preferential quota of roughly **14,500 tonnes** set aside for concessional-duty exports to the US and the European Union. It also exempts pre-approved government-to-government sales aimed at supporting food security in friendly nations.

Current Status of the Indian Sugar Sector

- **Global Standing:** India is the **world's second-largest sugar producer** (right behind Brazil) and stands as the biggest overall consumer.
- **Production Data (2025-26):** Total domestic sugar output for the current marketing year is estimated at **279 lakh tonnes**. When

combined with an opening stockpile of over 50 lakh tonnes, the country's total available pool reaches 329 lakh tonnes.

- **Reduced Buffer Margin:** Local annual consumption sits around **280 lakh tonnes**. While the industry produces a steady surplus, end-of-season closing stocks are tightening toward **42.5 lakh tonnes**. This leaves a comfortable but reduced 1.8-month consumption buffer.
- **Regional Production Realities:**
 - **Sub-Tropical North:** Uttar Pradesh, Haryana, and Punjab face shorter winter crushing windows (November to April) and lower juice recovery rates.
 - **Tropical South:** Maharashtra and Karnataka benefit from longer crushing stretches and higher recovery rates. **Maharashtra finished the season as the top producer at 99.20 lakh tonnes**, followed by Uttar Pradesh at 89.20 lakh tonnes and Karnataka at 47.15 lakh tonnes. However, groundwater depletion in regions like Marathwada is forcing a rethink of sugarcane sustainability.

Structural Problems and Alternative Paths

- **The Ethanol Diversion Plan:** To break the boom-and-bust cycle of sugar pricing, mills are increasingly diverting heavy molasses and fresh cane juice into ethanol distillation under the National Policy on Biofuels. This oil marketing procurement provides mills with a steady second revenue source, helping them clear historic dues to farmers much faster.
- **Pricing Faults (FRP vs. SAP):** The Center sets a **Fair and Remunerative Price (FRP)** based on expert inputs. However, states often enforce politically inflated **State Advised Prices (SAPs)**. This forces mills to buy cane at high fixed rates while their final sugar sale price depends on volatile market dynamics, leading to unpaid farmer dues.
- **Delayed Reforms:** The sector is still waiting for a full rollout of the **2012 Rangarajan Committee recommendations**. This model suggests a Revenue Sharing Formula to link cane purchase costs directly to 75% of the mill's earnings from sugar and its byproducts.

Global and Local Trade Repercussions

- **Diplomatic Pressures:** The export halt strains India's neighborhood-first trade goals. Buyers like Bangladesh, Sri Lanka, and various African nations face sudden food inflation risks due to the loss of Indian sugar supplies.
- **WTO Friction:** Abrupt export bans hurt India's status as a stable agricultural trade partner. The policy switch draws formal complaints at the World Trade Organization (WTO) from export rivals like Australia and Brazil, who challenge India's domestic farm subsidies.
- **Mill Margin Squeeze:** The outright ban eliminates export trade options for coastal mills in Maharashtra and Gujarat. These factories rely heavily on quick international sales to generate immediate cash flow.

Way Forward

- **Revenue Sharing Implementation:** Transition to the Rangarajan Committee pricing formula to link cane costs with market sales, protecting both farmers and mill capital.
- **Water-Saving Farm Tech:** Shift cane planting away from dry, drought-prone zones and mandate micro-drip irrigation to lower the sector's heavy water footprint.
- **Expanding the Bio-Economy:** Increase ethanol output for green fuel goals, expand compressed biogas production from processing waste, and support flex-fuel automobile adoption.
- **Modern Crop Tracking:** Deploy real-time digital inventory tools across all production plants to monitor physical stockpiles accurately and prevent speculative hoarding.

RBI's Defensive Interventions to Stabilize the Indian Rupee



Why in News?

The Indian Rupee (INR) has faced severe downward pressure, nearing a historic low of **97 against the US Dollar** in May 2026. To check this steep slide, the Reserve Bank of India (RBI) has deployed a multi-pronged intervention strategy. This includes selling approximately **USD 1 billion daily** in the spot market and launching a **USD 5 billion USD/INR buy-sell swap auction** to anchor the currency.

The RBI's Currency Intervention Toolkit

1. Spot Market Operations and Sterilization

- **Direct Dollar Sales:** The RBI's first line of defense is directly selling US dollars from its foreign exchange reserves into the spot market. This injects immediate dollar liquidity, meeting the high demand from importers and slowing the rupee's fall.
- **Sterilized Interventions:** Selling dollars drains rupees from the domestic banking system, which can spike local interest rates and hurt growth. To counter this, the RBI conducts Open Market Operations (OMOs)—purchasing government bonds to pump rupees back into circulation.
- **Handling Capital Inflows:** Conversely, during periods of massive capital inflows, the RBI issues short-dated **Market Stabilisation Scheme (MSS) bonds** to mop up excess rupees and prevent domestic inflation.

2. Foreign Exchange Swap Auctions

The RBI uses "Buy/Sell" or "Sell/Buy" Forex swaps to manage currency volatility and domestic cash liquidity simultaneously without permanently changing its overall reserves.

- **Buy/Sell Swap (Rupee Injection):** The RBI buys US dollars from banks and provides rupees, with a forward agreement to buy those dollars back after a fixed period (e.g., 3 years).
- **Sell/Buy Swap (Rupee Absorption):** The RBI sells US dollars to banks and takes back rupees to pull excess cash out of the system.
- **May 2026 Action:** With the rupee sliding past 95 against the greenback due to the US-Iran conflict, the RBI announced a **USD 5 billion buy-sell swap auction** to stabilize the market.

3. Contractionary Monetary Actions

When direct market interventions are insufficient, the RBI uses monetary policy to make speculative bets against the rupee expensive:

- **Repo Rate Hikes:** The Monetary Policy Committee (MPC) will raise the benchmark repo rate. Higher interest rates improve the yield differential with the US Federal Reserve, making Indian debt assets more attractive to foreign investors and drawing in capital.
- **LAF Corridor Squeeze:** During aggressive speculative attacks, the RBI tightens the **Liquidity Adjustment Facility (LAF)** corridor to restrict banks' borrowing windows. This spikes overnight call money rates. Because speculators often borrow rupees to buy dollars (shorting the INR), a higher borrowing cost makes this speculative trade prohibitively expensive.

4. Pre-Market and Offshore (NDF) Curbs

- **Breaking Speculative Cycles:** To stop panic trading, the RBI uses pre-market interventions. By selling large volumes of dollars through state-run banks before the onshore spot market officially opens, the RBI pushes the rupee to open stronger.
- **Taming the NDF Market:** Speculators often short the rupee in offshore **Non-Deliverable Forward (NDF)** markets like London or Singapore. The RBI restricts domestic banks' net open forex positions and occasionally intervenes in the NDF market directly to inflict losses on short-sellers.

5. Special Dollar Window for Oil Marketing Companies (OMCs)

Oil Marketing Companies are India's largest regular buyers of US dollars to pay for crude oil imports. Their sudden, massive market purchases can cause the rupee to crash.

To prevent this, the RBI can open a **Special Dollar Window**, allowing OMCs to buy dollars directly from the central bank or designated state-run banks (like SBI) at a fixed swap rate. This takes their heavy demand out of the open spot market, a strategy previously utilized during the 2013 currency crisis.

Capital Flow Management Measures (CFMs)

When capital leaves the country too quickly, the RBI alters macroeconomic regulations to slow down outflows and encourage immediate inflows:

- **Easing Borrowing Rules:** The RBI temporarily relaxes guidelines for **External Commercial Borrowings (ECBs)**, allowing Indian corporations to borrow more dollars from abroad, and raises investment caps for Foreign Portfolio Investors (FPIs) in government bonds.
- **Promoting Masala Bonds:** The central bank encourages companies to issue Masala Bonds (rupee-denominated bonds issued in overseas markets). Because the bonds are denominated in rupees, foreign investors bear the currency depreciation risk rather than the Indian borrower, avoiding future dollar repayment pressures.
- **Capping Speculative Exposure:** In 2026, the RBI capped banks' **Net Open Position (NOP)** in foreign currencies at **USD 100 million per day**. This forced commercial banks to unwind excess dollar holdings, boosting dollar supply in the market and lowering speculative pressure against the rupee.

Unconventional Crisis Tools: Mobilizing NRI Capital

During severe Balance of Payments (BoP) strains, India has historically incentivized Non-Resident Indians (NRIs) to funnel foreign liquidity into the country:

Historical Crisis	RBI Intervention Strategy	Economic Outcome
1998 Asian Financial Crisis <i>(Post-nuclear test sanctions & market contagion)</i>	Supported the issuance of Resurgent India Bonds (RIBs) targeted at overseas Indians.	Successfully raised approximately USD 4.2 billion to shore up national reserves.
2013 "Taper Tantrum" <i>(US Fed quantitative easing wind-down triggers capital flight)</i>	Opened a special Foreign Currency Non-Resident (Bank) [FCNR(B)] deposit window with highly subsidized hedging rates for domestic banks.	Mobilized USD 26 billion within weeks, instantly stabilizing the currency.

Report Warns of Losses Due to Non-Implementation of Anti-Dumping Duties



Why in News?

- A recent report titled “**Impact of Anti-Dumping Duties in India**”, published by C-DEP Research and the Centre for WTO Studies, has warned that the non-implementation of anti-dumping duties recommended by the Directorate General of Trade Remedies (DGTR) is causing major losses to the Indian domestic industry and increasing import dependence.
- The report states that the failure to implement these recommended protective tariffs on **56 products** has caused an annual economic loss of **₹11,938 crore** to the country's domestic manufacturing sector.

Understanding Anti-Dumping Duties

- **Core Definition:** An anti-dumping duty is a protective tariff imposed by a government on foreign imports that are priced lower than their normal value in the exporting country's home market.
- **Primary Objective:** Its principal purpose is to safeguard domestic manufacturers from material injury or market distortions caused by unfairly priced foreign goods.
- **Global Legal Status:** World Trade Organization (WTO) rules, specifically **Article 6 of the General Agreement on Tariffs and Trade (GATT 1994)**, permit member nations

to impose anti-dumping and countervailing duties under specific and strictly regulated legal conditions.

- **India's Position:** India stands as one of the largest users of anti-dumping measures globally, with a significant majority of these duties levied against imports originating from China.

Mechanics of Dumping

- **The Dumping Phenomenon:** Dumping occurs when a foreign corporation exports a product to another country at a price below its normal domestic market value.
- **The Dumping Margin:** The exact financial gap between the product's normal value in the home country and its lower export price is technically referred to as the **dumping margin**.

Institutional Roles in India

The process of implementing an anti-dumping duty involves two distinct wings of the central government:

- **Investigation (Ministry of Commerce & Industry):** The **Directorate General of Trade Remedies (DGTR)** operates as the quasi-judicial authority responsible for initiating and conducting detailed investigations into alleged dumping practices and assessing domestic industry harm.
- **Enforcement (Ministry of Finance):** Once the DGTR concludes its probe and recommends a tariff, the **Ministry of Finance** holds the final executive authority to decide whether or not to officially impose and collect the anti-dumping duties.

**Crux of The Hindu & Indian Express****Economics****NSE Launches Electronic Gold Receipts (EGRs)****Why in News?**

- The National Stock Exchange (NSE) launched **Electronic Gold Receipts (EGRs)** on 4 May 2026.
- It has been introduced as a new trading segment for gold.
- The objective is to make India's gold market:
 - More transparent
 - More organised
 - More efficient
 - More digitally connected with the formal financial system

What are Electronic Gold Receipts (EGRs)?

- EGRs are **digital or dematerialised securities** that represent ownership of physical gold.
- The actual gold is stored in **SEBI-regulated vaults**.
- Investors hold EGRs in their **demat accounts**, similar to shares and ETFs.
- Every EGR is backed by real physical gold, ensuring:
 - Purity
 - Standardisation
 - Authenticity

Key Features of EGRs

- EGRs are issued in **electronic form**.
- They can be **traded on the stock exchange**.

- They are backed by **physical gold stored safely in accredited vaults**.
- Investors can:
 - Convert physical gold into EGRs
 - Convert EGRs back into physical gold
- They provide a secure and digital way to invest in gold.
- Smaller denominations are also possible, improving accessibility for small investors.

Role of SEBI

- The Securities and Exchange Board of India (SEBI) regulates the EGR framework.
- SEBI approves and supervises:
 - Vault managers
 - Vault infrastructure
 - Trading regulations
- This ensures transparency and investor protection.

What is a Vault Manager?

- SEBI has introduced a new entity called a **Vault Manager**.
- The Vault Manager:
 - Stores the deposited gold
 - Maintains records
 - Ensures safety and quality standards
 - Helps in creation and redemption of EGRs

How Does the EGR System Work?**Step 1: Deposit of Gold**

- Physical gold is deposited in a SEBI-approved vault.

Step 2: Verification

- The gold is checked for:
 - Purity
 - Weight
 - Quality standards

Step 3: Creation of EGR

- After verification, Electronic Gold Receipts are issued against the deposited gold.

Step 4: Credit to Demat Account

- The EGR units are transferred electronically to the investor's demat account.

Step 5: Trading on Exchange

- Investors can buy and sell EGRs on the NSE.

Step 6: Redemption

- Investors can convert EGRs back into physical gold whenever required.

NSE Demonstration

- During the launch, NSE converted a **1,000-gram gold bar** into an EGR.
- This demonstrated how physical gold can be transformed into a tradable digital instrument within a regulated system.

Participants in the EGR Ecosystem

The system is designed for wide participation, including:

- Jewellers
- Refiners
- Gold traders
- Retail investors
- Institutional investors

Importance of EGRs

Formalisation of Gold Market

- A large part of India's gold trade happens in the informal sector.
- EGRs will help bring gold trading into the regulated financial system.

Better Transparency

- Transactions will be digitally recorded and regulated by SEBI.

Improved Price Discovery

- Exchange-based trading helps create more standard and market-based pricing.

Safe Gold Ownership

- Investors do not need to physically store gold at home.

Increased Liquidity

- Gold can be traded more easily like shares and other securities.

Boost to Digital Investment

- EGRs support India's move towards digital and paperless financial systems.

Wider Investor Participation

- Small investors can participate through smaller units of gold.

Challenges

- Many investors still prefer physical gold over digital forms.
- Efficient vaulting and storage systems are necessary.
- Trading volumes may remain limited during the early stages.

- People may take time to fully trust electronic gold ownership systems.

Conclusion

- Electronic Gold Receipts are an important reform in India's gold trading ecosystem.
- They combine:
 - Physical ownership of gold
 - Digital trading convenience
 - SEBI-regulated transparency
- Over time, EGRs can help modernise and formalise India's gold market while making gold investment safer and more accessible.

PM Modi's Self-Reliance Push Amid West Asia Crisis (May 2026)



Background

- Prime Minister Narendra Modi appealed to citizens to support the country during the global crisis caused by tensions in **West Asia**.
- The Prime Minister made this appeal while addressing a public meeting in **Hyderabad** on **May 10, 2026**.
- He emphasized the need to conserve **Foreign Exchange Reserves (Forex Reserves)** and reduce dependence on imports.
- The appeal came at a time when rising **crude oil prices** and high **gold imports** were increasing pressure on India's economy.
- India's gold imports reached nearly **\$72 billion in FY 2025–26**, contributing to a widening **trade deficit**.
- India's **foreign exchange reserves** were reported to be above **\$690 billion**, but

concerns remained regarding pressure from oil and gold imports.

EVEN AFTER THE DIP, INDIA STILL RANKS AROUND 4TH GLOBALLY

1	 CHINA	~US\$3.2T
2	 JAPAN	~US\$1.2T
3	 SWITZERLAND	~US\$0.9T
4	 INDIA	~US\$0.68T

Approximate reserve sizes; rankings rounded for simple comparison.

So yes, reserves fell — but the overall stock is still huge.

- The Prime Minister linked the appeal with the vision of **Atmanirbhar Bharat** or **Self-Reliant India**.

Major Appeals Made by the Prime Minister Reduction in Fuel Consumption

BUT WE STILL NEED TO BE CAUTIOUS!!



- The Prime Minister urged citizens to reduce the use of **petrol and diesel** in daily life.
- He advised people to use **metro services** wherever available.
- He encouraged the use of **public transport** and **carpooling** to reduce fuel consumption.
- He promoted the use of **Electric Vehicles (EVs)** to reduce dependence on imported crude oil.

- He suggested that goods should be transported more through **railways** rather than roadways.
- He stated that reducing fuel consumption would help India conserve **foreign exchange reserves**.

Revival of Work From Home and Virtual Meetings

- The Prime Minister asked citizens and organizations to revive **Work From Home (WFH)** arrangements and **virtual meetings**.
- He stated that India had successfully adapted to digital working methods during the **Covid-19 pandemic**.
- He encouraged the use of **video conferencing** and remote work to reduce travel expenses and fuel consumption.
- He described these practices as the “**need of the hour**” during the present global crisis.

Appeal to Avoid Non-Essential Foreign Travel

- The Prime Minister appealed to citizens to postpone unnecessary **foreign travel** for at least **one year**.
- He specifically mentioned **foreign vacations, destination weddings**, and luxury overseas travel.
- He stated that increasing foreign travel among the middle class was causing a large outflow of **foreign exchange**.
- He urged citizens to prioritize **national interest** over non-essential spending abroad.

Appeal to Reduce Gold Purchases

- The Prime Minister urged people to avoid purchasing **gold** during festivals and weddings for at least **one year**.
- He stated that reducing gold imports would help conserve **foreign exchange reserves**.
- India is one of the world’s largest importers of gold, and heavy imports increase pressure on the **trade deficit**.
- The Prime Minister presented the appeal as a **voluntary** and **patriotic** contribution toward economic stability.
- The article noted that **jewellery stocks** declined after the Prime Minister’s appeal, as investors anticipated moderation in gold demand.

Promotion of “Vocal for Local”

- The Prime Minister encouraged citizens to identify **imported goods** used in daily life and gradually shift toward **Indian-made products**.
- He clarified that people should not immediately discard foreign products.
- He stated that the long-term goal should be to strengthen **domestic manufacturing** and **self-reliance**.
- He connected this appeal with the “**Vocal for Local**” campaign that had earlier been promoted during the Covid-19 pandemic.

Reduction in Cooking Oil Consumption

- The Prime Minister appealed to families to reduce **cooking oil consumption** by **10%**.
- He stated that lower edible oil consumption would improve **family health**.
- He also noted that India imports large quantities of **edible oil**, and reducing consumption would lower import dependence.

Promotion of Natural Farming

- The Prime Minister appealed to farmers to reduce dependence on **chemical fertilizers**.
- He promoted **natural farming** practices to improve agricultural self-reliance.
- He stated that natural farming would reduce import dependence and support **sustainable agriculture**.

Historical Context of Gold Control Policies

United States Gold Policy, 1933 :

- During the **Great Depression**, US President Franklin D. Roosevelt issued **Executive Order 6102** in **1933**.
- The order restricted **private ownership of gold** in the United States.
- Americans largely complied due to patriotism and fear of legal penalties.
- The policy helped strengthen **US gold reserves** and the financial position of the United States.

India’s Gold Control Act, 1968 :

- In **1968**, Finance Minister Morarji Desai introduced the **Gold Control Act**.
- The law was introduced after economic difficulties caused by the **1962 India-China War** and the **1965 India-Pakistan War**.

- The Act banned private ownership of **gold bars and coins**.
- Citizens were required to convert gold into **jewellery** and declare their holdings.
- The government expected citizens to cooperate in the **national interest**.
- However, demand for gold remained very high despite the restrictions.
- The policy led to increased **gold smuggling**, expansion of **hawala networks**, and growth of the **black economy**.
- Illegal trade and tax evasion increased significantly during this period.
- The **Gold Control Act** was eventually repealed in **1990**.

Difference Between the 1968 Policy and the 2026 Appeal :

- The **Gold Control Act of 1968** imposed compulsory legal restrictions, whereas the **2026 appeal** is voluntary.
- The current government has not imposed any legal ban on gold ownership or purchases.
- Modern India has financial alternatives such as **Gold ETFs**, **Sovereign Gold Bonds (SGBs)**, and **digital gold investments**.
- The present approach focuses on **patriotism**, **awareness**, and **self-discipline** rather than coercion.

Modern Alternatives to Physical Gold :

Sovereign Gold Bonds (SGBs)

- **Sovereign Gold Bonds (SGBs)** are **government securities denominated in grams of gold**.
- The **SGB Scheme** was launched by the Government of India on **30 October 2015**.
- SGBs were issued by the **Reserve Bank of India (RBI)** on behalf of the **Government of India (GOI)**.
- SGBs acted as a substitute for holding **physical gold**, allowing investors to invest in gold without storing it physically.

Current Status (As of May 2026)

- As of **May 2026**, the **Sovereign Gold Bond (SGB) scheme** is **no longer open for new subscriptions**.
- The Government of India has **discontinued issuing new tranches** of SGBs.

- However, **existing SGBs remain valid** until maturity.
- Existing bonds continue to **trade on stock exchanges (NSE/BSE)**.
- Investors **cannot purchase new SGBs directly from the RBI** anymore.
- Investors can still buy SGB units from **existing holders in the secondary market (NSE/BSE)**.

Gold ETFs

- **Gold Exchange Traded Funds (ETFs)** allow investors to invest in gold digitally.
- Gold ETFs reduce storage risks associated with physical gold.

Digital Gold

- **Digital gold** allows people to purchase and store gold online in small quantities.
- Digital platforms provide easy access to gold investment without physical handling.

Why Gold Demand Remains Strong in India

- Gold is considered a symbol of **wealth, security, and prosperity** in Indian society.
- Gold plays an important role in **weddings, festivals, and religious traditions**.
- Many households consider physical gold a safe investment during **inflation** and economic uncertainty.
- Rural and semi-urban families often trust **physical assets** more than financial instruments.

Economic Importance of the Appeal



- Reduced gold and fuel imports can help lower India's **trade deficit**.
- Lower imports can reduce pressure on **foreign exchange reserves**.
- Reduced import dependence can help stabilize the **Indian Rupee**.
- More domestic savings may flow into productive investments such as **manufacturing and infrastructure**.
- Increased investment can support **economic growth** and **job creation**.

Challenges Associated with the Appeal

Cultural Attachment to Gold

- Gold buying is deeply linked with Indian **cultural traditions** and **social customs**.
- Weddings and festivals are major periods of gold consumption in India.
- Therefore, changing public behavior regarding gold purchases may be difficult.

Risk of Smuggling

- Historical experience shows that excessive restrictions on gold can increase **smuggling activities**.
- Illegal trade and **black market networks** may expand if harsh controls are introduced.
- Therefore, voluntary cooperation is considered more effective than strict legal enforcement.

Important Terms

Foreign Exchange Reserves

- **Foreign Exchange Reserves** are foreign currency assets held by a country's central bank.
- These reserves are used to finance imports and maintain **economic stability**.

Trade Deficit

- A **trade deficit** occurs when a country's imports exceed its exports.
- High imports of **crude oil** and **gold** contribute significantly to India's trade deficit.

Atmanirbhar Bharat

- **Atmanirbhar Bharat** is a government initiative aimed at promoting **self-reliance** and reducing import dependence.

- The initiative focuses on strengthening **domestic manufacturing** and economic resilience.

Why India Increased Petrol and Diesel Prices (May 2026)



Background

- India is currently facing an **energy and economic challenge** because of the ongoing conflict in **West Asia (Middle East)**.
- Rising tensions in the region have pushed up international crude oil prices, making fuel imports expensive for India.
- Since India imports most of its crude oil from other countries, any rise in global oil prices directly affects India's economy.

1. Fuel Prices Increased

On **15 May 2026**, the Central Government increased:

- **Petrol price** by ₹3 per litre
- **Diesel price** by ₹3 per litre
- **CNG price** by ₹2 per kg

This is the **first major fuel price increase in four years**.

2. Why Did the Government Increase Fuel Prices?

(a) Rising International Crude Oil Prices

- Because of the war in West Asia, global crude oil became expensive.
- India imports large quantities of oil, so the government and oil companies had to pay more money to buy fuel from abroad.

(b) Heavy Losses for Oil Companies

Government-owned oil companies were **selling petrol and diesel at old prices even though buying costs had increased**.

As a result:

- They were reportedly losing around **₹1,600 crore every day**

- Earlier low-cost fuel stock had finished
 - Losses became larger in April and May
- So, the government finally allowed fuel prices to rise.

(c) Saving Foreign Exchange

- India pays for imported oil in foreign currency, mainly US dollars.

When oil prices rise:

- More dollars are needed
- Pressure increases on India's foreign exchange reserves
- The rupee can weaken

So the government wants people to reduce unnecessary fuel use.

3. PM Modi's Appeal to Citizens

Before the price hike, Prime Minister Narendra Modi appealed to people to:

- Prefer **work from home (WFH)**
- Attend **online classes**
- Avoid unnecessary travel
- Delay gold purchases
- Avoid foreign trips for one year

Main Goal:

To save:

- Fuel
- Foreign exchange reserves
- Import costs

4. Public Reaction

- The PM's appeal created fear among many people that fuel shortages might happen.

As a result:

- Long queues formed outside petrol pumps
- Panic buying was reported in:
 - Delhi-NCR
 - Uttar Pradesh
 - Gujarat
 - Bihar
 - Rajasthan
 - Odisha

Later, Petroleum Minister Hardeep Singh Puri clarified that India has enough fuel reserves and there is no shortage.

5. Three Other Major Economic Decisions by the Government

(1) Increase in Gold Import Duty

The government increased import duty on:

- Gold
- Silver
- Platinum
- Jewellery-related imports

New Effective Gold Import Duty:  15%

Why?

To:

- Reduce non-essential imports
- Save foreign exchange
- Control the trade deficit

Since India imports large amounts of gold, reducing imports can save dollars.

(2) Milk Prices Increased

Major milk brands:

- Amul
- Mother Dairy

increased milk prices by ₹1–₹5.

Reason:

- Rising production and transport costs
- Higher fuel expenses

This directly affects household budgets.

(3) Sugar Export Ban Till September

India banned export of:

- Raw sugar
- White sugar
- Refined sugar

Reasons:

1. Fear of lower production due to **El Niño**
2. Global uncertainty because of the Iran-related conflict
3. Falling domestic sugar stocks

Aim:

- To ensure enough sugar remains available inside India and prices stay under control.

6. What Could Happen Next?

Reports suggest the government may also:

- Reduce taxes for foreign investors investing in Indian bonds

Why?

To:

- Attract foreign money into India
- Support the rupee
- Improve economic stability

However, no final decision has been announced yet.

Impact on Common People

Area	Possible Impact
Petrol & Diesel	Travel becomes costlier
Public Transport	Bus/auto fares may rise
Milk	Household expenses increase
Goods Transport	Prices of vegetables and goods may rise
Inflation	Overall cost of living may increase

NCDEX Launches "RAINMUMBAI" – India's First Weather Derivatives Contract



Why in News?

- The National Commodity and Derivatives Exchange (NCDEX) has launched India's first **SEBI-approved exchange-traded weather derivatives contract** called: RAINMUMBAI

Key Highlights

What is RAINMUMBAI?

- India's **first weather derivatives contract**
- Launched by **NCDEX**
- Approved by Securities and Exchange Board of India (**SEBI**)
- Developed in collaboration with:
 - Indian Institute of Technology Bombay (**IIT Bombay**)

Objective of RAINMUMBAI

Main Purpose

- To help manage risks caused by:
 - **Unpredictable rainfall**
 - **Monsoon variability**

Who will benefit?

Sectors affected by weather changes:

- Agriculture
- Power
- Construction
- Logistics
- Tourism
- Energy

How Weather Derivatives Work

Key Idea

- Unlike insurance, payouts are based on:
 - **Weather data (rainfall, temperature, etc.)**
- Not based on:
 - Physical damage inspection

Advantage

- Faster settlement
- Less paperwork
- No field damage assessment required

How RAINMUMBAI Works

Underlying Data Sources

- India Meteorological Department (IMD) rainfall data
- Automatic Weather Stations (AWS) at:
 - Santacruz
 - Colaba

Contract Basis

- Tracks deviation from:
 - **Long Period Average (LPA)** rainfall in Mumbai

Trading Months

Only available during monsoon:

- June
- July
- August
- September

Settlement Type

- **Cash-settled contract**
- No physical delivery involved

Pricing System

- Base value:
 - ₹50 per millimetre of rainfall

Trading Hours

- Weekdays:
 - **10:00 AM to 11:30 PM**

What are Derivatives?

Definition

- Financial contracts whose value depends on an:
 - **Underlying asset**

Common Underlying Assets

- Stocks
- Bonds
- Commodities
- Currencies
- Interest rates
- Market indices

Uses of Derivatives

1. Hedging

- Protect against financial risk

2. Speculation

- Bet on price movements

3. Portfolio Management

- Improve returns or reduce risk

About NCDEX

Full Form

- **National Commodity and Derivatives Exchange**

Established

- **2003**

Headquarters

- Mumbai

Main Role

- Electronic trading platform for:
 - Agricultural commodity derivatives
 - Futures contracts

Major Commodities Traded

- Wheat
- Sugar
- Spices
- Cotton

Regulation

- Operates under supervision of:
 - Securities and Exchange Board of India (SEBI)

Importance of RAINMUMBAI

Economic Significance

- Helps farmers and businesses manage **climate risk**
- Reduces financial losses due to:
 - erratic monsoon patterns

Financial Innovation

- First structured **weather-based financial product in India**
- Expands India's derivatives market

Climate Risk Management

- Encourages:
 - Better planning
 - Risk hedging against climate uncertainty

Centre Launches BHAVYA Scheme to Develop 100 Industrial Parks Across India



Why in News?

- On **23 May 2026**, Union Commerce and Industry Minister Piyush Goyal announced the launch of guidelines for the **BHAVYA (Bharat Audyogik Vikas Yojna) Scheme**.
- The scheme aims to establish **100 industrial parks** across India to strengthen manufacturing, attract investments, and improve industrial infrastructure.

BHAVYA Scheme: Key Highlights

Feature	Details
Scheme Name	BHAVYA – Bharat Audyogik Vikas Yojna
Launch Date	May 2026
Ministry	Ministry of Commerce & Industry
Implementing Agency	National Industrial Corridor Development Corporation (NICDC)
Financial Outlay	₹33,660 crore
Objective	Development of 100 industrial parks across India
Model	Plug-and-play industrial parks
Partnership	Centre + States + Private Sector
Framework	National Industrial Corridor Development Programme (NICDP)

Objectives of the Scheme

The BHAVYA Scheme aims to:

- Promote **manufacturing-led economic growth**
- Create **investment-ready industrial ecosystems**
- Improve India's **ease of doing business**
- Generate employment opportunities
- Strengthen domestic supply chains
- Encourage **cluster-based industrial development**
- Reduce project delays through pre-approved infrastructure

What are Plug-and-Play Industrial Parks?

Plug-and-play parks are industrial zones where:

- Land is already approved
- Infrastructure is pre-developed
- Utilities such as water, roads, power, and drainage are ready
- Industries can start operations quickly without long approval delays

This reduces:

- Initial investment burden
- Time taken to establish factories
- Regulatory hurdles

Important Features of the Scheme

1. Development of 100 Industrial Parks

The government plans to establish 100 industrial parks across the country.

Phase-wise Rollout

- First 20 parks: Applications invited within first 2 months
- Next 30 parks: Following 2 months
- Remaining 50 parks: In later phases

The government expects the first 50 parks to become operational within three years.

2. Financial Assistance

Infrastructure Support

- Up to **₹1 crore per acre** for infrastructure development

Covered Facilities

The support includes:

- Internal roads
- Underground utilities
- Drainage systems
- Common treatment facilities
- Warehouses
- Testing laboratories
- Worker housing

External Connectivity Support

- Centre will support up to **25% of external infrastructure cost**
- Focus on connectivity with:
 - Roads
 - Railways
 - Logistics networks

3. Special Provisions for Hilly States

- Minimum land requirement reduced to **25 acres** for hilly states
- In other regions, parks may range from **100–1,000 acres**

This aims to ensure regional inclusiveness and balanced industrial development.

4. Role of States

States and Union Territories must:

- Provide land, water, and power facilities
- Create investor-friendly policies
- Establish **Single Window Clearance Systems**
- Set up **Special Purpose Vehicles (SPVs)**
- Notify planning authorities

States offering better infrastructure are expected to attract more investment.

States Showing Interest :

According to the government:

- Rajasthan
- Maharashtra
- West Bengal
- Haryana

have already shown interest.

5. Public-Private Partnership (PPP) Model

- States can partner with private players and submit proposals jointly.

Incentive for PPP Projects

- Centre will provide assistance of up to ₹50 lakh per acre

This is expected to increase:

- Private investment
- Industrial efficiency
- Faster project execution

Link with PM GatiShakti

- The BHAVYA Scheme is aligned with the **PM GatiShakti National Master Plan**.

Focus Areas

- Multimodal connectivity
- Last-mile logistics access
- Integrated underground utility corridors
- Reduced maintenance disruptions
- Green energy integration
- Sustainable resource usage

This reflects the government's focus on integrated infrastructure planning.

Role of NICDC

- The **National Industrial Corridor Development Corporation (NICDC)** will anchor implementation.

About NICDC

NICDC is already:

- Implementing 20 industrial corridor projects across 13 states
- Acting as project management agency for 7 PM MITRA textile parks

Its experience is expected to help in faster execution of the BHAVYA Scheme.

Significance of the Scheme

Economic Significance

- Boosts manufacturing sector

- Supports the “Make in India” initiative
- Enhances export competitiveness
- Attracts domestic and foreign investment

Employment Generation

Industrial clusters are expected to create:

- Direct factory jobs
- Indirect employment in logistics, services, and supply chains

Ease of Doing Business

- Pre-approved infrastructure and single-window clearances reduce bureaucratic delays.

Regional Development

Industrial parks in multiple states can:

- Reduce regional imbalances
- Promote industrialisation in backward areas

Supply Chain Strengthening

Cluster-based development enables:

- Manufacturers
- Suppliers
- Service providers

to operate close together, improving efficiency and reducing logistics costs.

Challenges

Despite its ambitious goals, the scheme may face challenges such as:

- Land acquisition issues
- Coordination between Centre and States
- Environmental clearances
- Financing and timely execution
- Ensuring balanced regional distribution
- Availability of skilled workforce

Conclusion

The BHAVYA Scheme represents a major step toward transforming India into a global manufacturing hub. By creating plug-and-play industrial ecosystems with modern infrastructure and multimodal connectivity, the scheme seeks to accelerate industrial growth, attract investment, generate employment, and strengthen India's supply chains.



Green Methanol Project in Gujarat: Turning Invasive Shrub into Clean Fuel



Why in News?

- The invasive shrub **Prosopis juliflora**, which has long threatened biodiversity in the **Banni Grasslands of Kutch**, is set to be used as feedstock for India's **first green methanol production plant**.
- The initiative represents a shift from viewing invasive species as a problem to **using them as a resource for clean energy production**.

About the Green Methanol Project

Location and Setup

- The plant is being developed at the **Deendayal Port Authority, Gujarat**.
- It is India's **first demonstration green methanol facility**.

Production Capacity

- Initial capacity: **5 tonnes per day**
- Future scaling potential: **100–500 tonnes per day**

Technology Used

- Uses **gasification technology** to convert biomass into **syngas**, which includes:
 - Hydrogen (H₂)
 - Carbon monoxide (CO)
 - Carbon dioxide (CO₂)
- Syngas is further processed to produce **methanol**.

Significance of the Project

- Promotes **green ports and clean shipping fuels**.
- Reduces **dependence on imported fossil fuels**.
- Supports **decarbonisation of the maritime sector**.

- Aligns with the **International Maritime Organization (IMO)** target of:
 - Achieving **net-zero emissions in shipping by 2050**
- Encourages adoption of **low-carbon fuels like green methanol**.

What is Green Methanol?

Definition

- **Green methanol** is a **low-carbon, renewable liquid fuel and chemical feedstock**.
- It is produced from:
 - Biomass (bio-methanol)
 - Green hydrogen

Environmental Benefits

- Acts as a **net-zero alternative** to fossil-based methanol.
- Can reduce **greenhouse gas emissions by 60–95%**.
- Supports **decarbonisation of transport and industrial sectors**.

Prosopis juliflora: The Invasive Species

Introduction

- **Prosopis juliflora** is a **Mexican-origin invasive shrub**.
- Introduced in India during the **1920s**.
- Expanded significantly in Gujarat in **1961** to combat desertification.

Local Names in India

- Gujarat: **Gando Bavai**
- North India: **Vilayati Keekar**
- Tamil Nadu: **Velikathan**

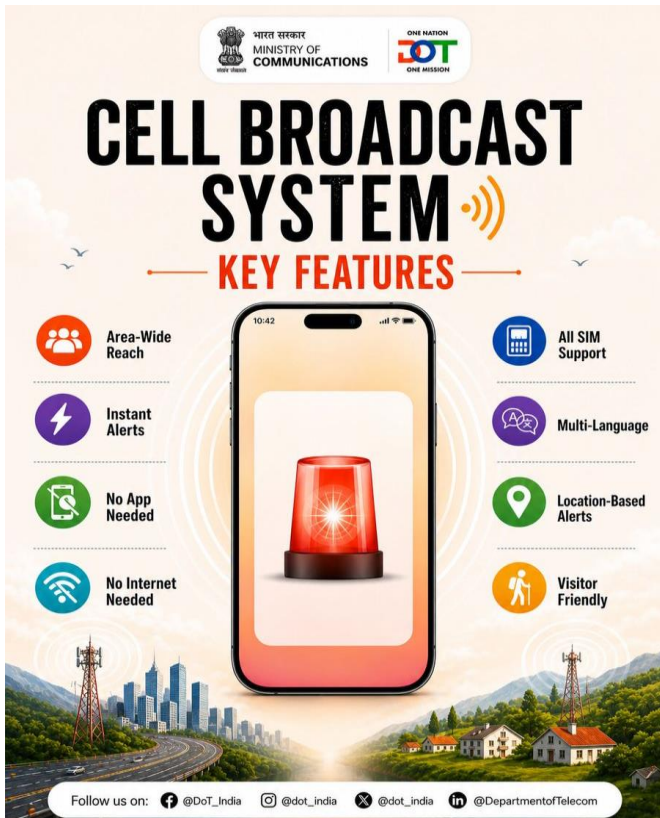
Ecological Impact

- Rapidly spread in the **Banni Grasslands of Kutch**.
- Causes:
 - Loss of native grass species
 - Reduction in biodiversity
 - Degradation of fragile arid ecosystems
- Alters **grassland ecology and grazing patterns**.

Conclusion

The conversion of **Prosopis juliflora** into **green methanol** represents an innovative approach that integrates **invasive species management with renewable energy production**. By transforming an ecological threat into a **clean energy resource**, the project supports India's goals of **energy transition, maritime decarbonisation, and sustainable ecosystem restoration**.

India Launches Indigenous Cell Broadcast System to Strengthen Disaster Alerts



Why in News

- The Ministry of Communications has launched India's indigenous **Cell Broadcast System (CBS)**, marking a major shift in disaster management from a **reactive approach** to a **proactive early-warning framework**.
- The system has already been deployed in real situations across **Andhra Pradesh, Odisha, and Uttarakhand**, including during the **Char Dham Yatra**, demonstrating its operational readiness for large-scale emergency communication.

What is the Cell Broadcast System (CBS)?

About

- CBS is a system that sends **simultaneous emergency messages** to all mobile phones in a defined **geographical area**
- Developed by the **European Telecommunications Standards Institute (ETSI)** in the early 1990s
- First demonstrated in **1997 in Paris**
- Now widely used as a global standard for **disaster warning systems**

Key Features of CBS

1. Integration with National Alert Platform

- Integrated with **SACHET (Common Alerting Protocol-based system)**
- SACHET is India's **National Disaster Alert Platform**
- Enables real-time alerts for:
 - Floods
 - Tsunamis
 - Cyclones
 - Gas leaks and other emergencies

2. Indigenous Development

- Developed by **C-DOT (Centre for Development of Telematics)**
- In collaboration with:
 - **National Disaster Management Authority (NDMA)**
 - **Ministry of Home Affairs (MHA)**

3. Instant and Unmissable Alerts

- Alerts override:
 - Silent mode
 - Do Not Disturb mode
- Include:
 - Siren sound
 - Vibration
 - Pop-up emergency message
- Supports **multiple languages**, including regional languages

4. Geo-Targeted Broadcasting

- Sends alerts to all phones in a **specific geographic zone**
- No need for:
 - Phone numbers
 - Internet connection
 - App installation
- Works across **2G, 3G, 4G, and 5G networks**

CBS vs SMS-Based Alert System

Existing SMS System

- Operates across all **36 States and UTs**
- Requires mobile number databases
- Can be affected by **network congestion**

CBS Advantage

- One-to-many broadcast system
- Delivers alerts to **millions of users simultaneously**
- Works even during **network overload situations**
- Does not use **personal user data**

National and Global Significance

India's Disaster Preparedness

- Strengthens early warning capability
- Supports vision of “Alert Citizens, Safe Nation”
- Already tested in real-world emergencies

International Outreach

- Successfully demonstrated by C-DOT in:
 - Mauritius
 - Cambodia
 - El Salvador
 - Sri Lanka

Global Context

- India joins over **30 countries** using CBS-type systems
- Examples:
 - Japan (J-Alert, 2007)
 - USA (Wireless Emergency Alerts)
- Aligns with UN initiative “Early Warnings for All”

Modern Orbital Conflict: The Rise of Silent Warfare in Space



Why in News

- Modern orbital conflict has shifted from **kinetic destruction to “silent warfare”**, involving **jamming, GPS spoofing, and cyber intrusions on ground stations and satellites**.
- These developments show how **digital attacks on space infrastructure can disable critical systems on Earth without any physical destruction or traditional warfare**.

What are the Key Highlights of Modern Orbital Conflict?

1. Weaponisation of Everyday Systems

- Modern conflicts increasingly use **cyber and electronic warfare tools**
- Example: **Viasat KA-SAT cyberattack (Russia–Ukraine conflict)** disrupted satellite communications across Europe

- Techniques include:
 - **GPS spoofing**
 - Signal jamming
 - Misleading navigation systems for aircraft and ships
- Result: Even safety systems of platforms can be **turned into vulnerabilities**

2. Attribution Gap in Space Warfare

- Attacks are often routed through **proxy networks**
- Creates difficulty in identifying the real attacker
- Leads to **weak deterrence due to lack of proof**
- Challenges traditional principles of international law

3. “Functional Strike” Doctrine

- Emerging view that **digital attacks causing functional failure of satellites** may qualify as “use of force”
- Even without physical destruction, disabling a satellite (“bricking”) may violate **Article 2(4) of the UN Charter**
- Redefines warfare beyond visible damage

4. Collapse of Civilian–Military Divide

- Commercial satellite systems are now used for military purposes
- Example: **Starlink model of dual-use connectivity**
- This blurs the line between:
 - Civilian infrastructure
 - Military targeting systems
- Creates legal and ethical ambiguity in warfare

What are the Consequences of Modern Orbital Conflict?

1. Kessler Syndrome and Orbital Denial

- Space debris collisions can trigger a **chain reaction (Kessler Syndrome)**
- Leads to exponential increase in debris in **Low Earth Orbit (LEO)**
- Risk: Certain orbital zones may become **unusable for decades**

2. Environmental and Scientific Impact

- Re-entry of debris may release **metallic particles in the atmosphere**
- Possible impact on **ozone layer**

- Space debris and mega-constellations contribute to:
 - Light pollution
 - Disruption of astronomical research

3. Global Socio-Economic Disruption

- Dependence on satellites makes economies highly vulnerable:

Navigation Collapse

- Disruption of GPS/GNSS (including systems like **NavIC**)
- Impacts logistics, aviation, and maritime trade

Financial System Shock

- Satellite atomic clocks used for **time-stamping financial transactions**
- Failure may disrupt global banking systems

Communication Breakdown

- Loss of satellite internet systems like **Starlink and OneWeb**
- Affects education, disaster response, and rural connectivity

4. Strategic Instability and Escalation Risk

- Attacks on early-warning satellites may be misinterpreted as **nuclear first-strike preparation**
- Cyber and laser-based attacks create a **“grey zone” conflict environment**
- Weakens trust in treaties like the **Outer Space Treaty (1967)**

5. Orbital Dependency Risks

- Developing countries depend on foreign satellite systems
- Creates a **“jurisdictional vulnerability” over data and security**
- Raises concerns over **digital sovereignty in space-based infrastructure**

International Regulations on Orbital Management

Outer Space Treaty (1967)

- States are responsible for all national space activities, including private actors
- Lacks strong enforcement mechanisms

Liability Convention (1972)

- Establishes **absolute liability for damage caused by space objects on Earth**
- Enforcement remains weak in practice

UN Debris Mitigation Guidelines

- Recommend deorbiting satellites within **25 years**
- Global compliance is only about **30%**

What Steps are Needed to Prevent Orbital Conflict?

1. Strengthening Legal Framework

- Finalisation of **PAROS (Prevention of an Arms Race in Outer Space) Treaty**
- Proposed ban on **all weapons in orbit, not just WMDs**
- Support for **PPWT initiative** promoting no-first-weaponisation commitments

2. Global Norms of Responsible Behaviour

- Ban on **kinetic Anti-Satellite (ASAT) tests**
- Transparent protocols for **Rendezvous and Proximity Operations (RPOs)**
- Prevent misinterpretation of satellite movements as hostile actions

3. Space Situational Awareness (SSA)

- Creation of global **space traffic management system**
- Real-time sharing of satellite and debris tracking data
- Contributions from systems like:
 - India's **Project NETRA**
 - US Space Surveillance Network

4. Attribution Capability Development

- Improve technology to identify perpetrators of space attacks
- Strengthens deterrence through **accountability**

5. Distributed Satellite Constellations

- Shift from large satellites to **small satellite constellations**
- Limits damage impact if individual satellites are targeted
- Enhances system resilience

Conclusion

Modern orbital conflict represents a shift toward **invisible, non-kinetic warfare in space**, where disruption—not destruction—is the primary objective. As global dependence on satellites grows, strengthening **legal frameworks, attribution systems, and international cooperation** becomes essential to ensure the **security and sustainability of outer space**.

GalaxEye Launches Mission Drishti: India's First Multi-Sensor Earth Observation Satellite



Why in News

- Indian space start-up **GalaxEye** has successfully launched its first satellite, **Mission Drishti**, aboard a **SpaceX Falcon 9 rocket**, marking a global milestone in **simultaneous multi-sensor Earth observation**.
- Weighing **190 kg**, it is India's largest privately developed **Earth observation satellite**, strengthening the country's growing private space ecosystem.

Opto-SAR Technology Breakthrough

Dual-Sensor Imaging System

- First satellite in the world to combine:
 - **Optical (multi-spectral) imaging**
 - **Synthetic Aperture Radar (SAR) imaging**
- Both capture the **same location simultaneously**

All-Weather Imaging Capability

- Optical satellites struggle with:
 - Cloud cover
 - Night-time visibility issues
- SAR overcomes this by:
 - Penetrating clouds
 - Working in all-weather, day-and-night conditions

AI-Driven Image Enhancement

- AI reconstructs **optical-like visuals from SAR data**
- Helps convert complex radar data into **user-friendly images**

Key Innovation: Simultaneous Synchronization

- Optical and SAR sensors are **synchronized in real time**

- Eliminates need for:
 - Post-processing alignment
 - Separate dataset merging
- Ensures **instant fused imaging output**
- Enhances **accuracy and operational efficiency**

Strategic Applications

Defence and Security

- Border surveillance
- Threat monitoring in all weather conditions

Disaster Management

- Flood monitoring
- Cyclone tracking
- Landslide assessment

Economic and Civil Use

- Agriculture monitoring
- Infrastructure planning
- Insurance risk assessment

Significance for India's Space Ecosystem

- Strengthens India's **private space industry**
- Adds to ecosystem of emerging players such as:
 - **Agnikul Cosmos** (3D-printed rocket engines)
 - **Skyroot Aerospace** (privately developed launch vehicles)

Conclusion

Mission Drishti marks a major step in **dual-sensor Earth observation technology**, enhancing India's capabilities in **real-time, all-weather imaging**. It also signals the accelerating growth of India's **private space sector and space-tech innovation ecosystem**.

Hantavirus Outbreak Suspected on MV Hondius Cruise Near Cape Verde



Why in News

- A suspected outbreak of the rare **Hantavirus** has reportedly trapped around **150**

passengers and crew aboard the Dutch cruise ship **MV Hondius**, located off the coast of **Cape Verde (West Africa)**, triggering global public health concern and emergency monitoring.

What is Hantavirus?

- A family of **zoonotic viruses** primarily carried by rodents
- Causes two major severe diseases:
 - **Hantavirus Pulmonary Syndrome (HPS)** → acute respiratory failure
 - **Hemorrhagic Fever with Renal Syndrome (HFRS)** → internal bleeding and kidney failure

Virus Characteristics

- Not highly contagious between humans (unlike COVID-19 or influenza)
- Global burden: **150,000–200,000 cases annually**

Transmission and Vector

Rodent-Borne Spread

- Carriers include:
 - Deer mice
 - White-footed mice
 - Cotton rats

Mode of Infection

- Spread through **aerosolisation of viral particles**
- Humans get infected by inhaling contaminated air from:
 - Rodent urine
 - Droppings
 - Saliva
- Common exposure during cleaning or sweeping infested areas

Rare Human-to-Human Transmission

- Generally absent
- Exception: **Andes virus strain** (Argentina and Chile) has shown rare transmission cases

Symptoms and Disease Progression

Early Stage

- Incubation: **1–8 weeks**
- Flu-like symptoms:
 - Fever

- Muscle pain
- Fatigue

Severe Stage

- Rapid progression to:
 - Acute respiratory distress
 - Shortness of breath
 - Chest tightness
- Can become **fatal without urgent medical care**

Diagnosis

- Confirmed using **PCR (Polymerase Chain Reaction) testing**
- Similar diagnostic method used for viral infections like COVID-19

High-Risk Groups

Exposure-Prone Occupations

- Farmers
- Construction workers
- Campers

Vulnerable Populations

- Children under 5 years
- Pregnant women
- Immunocompromised individuals

Treatment and Management

No Specific Cure

- No approved antiviral treatment
- No vaccine currently available

Supportive Care

- Oxygen therapy
- Mechanical ventilation in severe cases
- Intensive care support for respiratory failure

Prevention Strategies

Rodent Control is Key

- Preventing rodent infestation in human habitats
- Maintaining strict sanitation and hygiene

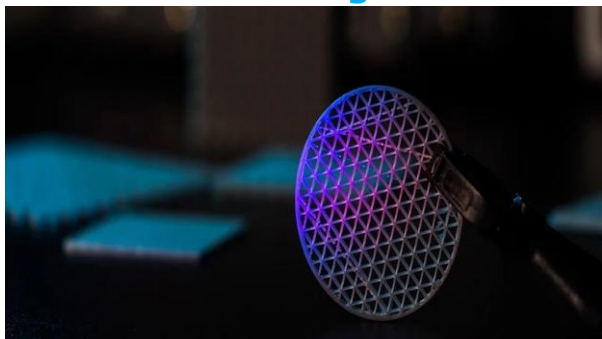
Exposure Avoidance

- Avoid disturbing rodent waste
- Use protective equipment during cleaning in high-risk areas

Conclusion

The MV Hondius incident highlights the continuing threat of **rare zoonotic diseases like Hantavirus**, especially in confined environments. With no vaccine or specific treatment available, **early detection, rodent control, and strict preventive hygiene measures remain the only effective safeguards.**

Synthetic Metamaterials and Mechanical Learning



Why in News?

A European research team has created synthetic metamaterials that can physically "learn" and modify their shape in response to external environments. Published in *Nature Physics*, this discovery marks a major step forward for adaptive materials and the field of soft robotics.

What are Metamaterials?

- **Structure Over Chemistry:** Metamaterials are human-made, engineered materials whose unique features come from their artificial physical design rather than their chemical makeup alone.
- **Unnatural Behaviors:** Unlike regular materials found in nature, they can warp, bend, or react in unusual mechanical ways that standard substances cannot replicate.

Key Features of the New Learning Material

1. Hardware-Based Learning Process

The material updates its structure using a built-in "contrastive learning" method. Each small unit inside the material compares different physical pressures and slowly alters its own layout to hit a target shape. By continuously reading feedback from its surroundings, the material can learn, erase, and relearn entirely new physical shapes over time.

2. Non-Reciprocal Reactions

The material reacts differently based on the exact direction of an incoming force. For example, pushing the material from the left side causes a completely different bending motion than pushing it from the right side. This distinct behavioral trait allows the system to discover multiple pathways to its final target shape without needing extra training rounds.

3. Energy-Efficient Bistable Units

The internal structure is made up of bistable segments. These components can sit securely in two

separate positions, allowing the material to switch between profiles, save shape memory, and adapt to new states while consuming very little energy.

Future Applications and Current Bottlenecks

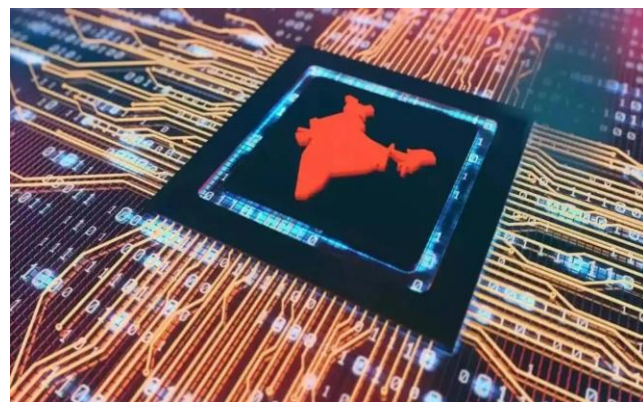
Potential Uses

- **Soft Robotics:** Building flexible, fluid robots that can navigate tight or changing spaces safely.
- **Adaptive Prosthetics:** Designing artificial limbs that alter their fit or stiffness based on a user's real-time movement.
- **Smart Infrastructure:** Manufacturing intelligent materials that naturally adjust to shifting weights, winds, or temperatures.
- **Autonomous Systems:** Deploying distributed robotic networks capable of self-adjusting in unpredictable field conditions.

Current Limitations

While the proof of concept is highly successful, the system currently requires bulky hardware and highly specialized laboratory equipment to function. These factors limit its immediate use in everyday commercial products and make large-scale manufacturing difficult for now.

Cabinet Approvals Under India Semiconductor Mission



Why in News?

- The Union Cabinet has approved two new semiconductor projects in Gujarat under the **India Semiconductor Mission (ISM) 1.0**.
- These projects include India's very first commercial GaN-based (Gallium Nitride) Mini/Micro-LED display factory and a new chip packaging unit.

Expanding India's Chip Factories

- **Growing Network:** With these two new projects, the total number of semiconductor

plants approved under ISM 1.0 has now reached **12**.

- **Regional Spread:** These manufacturing units are being set up across multiple states, including Gujarat, Assam, Andhra Pradesh, Uttar Pradesh, and Odisha.
- **Future Goals:** India expects to be able to design and make chips for **70-75%** of its domestic needs by 2029, and aims to become one of the world's top semiconductor nations by 2035.

Evolution of the India Semiconductor Mission (ISM)

1. ISM 1.0 Framework

- Launched in 2021 by the Ministry of Electronics and Information Technology (MeitY), this initial phase aimed to build a strong chip and display manufacturing base in India. Backed by a budget of **Rs 76,000 crore**, it offers financial support for chip making, display production, and design to help India join global electronics supply chains.

2. Transition to ISM 2.0

- To build on this progress, the government introduced **ISM 2.0** in the Union Budget 2026-27. This next phase shifts the focus from just funding factories to a broader **USD 11 billion** strategy. It aims to develop a complete domestic ecosystem and support local chip design by helping connected industries, such as specialty chemicals and machinery.

Strategic Significance

- **Meeting Demand:** These new units will help fulfill the rising demand for chips in everyday sectors like smartphones, heavy industries, cars, telecom networks, aerospace, and power grids.
- **Lowering Imports:** By using local technology for assembling, testing, and packaging chips, India is proving its technical strength. This reduces dependence on foreign countries and secures India's place in global tech manufacturing.

India's First Orbital Data Centre Satellite: Pathfinder



Why in News?

- Pixxel, a satellite imaging startup based in Bengaluru, has teamed up with Indian artificial intelligence firm Sarvam AI to create the country's first "orbital data centre" satellite, named **Pathfinder**.
- Planned for launch in the final quarter of 2026, the mission intends to place data-centre-grade Graphics Processing Units (GPUs) into low Earth orbit to handle AI tasks directly in space.

What is an Orbital Data Centre?

- **Core Concept:** An orbital data centre consists of a network or group of satellites packed with high-powered computing hardware like GPUs to process information directly in space.
- **The Shift to Edge Computing:** Standard satellites gather raw images or signals and send those massive files down to Earth for analysis. Orbital data centres use edge computing, which means they analyze data directly at the source and transmit only the final, useful insights back to ground stations.

Why Move Computing to Space?

- **Earth-Bound Limits:** Ground-based data centres face growing limits on available land, water for cooling, and high power usage. These issues are getting worse due to the massive energy demands of generative AI.
- **Constant Solar Energy:** Positioned in the correct orbit, satellites can access nearly continuous solar power. This provides a steady stream of electricity, making a strong

economic case for moving heavy computing workloads into space.

- **Fixing Data Bottlenecks:** Earth observation satellites take highly detailed, massive pictures that are slow and expensive to download. Processing this data while still in orbit cuts down on bandwidth congestion.
- **Future Growth:** Upcoming technology setups, like combining advanced satellite designs with heavy-payload rockets, could eventually supply up to 100 GW of power to space. This potential makes large-scale computing constellations a realistic business model.

The Challenges of Space-Based Computing

1. Managing High Heat

Space is a vacuum, meaning there is no air to carry heat away naturally like on Earth. The heat built up by processing units must be released through radiation. This requires complex radiative cooling setups that use fluid heat-transfer loops and large cooling panels.

2. Space Radiation

Standard commercial GPUs are highly vulnerable to cosmic rays. Radiation exposure can cause "bit flips"—which are random errors in software code—and permanently damage the delicate computer chips. Adding protective shielding blocks these rays but makes the satellite heavier and more complex.

3. Shrinking the Hardware

Fitting power-heavy data centre parts into a compact **200-kg** satellite takes advanced engineering to successfully downsize components and manage electricity.

4. High Upfront Costs and Risks

Launching and running advanced computer servers in orbit requires a lot of capital compared to setting up a cloud server on Earth. Furthermore, a satellite cannot be easily repaired if something breaks down. Engineers must build in extra backup systems and plan for "eclipse periods" when the satellite is in shadow and solar power drops.

5. Growing the Network

Pixxel estimates that it could take anywhere from **100 to 500** satellites working together to equal the processing power of a single ground-based data centre. While processing data at the edge in space is achievable in the near term, completely replacing Earth's cloud systems remains a distant goal.

The Pathfinder Mission Details

Overview

Pathfinder is a 200-kg class satellite built to serve as a real-world test model for processing data directly in orbit.

Key Technology and Payloads

- **Data-Centre-Grade GPUs:** The satellite will carry high-performance graphics chips identical to the ones running heavy servers on Earth.
- **Hyperspectral Imaging:** It will include Pixxel's advanced hyperspectral camera, designed to take highly detailed, multi-layered pictures of Earth.
- **Sovereign AI Foundation:** Sarvam AI will supply the full language models and AI processing platform. This setup allows both AI training and real-time reasoning to happen entirely in space.

Main Objective

- The mission's goal is to test how well real-time AI reasoning, power controls, and cooling systems hold up in the harsh conditions of space. This data will lay the technical groundwork for building larger commercial data centres in orbit.

Production

- The spacecraft will be put together at **Gigapixxel**, Pixxel's new production facility designed for scaling up satellite manufacturing.

Historical Note: Outside of this upcoming Indian space mission, the name "Pathfinder" is also famous for NASA's **Mars Pathfinder (1997)**. That historic project successfully landed the very first robotic rover, *Sojourner*, onto the surface of Mars.

New Ebola Outbreak in the Democratic Republic of Congo



Why in News?

- The **Africa Centres for Disease Control and Prevention (Africa CDC)** and the **World Health Organization (WHO)** have confirmed the **17th Ebola outbreak** in the **Democratic Republic of Congo (DRC)**.
- This situation is highly challenging because it involves a rare **non-Zaire strain**.

Key Challenges and Global Response

- **Vaccine Issues:** Tests show the outbreak is caused by a non-Zaire strain. This makes standard treatments difficult because existing Ebola vaccines and drugs were made only for the Zaire strain.
- **Cross-Border Risks:** The Africa CDC warned of high transmission risks to **Uganda and South Sudan**. This is driven by busy travel routes, high crowding in the city of Bunia, and moving miners.
- **Emergency Funding:** The WHO sent a field team and released **USD 500,000** from its **Contingency Fund for Emergencies (CFE)** to start quick contact tracing and border checks.

Medical Profile of Ebola Virus Disease (EVD)

- **What it is:** A severe and often deadly disease in humans and primates caused by the *Orthoebolavirus* genus of the *Filoviridae* family.
- **Three Major Species:** Six types exist, but three cause the most outbreaks:
 - Ebola virus (*Zaire ebolavirus*)
 - Sudan virus
 - Bundibugyo virus
- **Origin:** First found in **1976** during two matching outbreaks in Yambuku (DRC) near the **Ebola River** and in Nzara (South Sudan).

How it Spreads

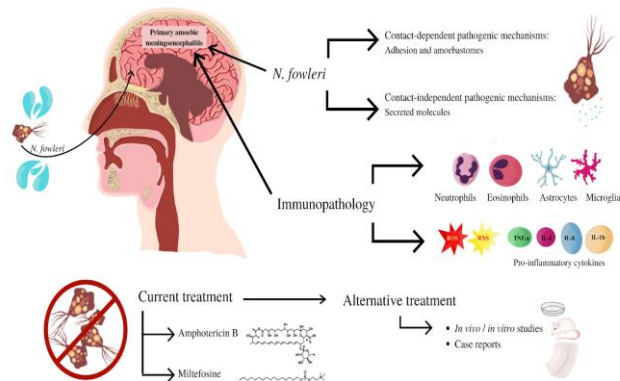
- **From Animals:** **Fruit bats** are the natural hosts. It jumps to humans through direct contact with the blood, fluids, or organs of infected animals like bats, monkeys, or apes.
- **Between Humans:** Spreads through broken skin or mucous membranes touching an infected person's blood or body fluids, or soiled items like clothes and bedding.

Symptoms and Treatment

- **Early Signs:** Sudden fever, severe tiredness, muscle pain, headache, and sore throat.

- **Later Signs:** Vomiting, diarrhea, rash, poor kidney/liver function, and internal or external bleeding.
- **Death Rate:** Highly lethal with an average **50% fatality rate** (ranging from 25% to 90% in past outbreaks).
- **Care:** Quick hydration therapy (liquids by mouth or IV) improves survival. Specific antibody drugs (**Inmazeb and Ebanga**) exist, but **only work for the Zaire strain**.

Spike in Brain-Eating Amoeba Cases in Kerala



Why in News?

The death of a **73-year-old woman** in Ernakulam, Kerala, has drawn renewed medical and administrative focus to **Primary Amoebic Meningoencephalitis (PAM)**. This rare but highly lethal brain infection is triggered by a microscopic organism popularly known as the "**brain-eating amoeba.**"

Technical Profile of Naegleria fowleri

- **The Pathogen:** PAM is caused by *Naegleria fowleri*, a microscopic, free-living amoeba that targets the central nervous system.
- **Natural Habitat:** The organism thrives in warm freshwater environments such as lakes, ponds, rivers, and canals. In rare instances, it can survive in poorly maintained or under-chlorinated swimming pools and untreated private wells.
- **Mode of Transmission:** Infection happens exclusively when contaminated water enters the human body **through the nose**—typically during swimming, diving, or washing the face. The amoeba climbs up the **olfactory nerve** directly into the brain, where it destroys brain tissue.

- **Crucial Exceptions:** A person cannot contract PAM by drinking contaminated water, as stomach acids safely neutralize the pathogen. Furthermore, the infection cannot spread from human to human.

Symptoms and Clinical Severity

- **Early Indicators:** The illness starts similarly to common viral infections, presenting with a severe headache, sudden fever, nausea, and vomiting.
- **Advanced Progression:** Within days, the infection causes severe brain swelling, leading to a stiff neck, mental confusion, seizures, hallucinations, and a coma.
- **Mortality Rate:** The condition is exceptionally lethal, carrying a fatality rate greater than 95%. Most patients pass away within 1 to 18 days from the start of the symptoms, often within the first 5 days.
- **Current Treatments:** There is no single, universally effective cure. Medical teams manage the infection using an aggressive combination of antimicrobial and anti-parasitic drugs, including amphotericin B, miltefosine, azithromycin, and fluconazole.

Public Health Measures and Safety Advisories

- **Water Disinfection:** Local health authorities in Ernakulam have stepped up surveillance and initiated superchlorination of community water assets, including public wells and canals, to eliminate any potential presence of the pathogen.
- **Preventive Guidelines:** Health officials urge the public to follow simple safety protocols to minimize nasal exposure during warm seasons:
 - Avoid diving, swimming, or submerging your head in stagnant, untreated freshwater bodies.
 - Use nose clips or plugs if engaging in water activities in fresh, shallow streams.
 - Ensure that any water used for rinsing nasal passages or sinuses (such as with a neti pot) is thoroughly boiled, distilled, or sterilized.

India's Gaganyaan Mission: The Life Support System (ECLSS)



Why in News?

- The Indian Space Research Organisation (ISRO) is developing the Gaganyaan Mission, which aims to launch Indian astronauts into a 400-km low Earth orbit.
- To ensure the crew survives in space, the spacecraft features an advanced Environmental Control and Life Support System (ECLSS).
- This system recreates Earth-like living conditions inside the capsule by regulating air, water, pressure, temperature, humidity, and waste in a microgravity environment.

Supply Management Strategy

- **Short-Duration Architecture:** Because Gaganyaan is a short-term mission, all essential supplies like oxygen and drinking water are carried directly from Earth. Any human or operational waste is stored securely inside the capsule and brought back for disposal.
- **Long-Duration Comparison:** In contrast, long-term missions (like those on the International Space Station) cannot rely solely on stored cargo. They use advanced recycling systems to turn exhaled air and wastewater back into breathable oxygen and clean drinking water.

Core Subsystems of the ECLSS

1. Air Revitalization

- **Oxygen Supply and Carbon Dioxide Removal:** The system pumps in fresh oxygen and uses lithium hydroxide canisters packed with activated charcoal to filter out dangerous carbon dioxide gas exhaled by the crew.

- **Forced Air Circulation:** In weightlessness, air does not rise or fall naturally because there is no thermal convection. The cabin uses small internal fans to keep air moving constantly, preventing lethal pockets of stagnant carbon dioxide or pure oxygen from clustering around the astronauts.

2. Thermal and Humidity Regulation

- **Climate Range:** The system holds the cabin temperature strictly between **20–26°C** and maintains humidity levels between **30–70%**.
- **Heat and Moisture Extraction:** Active cooling networks use heat exchangers to collect metabolic body heat and electrical equipment heat, venting it out into space. Condensing units extract moisture from the air to protect electronics from short-circuits and stop mold growth.

3. Atmospheric Pressure

- **Sea-Level Emulation:** The internal pressure is kept at **101.3 kilopascals (kPa)** to match normal atmospheric pressure at sea level on Earth. Electronic sensors and safety valves work together to balance the mix of breathable gases.

4. Water Management

- **Globule Containment:** Without gravity, water forms floating liquid balls that can drift into sensitive electronics or cause accidental inhalation hazards.
- **Pressurized Storage:** To prevent this, Gaganyaan uses pressurized bladders inside storage tanks. These bladders mechanically push clean drinking water out through specialized pouches directly to the crew.

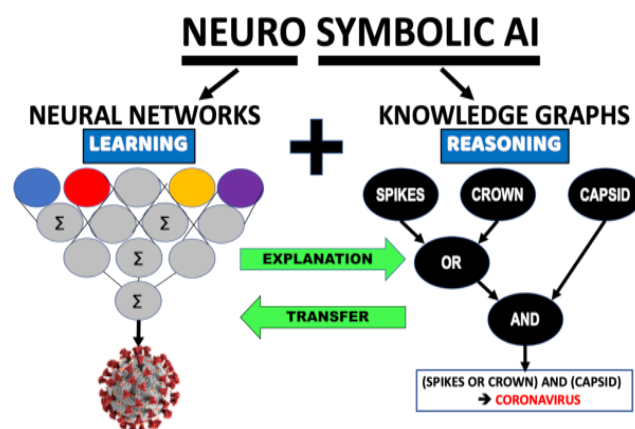
5. Waste Disposal

- **Suction Systems:** The capsule uses suction-based airflow systems to collect human waste and stop it from floating inside the cabin.
- **Chemical Treatment:** Collected urine and feces are treated with chemicals to halt bacterial growth and neutralize toxic ammonia fumes. The waste is then locked away in sealed containers until the mission returns to Earth.

6. Fire Suppression

- **Spherical Fire Behavior:** In microgravity, flames do not rise; instead, fires expand outward like a sphere.
- **Detection and Extinguishing:** Gaganyaan utilizes ultra-sensitive smoke detectors alongside fine-water-mist fire extinguishers. This mist cools down the flame source while simultaneously cleaning toxic smoke particles out of the cabin air.

Neuro-Symbolic AI: A New Paradigm for Indian Education



Why in News?

- Technology experts and educational researchers have highlighted the potential of **Neuro-Symbolic Artificial Intelligence (NSAI)** as a more reliable, stable, and effective framework for the Indian schooling system compared to traditional generative models like Large Language Models (LLMs).

What is Neuro-Symbolic AI?

NSAI is a hybrid architecture that fuses data-driven neural networks with rule-based symbolic logic systems, combining two distinct computing methodologies:

- **The Neural Component (Perception):** Utilizes deep learning for advanced pattern recognition. It excels at processing unstructured, unpredictable data, such as identifying a student's handwritten text, analyzing spoken phrases in regional dialects, or extracting visual features from diagrams.
- **The Symbolic Component (Reasoning):** Relies on explicit, human-readable logic rules, predefined constraints, and structured Knowledge Graphs or Ontologies.

The Synergy

- In an NSAI framework, the neural network acts as the "eyes and ears" by converting messy, unstructured data into clear symbols.
- Concurrently, the symbolic engine acts as the "logical brain," applying strict rules to those symbols to generate a verifiable, fact-based response.
- This dual setup improves transparency, trustworthiness, and explainability in automated decision-making.

Limitations of Traditional LLMs in Indian Classrooms

- **Infrastructure and Energy Mismatch:** Advanced frontier models require massive data centers and high-bandwidth internet. This presents a major obstacle in India, where only **47% of rural schools** possess functional computers, risking an expansion of the digital divide.
- **The Vernacular Data Trap:** Standard statistical models are heavily English-dominant. When applied to India's **22 constitutionally recognized languages** and varied dialects, they suffer from low data availability, frequently resulting in clunky, conceptually flawed translations.
- **The Hallucination Crisis:** When pushed beyond their training data, traditional LLMs confidently invent historical facts, fabricate scientific formulas, or cite fake academic papers. Students and overworked teachers often lack the immediate subject-matter expertise to catch these errors, risking the spread of incorrect information.
- **Amplification of Rote Learning:** Because standard generative AI acts as a statistical pattern-matcher rather than a logical processor, it generates quick answers without encouraging conceptual clarity, failing to stimulate original scientific reasoning or align with the core goals of the National Education Policy (NEP) 2020.
- **The Black Box Problem:** If an LLM solves a calculus problem incorrectly, it cannot explain its internal error pathway. This lack of interpretability prevents teachers from diagnosing specific learning gaps.

Strategic Significance of NSAI for Indian Schools

The implementation of NSAI aligns closely with the mandates of **NEP 2020**, which emphasizes conceptual clarity, multilingualism, and reducing cognitive loads on students.

- **Factual Grounding via Curricular Ontologies:** NSAI can be hardcoded with structured knowledge bases, such as mapping the entire NCERT curriculum into a machine-readable logic tree. The AI's outputs are strictly bounded by these facts, completely eliminating hallucinations.
- **Overcoming the Vernacular Barrier:** The system bypasses data scarcity by combining neural translation with the explicit, hardcoded grammatical rules of Indian languages (such as Paninian grammar logic). This allows the system to achieve high accuracy in regional languages with exponentially less training data, supporting platforms like *Bhashini*.
- **Explainable "Knowledge Tracing":** The symbolic engine can track a student's step-by-step logic through a multi-stage equation. If the student makes an error, the system isolates the exact micro-concept misunderstood (e.g., misapplying a distributive property) and provides targeted feedback, acting as a precise digital tutor.
- **Frugal Innovation and Edge Deployment:** Because NSAI relies on pre-programmed logic for reasoning rather than discovering rules via brute-force data consumption, these models are lightweight and require minimal computing power. Built on efficient principles like the **C3AN framework**, they can be downloaded onto low-cost smartphones and run completely offline, bypassing rural connectivity deficits.

Indigenous Case Studies

- **Project PrahelikaAI (IIT Kharagpur):** Uses logic puzzles to stimulate cognitive reasoning. It features a continuous digital tutor that tracks student delays, offers localized hints in Hindi and Bengali, and builds personalized learning profiles of recurring misconceptions.
- **C3AN Edge Deployment:** A framework designed specifically for rural deployment,

enabling students in remote regions to master complex concepts natively in languages like Odia on low-end devices without an active internet connection.

Implementation Challenges in India

- **Knowledge Engineering Bottleneck:** The symbolic component depends on highly detailed knowledge graphs that must be manually designed by experts. Digitizing India's vast curriculum across NCERT, varied State Boards, and technical institutions into machine-readable logic structures is highly time-consuming and resource-intensive.
- **Linguistic Dialectal Diversity:** Building accurate symbolic reasoning systems for dozens of regional languages and localized dialects requires extensive linguistic datasets and customized logic frameworks, which remain underdeveloped for many Indian tongues.
- **Hardware and Infrastructure Gaps:** Deploying software across fragmented hardware ecosystems, including outdated smartphones and poorly equipped rural schools with unstable electricity, poses severe software optimization challenges.
- **Socio-Emotional Blindspots:** AI systems can identify academic weaknesses but cannot detect or resolve emotional, psychological, or socioeconomic factors affecting student performance, such as malnutrition, home environment stress, or a lack of motivation.
- **Risk of Algorithmic Over-Reliance:** An over-emphasis on automated diagnostics may reduce the role of human mentorship, empathy, and personal counseling, which are essential components of holistic education.

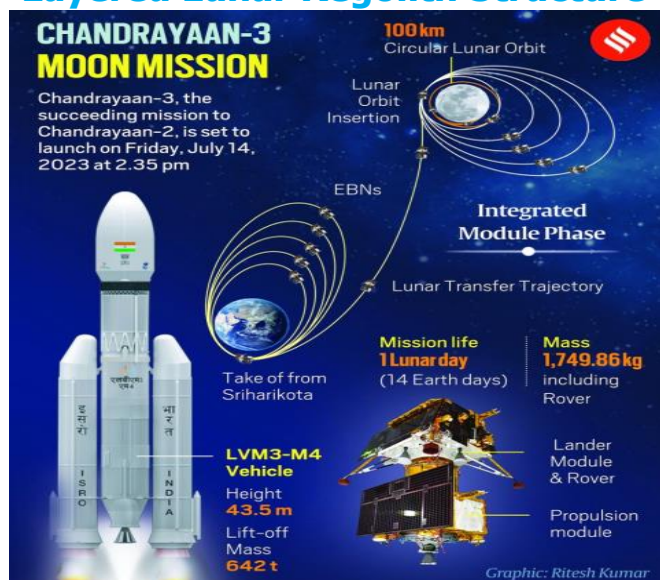
Measures to Ensure Inclusive and Effective Deployment

- **Integration with Digital Public Infrastructure (DPI):** NSAI-powered tutoring systems should be integrated into existing educational platforms like **DIKSHA** (Digital Infrastructure for Knowledge Sharing) to democratize access to personalized learning in remote areas.
- **Building a open-source "Bharat-Ontology":** Under the **IndiaAI Mission**, the Ministry of

Education should collaborate with academic institutions (such as the IITs and IIITs) and ed-tech firms to build open-source, curriculum-aligned knowledge graphs.

- **Upgrading Teacher Training via NISHTHA 2.0:** National teacher capacity-building programs must be upgraded to help educators interpret AI-generated learning diagnostics and tailor their lesson plans accordingly, while using AI to automate repetitive grading tasks.
- **Strict DPDP Act Compliance:** The deployment of educational AI must adhere strictly to the **Digital Personal Data Protection (DPDP) Act, 2023**. Student information must be thoroughly anonymized, localized, and used exclusively for pedagogical improvements, with strict prohibitions against commercial exploitation.
- **Pedagogical Bias Auditing:** The symbolic logic and underlying knowledge graphs must be regularly audited by independent educational bodies to ensure they do not inadvertently encode gender, caste, or regional biases into the AI's reasoning pathways.

Chandrayaan-3 Findings Reveal Layered Lunar Regolith Structure



Why in News?

- Scientists from the **Indian Space Research Organisation (ISRO)** have published new findings from the **Chandrayaan-3 mission**, focusing on data collected during the Vikram

lander's "hop" experiment and the **Chandra's Surface Thermophysical Experiment (ChaSTE)**.

- The study reveals a highly distinct, layered structure within the top few centimeters of the Moon's upper surface.

Technical Elements of the Lunar Experiments

- **The ChaSTE Instrument:** This specialized tool was deployed directly from the lander. Equipped with a motorized thermal probe and a suite of ten high-precision temperature sensors, it penetrated the top layers of the lunar crust to map its thermal behavior and conductivity.
- **The Lander Hop Maneuver:** After its historic initial touchdown, the Vikram lander fired its engines a second time using residual propellant. It lifted off to perform a short "hop" of roughly **50 cm** before landing safely at an adjacent spot. This maneuver allowed scientists to observe plume-surface interactions and analyze surface characteristics at a secondary location.

Key Scientific Findings and Material Dynamics

- **Lunar Regolith Composition:** Scientists emphasized that the Moon's outer covering is more accurately called "**lunar regolith**" rather than lunar soil. Unlike organic Earth soil, it is a dry, uncompacted layer consisting entirely of shattered rock fragments and jagged, glass-like minerals produced by eons of meteorite impacts.
- **Two-Layered Architecture:** The dual experiments revealed a cake-like, two-layered layout within the top few centimeters of the lunar terrain:
 - **Top Layer Characteristics:** The upper **2–6 cm** layer was found to be highly cohesive, unusually sticky, and hyper-porous. This specific porous composition allows it to function like an insulating thermal blanket, trapping underlying temperatures.
 - **Abrupt Density Variation:** The probe recorded a major change in density within a narrow depth. The bulk density of the regolith spikes rapidly from **750 kg/m³** at the immediate

surface to **1600 kg/m³** just a few centimeters below the topsoil.

Space Exploration and Engineering Significance

- **Subsurface Water-Ice Preservation:** The highly porous and insulating nature of the top regolith layer plays a key role in shielding deep-seated water molecules. This structure keeps subsurface water-ice from evaporating into space despite the extreme temperature swings of the lunar day.
- **Rocket Plume Dynamics:** Understanding how the engine's exhaust gases interact with loose regolith helps engineers design better landing pads and anti-erosion shielding for future spacecraft.
- **Future Lunar Base Planning:** The data on geotechnical variability and surface load-bearing stability is critical for selecting optimal construction sites and structural materials for future long-term lunar bases and habitats.

Phishing Campaign Targeting Lost or Stolen iPhones



Why in News?

The National Cybercrime Threat Analytics Unit of the **Indian Cybercrime Coordination Centre (I4C)** issued an advisory warning of a sophisticated phishing campaign. This "hybrid" cybercrime campaign specifically targets Apple iPhone users whose devices have been lost or stolen.

Modus Operandi of the Campaign

- **Exploiting Emotional Urgency:** Cybercriminals track individuals who have recently lost their premium handsets and

exploit their anxiety. They send fraudulent SMS messages from numeric headers or international text headers, pretending to be from "Apple Support" or the "Find My iPhone" service.

- **Deceptive Content:** The fake messages typically state that the missing iPhone has been located, temporarily switched off, or requires immediate action to erase sensitive media and contacts.
- **Counterfeit Portals:** These texts contain embedded phishing links using deceptive naming conventions. Clicking the link redirects the user to a counterfeit website designed to look exactly like the official Apple Support or iCloud login page.
- **Account Compromise:** Victims are prompted to type in their Apple ID credentials, followed by their One-Time Password (OTP) or two-factor authentication code.
- **Bypassing Security:** Once the attackers steal these credentials, they log into the genuine iCloud account, remotely disable the "Find My iPhone" tracking feature, and remove the linked Apple ID from the stolen handset. This allows the criminals to resell or reuse the stolen device without operational restrictions.

Profile of the Indian Cybercrime Coordination Centre (I4C)

- **Administrative Structure:** Established under the **Ministry of Home Affairs (MHA)**, the I4C functions as the nodal agency to strengthen India's coordinated response against cyber threats.
- **Core Functions:** The center analyzes emerging digital threats, issues national public advisories, runs the **1930 national cybercrime helpline**, and manages the central reporting portal
- It coordinates enforcement efforts between various state and central law enforcement agencies.

Understanding Phishing Dynamics

- **Core Definition:** Phishing is a cyberattack where fraudsters use fake communications—such as emails, text messages, telephone calls, or websites—to trick individuals into

revealing sensitive credentials, financial data, or personal records.

- **Social Engineering Baseline:** Rather than directly cracking computer firewalls or software code, phishing functions through social engineering. It manipulates human psychology, relying on trust, extreme urgency, panic, or oversight to execute the breach.
- **Impact Vectors:** A successful attack leads to the theft of primary identity credentials, corporate system logins, and banking data. It can also be used to install destructive malware or ransomware, resulting in massive financial and structural damage.
- **Variant Classifications:**
 - **Smishing:** Short Message Service (SMS) phishing, where fraudulent links are delivered directly via text messages.
 - **Vishing:** Voice phishing, where attackers use spoofed voice phone calls to verbally deceive users into giving up data.

Advisory Guidelines and Countermeasures

- **Verify the URL:** Users must avoid opening links received via unsolicited text messages or non-standard headers. Always check the browser address bar directly; official tracing must only be done through Apple's authentic portal
- **Guard Credentials:** Apple never contacts users via phone or text to announce a device has been found, nor does it ask users to share account passwords or verification OTPs.
- **Immediate Reporting:** If an iPhone is lost or stolen, users should report the device details immediately on the central government's **Central Equipment Identity Register (CEIR)** platform and flag financial fraud on the national helpline (1930).

Crux of The Hindu & Indian Express

Science & Technology

UK Army's Parachute Mission to Tristan da Cunha Amid Hantavirus Outbreak



Why in News

- The British Army conducted a **rare parachute-based humanitarian medical mission** to the remote island of Tristan da Cunha.
- The mission was launched to assist a British resident suspected of contracting **hantavirus** after leaving the cruise ship MV Hondius.
- The operation became globally significant because it marked the **first-ever emergency deployment of UK military medical personnel through parachute insertion**.
- The event also highlighted concerns regarding the ongoing **hantavirus outbreak** linked to the cruise ship.

Background of the Incident

- A resident of Tristan da Cunha disembarked from the cruise ship MV Hondius on **14 April 2026**.
- According to the World Health Organization, the individual later developed symptoms such as:
 - **Diarrhoea**
 - **Fever**
- These symptoms raised suspicion of **hantavirus infection**.

- Due to the island's geographic isolation and limited healthcare facilities, emergency medical support became necessary.

Details of the Military Operation

- The mission was conducted by the 16 Air Assault Brigade.
- The operation involved:
 - **Six paratroopers**
 - **Two intensive-care medical specialists**
- The team travelled from RAF Brize Norton aboard an Airbus A400M Atlas aircraft.
- The medical personnel parachuted onto the island through **tandem jumps** because the island lacks an airport.
- The aircraft also delivered:
 - **Critical oxygen supplies**
 - **3.3 tonnes of medical equipment and medicines**

Why the Mission Was Extraordinary

- The Ministry of Defence described the mission as an **unprecedented humanitarian deployment**.
- It was the **first time** UK military doctors and nurses were deployed into a medical emergency through a **parachute insertion operation**.
- The mission was carried out under:
 - **Strong winds**
 - Difficult weather conditions
 - Severe geographic isolation

About Tristan da Cunha

- Tristan da Cunha is regarded as the **world's most remote inhabited island settlement**.
- Key facts:
 - Population: Around **221 residents**
 - Located in the **South Atlantic Ocean**
 - It is a **British Overseas Territory**
 - The island has **no airport**
 - Access is possible only by **sea**
- Its nearest inhabited neighbour is Saint Helena, located over **2,400 km away**.

Hantavirus Outbreak on MV Hondius

- The outbreak originated aboard the expedition cruise vessel MV Hondius.
- Current outbreak figures include:
 - **3 deaths**

- **6 confirmed infections**
- **2 suspected cases**
- The ship later reached Tenerife, where passengers began disembarkation and repatriation.

What is Hantavirus

- Hantaviruses are **zoonotic viruses**, meaning they spread from animals to humans.
- They belong to the Hantaviridae family under the order **Bunyavirales**.
- **Hantaviruses** are a group of viruses mainly carried by **rodents**.
- Each hantavirus strain is generally linked to a specific rodent species.
- Rodents usually carry the virus without becoming ill.
- Humans usually become infected through contact with:
 - Rodent urine
 - Droppings
 - Saliva
- Infection can cause:
 - Severe respiratory illness
 - Kidney complications
 - Death in serious cases
- In the **Americas**, hantaviruses can cause **Hantavirus Cardiopulmonary Syndrome (HCPS)**, which affects the lungs and heart.
- HCPS may have a **fatality rate of up to 50%**.
- In **Europe and Asia**, hantaviruses mainly cause **Haemorrhagic Fever with Renal Syndrome (HFRS)**, which affects kidneys and blood vessels.
- The **Andes virus** found in South America is the only known hantavirus capable of **limited human-to-human transmission**.

Types of Hantavirus Diseases

Hantavirus Cardiopulmonary Syndrome (HCPS)

- Found mainly in:
 - North America
 - Central America
 - South America
- It affects:
 - Lungs
 - Heart
- Symptoms may rapidly progress to:
 - Cough

- Breathlessness
- Fluid accumulation in lungs
- Shock

Haemorrhagic Fever with Renal Syndrome (HFRS)

- Found mainly in:
 - Europe
 - Asia
- It primarily affects:
 - Kidneys
 - Blood vessels
- Severe cases may lead to:
 - Bleeding disorders
 - Kidney failure
 - Low blood pressure

Transmission of Hantavirus

- **Infection mainly spreads through:**
 - Contact with contaminated rodent waste
 - Inhalation of virus particles in enclosed spaces
 - Rodent bites (rare)
- **High-risk activities include:**
 - Cleaning poorly ventilated rooms
 - Farming
 - Forestry work
 - Staying in rodent-infested areas
- Human-to-human transmission has been documented only for the **Andes virus**.

Symptoms of Hantavirus Infection

- Symptoms usually appear between **1 and 8 weeks** after exposure.
- Common symptoms include:
 - Fever
 - Headache
 - Muscle pain
 - Abdominal pain
 - Nausea
 - Vomiting
- Severe disease may lead to:
 - Respiratory failure
 - Shock
 - Kidney complications

Diagnosis

- Early diagnosis is difficult because symptoms resemble diseases such as:
 - Influenza

- COVID-19
- Dengue
- Viral pneumonia
- Leptospirosis
- Diagnosis depends on:
 - Patient history
 - Rodent exposure history
 - Travel history
- Laboratory confirmation includes:
 - **IgM and IgG antibody testing**
 - **RT-PCR testing**

Treatment

- There is currently:
 - **No specific antiviral treatment**
 - **No licensed vaccine**
- Treatment mainly involves:
 - Intensive supportive care
 - Oxygen support
 - Management of respiratory and kidney complications
- Early medical intervention significantly improves survival chances.

Prevention and Control

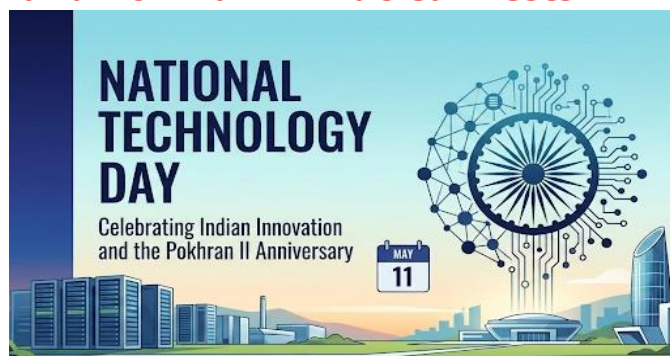
Preventive Measures

- Keep homes and workplaces clean.
- Seal openings that allow rodent entry.
- Store food securely.
- Avoid dry sweeping rodent droppings.
- Use wet cleaning methods in contaminated areas.
- Maintain proper hand hygiene.

WHO Response

- The World Health Organization supports countries through:
 - Disease surveillance
 - Laboratory strengthening
 - Risk communication
 - Outbreak response
 - Infection-control guidance
- WHO also promotes a **One Health approach**, linking:
 - Human health
 - Animal health
 - Environmental management

National Technology Day 2026 and Pokhran-II Nuclear Tests



Why in News

- Prime Minister Narendra Modi greeted the nation on the occasion of **National Technology Day** on **11 May 2026**.
- He recalled the historic **Pokhran-II nuclear tests (1998)** and described them as a symbol of:
 - **Scientific excellence**
 - **Strategic capability**
 - **Self-reliance**
- He stated that **technology** has become a key pillar in building an **Aatmanirbhar Bharat** by:
 - Accelerating **innovation**
 - Expanding **opportunities**
 - Driving **national growth**
- He further highlighted that India's focus remains on:
 - Empowering **talent**
 - Promoting **scientific research**
 - Developing **solutions for national progress**

About National Technology Day

- **National Technology Day** is observed every year on **11 May**.
- It commemorates India's major technological achievements on **11 May 1998**.
- The day is primarily associated with:
 - **Operation Shakti (Pokhran-II nuclear tests)**
- It also marks:
 - Successful testing of the **Trishul missile**
 - Successful test flight of the **Hansa-3 aircraft**
- The first **National Technology Day** was celebrated in **1999** on **11 May**.

National Technology Day 2026 Theme

Theme

- The theme for **National Technology Day 2026** is:
 - **“Responsible Innovation for Inclusive Growth”**
- The theme focuses on:
 - **Ethical innovation**
 - **Inclusive development**
 - **Sustainable technological progress**
 - **Technology for public welfare**
- It aligns with the vision of:
 - **Aatmanirbhar Bharat**

Pokhran-II Nuclear Tests (Operation Shakti)

About Operation Shakti

- **Operation Shakti** refers to India’s nuclear tests conducted in **May 1998**.
- The tests were conducted at:
 - **Pokhran Test Range, Rajasthan**
- India carried out:
 - **Five nuclear tests**
- The tests were conducted on:
 - **11 May 1998**
 - **13 May 1998**
- The first three detonations occurred simultaneously at:
 - **15:45 IST on 11 May 1998**
- The operation demonstrated India’s:
 - **Nuclear capability**
 - **Scientific strength**
 - **Technological advancement**
 - **Strategic preparedness**

Leadership Behind Pokhran-II

Political Leadership

- The operation was conducted under the leadership of:
 - **Atal Bihari Vajpayee**
- After the tests, India was declared a:
 - **Nuclear-weapon state**

Scientific Leadership

- The operation was led by:
 - **A. P. J. Abdul Kalam**
- His role included:
 - **Coordinating scientific planning**
 - **Supervising technological execution**
 - **Ensuring operational secrecy**

- Key institutions involved were:
 - **Defence Research and Development Organisation (DRDO)**
 - **Bhabha Atomic Research Centre (BARC)**

Strategic Significance

- The tests strengthened India’s:
 - **National security**
 - **Nuclear deterrence capability**
 - **Strategic autonomy**
- They established India as:
 - **A nuclear-capable nation**
 - **A major strategic power**
- They enhanced India’s ability to:
 - **Protect national interests**
 - **Maintain credible deterrence**

Scientific and Technological Significance

- The tests demonstrated India’s:
 - **Indigenous nuclear capability**
 - **Advanced defence technology**
 - **Scientific expertise**
- The operation showed India’s ability to:
 - **Develop complex weapon systems**
 - **Conduct high-level technological missions**
 - **Achieve self-reliance in strategic sectors**
- Prime Minister Narendra Modi described Indian scientists as:
 - **“The true architects of the nation’s pride and self-respect”**

International Significance

- The tests introduced the world to India’s:
 - **Strategic capability**
 - **Technological strength**
 - **Independent foreign policy stance**
- They marked India’s emergence as:
 - **A global technological power**
 - **A strategically autonomous nation**

[Pokhran-I: Background](#)

Operation Smiling Buddha (1974)

- India conducted its first nuclear test in:
 - **1974**
- The operation was named:
 - **Operation Smiling Buddha**
- It was conducted at:
 - **Pokhran, Rajasthan**

- It took place under the leadership of:
 - Indira Gandhi
- It laid the foundation for India's later **nuclear programme**.

Other Technological Achievements on 11 May 1998

Trishul Missile Test

- India successfully tested the:
 - **Trishul Surface-to-Air Missile**
- It demonstrated:
 - **Indigenous defence capability**
 - **Air defence strength**
- It was designed as a:
 - **Short-range quick reaction missile**

Hansa-3 Aircraft

- India also conducted the test flight of:
 - **Hansa-3**
- It is an:
 - **Indigenous light aircraft**
- It was developed for:
 - **Pilot training**
 - **Civil aviation use**
 - **Surveillance purposes**
- It highlighted India's progress in:
 - **Aerospace technology**
 - **Aircraft development**

India's Major Science and Technology Initiatives

National Quantum Mission

- The mission focuses on:
 - **Quantum computing**
 - **Quantum communication**
 - **Quantum sensing**
- It aims to position India as a leader in:
 - **Quantum technology**

India Semiconductor Mission 2.0

- The mission focuses on:
 - **Semiconductor manufacturing**
 - **Electronics ecosystem development**
 - Reducing dependence on **imports**
- It aims to build:
 - A **self-reliant semiconductor industry**

Deep Ocean Mission

- The mission focuses on:
 - Deep-sea exploration
 - Marine resource utilisation
 - Underwater technology development
- It also aims to explore:
 - **Critical ocean minerals**

Anusandhan National Research Foundation (ANRF)

Objective

- The foundation aims to:
 - Strengthen **research ecosystem**
 - Promote **scientific innovation**
 - Improve **collaboration** between academia, industry, and government
- It supports:
 - **Research funding**
 - **Scientific excellence**

Vigyan Dhara Scheme

- It is an umbrella programme for:
 - **Scientific research**
 - **Capacity building**
 - **Innovation promotion**
- It strengthens India's:
 - **Science and technology ecosystem**

Biotech-KISAN

- It connects:
 - **Biotechnology institutions**
 - **Farmers**
- It aims to:
 - Improve **agricultural productivity**
 - Promote **scientific farming**
 - Support **rural development**

iDEX (Innovations for Defence Excellence)

Objective

- It promotes:
 - **Defence innovation**
 - **Indigenous defence technology**
 - **Startup participation**
- It supports:
 - **Startups**
 - **MSMEs**
 - **Innovators**

National Mission on Cyber-Physical Systems

Focus Areas

- It focuses on:
 - **Artificial Intelligence (AI)**
 - **Robotics**
 - **Internet of Things (IoT)**
 - **Smart manufacturing**
 - **Autonomous systems**
- It strengthens India's:
 - **Emerging technology ecosystem**

SRS Statistical Report 2024: The Rise of Non-Communicable Diseases



Why in News?

The **Sample Registration System (SRS) Statistical Report 2024** highlights a profound shift in India's public health landscape, revealing that **Non-Communicable Diseases (NCDs)** were the cause of **60% of all deaths** in India during the 2022-2024 reporting period.

Key Trends and Mortality Analytics

- **Rising Mortality Curve:** The share of NCDs in total national mortality has escalated by **7.3% percentage points**, rising from 52.8% in 2015-2017 to 60% in 2022-2024. This trajectory signals that chronic illnesses have firmly displaced infectious diseases as India's primary health threat.
- **Cardiovascular Dominance:** Among all NCDs, cardiovascular diseases alone accounted for **32.1% of all deaths** (up from 27.1% in 2015-2017). This figure spikes to **37.3%** within the 30-69 productive age group, causing high premature mortality among adults in their 30s and 40s.
- **Rural-Urban and Gender Penetration:** NCD mortality remains statistically higher in urban areas (**64.8%**) compared to rural zones (**58.8%**), and among men (**62.3%**) versus women (**56.9%**). However, data shows an accelerating upward trajectory among rural populations and women.
- **Regional Asymmetries:** A distinct health divide persists between **Empowered Action Group (EAG) States and Assam**, where NCDs cause **53.9% of deaths**, compared to **non-EAG states** where NCD mortality stands significantly higher at **63.5%**. This directly maps to varying levels of urbanization and demographic aging.

Impact on the Demographic Dividend and Youth

- **Workforce Vulnerability:** With adults aged 30 to 44 accounting for **19.5% of total deaths** amidst a declining national Total Fertility Rate (TFR), premature mortality from lifestyle diseases poses a direct threat to India's window of demographic dividend.
- **Youth Mental Health Crisis:** For India's youth in the 15-29 age bracket, **suicide remains the leading cause of death**, rising from 16.3% to **19% of all deaths** in this cohort. This trend reflects high underlying mental health vulnerabilities linked to socio-economic stressors.

About Non-Communicable Diseases (NCDs)

- **Definition:** NCDs are chronic, non-transmissible diseases of long duration caused by a combination of genetic, physiological, environmental, and lifestyle-related factors.
- **Primary Classifications:** Major NCDs include cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes. These are commonly called lifestyle diseases when closely linked to unhealthy daily habits.

Government Intervention Framework:

- To address this growing public health burden, India launched the **National Programme for Prevention and Control of Non-Communicable Diseases (NP-NCD)** in 2010.
- It initially covered 100 districts across 21 states during the 11th Five Year Plan.
- The programme was later expanded under the 12th Five Year Plan and subsumed under the **National Health Mission (NHM)** in 2013-14 to strengthen universal access to affordable and quality healthcare.

IACS Marks 150 Years of Scientific Excellence



Why in News?

- The **Indian Association for the Cultivation of Science (IACS)** commemorated 150 years of its establishment.
- To mark this sesquicentennial milestone, the government inaugurated two major technological initiatives at the institute: an indigenously built **Plasma Enhanced Chemical Vapor Deposition (PECVD) system** and **RETINA** (Research Entrepreneurship for Translation, Innovation and Navigation).

New Technological and Entrepreneurial Frontiers

- **The Indigenously Built PECVD System:** This state-of-the-art system was launched for the fabrication of India's first **amorphous silicon solar cell**. It represents a significant step forward in domestic semiconductor manufacturing and solar energy technology.
- **RETINA Center:** Designed to act as an institutional bridge, this center links fundamental scientific research with entrepreneurship, incubator startups, and commercial applications to solve real-world societal challenges.

Historical Profile of IACS

- **Foundation:** IACS was founded in **1876** by **Dr. Mahendralal Sircar**. It holds the distinction of being the first research institution in Asia established entirely by Indians for the advancement of modern science through original research.
- **Early Leadership:** Renowned social reformers and scholars **Pandit Iswar Chandra Vidyasagar** and **Kesab Chandra Sen** were among the prominent members of the very first Trustee Board of IACS, with Dr. Sircar serving as its first Honorary Secretary.
- **Legacy of Scientific Giants:** The institution has been home to several of India's most celebrated scientists, including **Jagadish Chandra Bose**, **Meghnad Saha**, **S.N. Bose**, and **Sir C.V. Raman**.

The Raman Effect and India's First Nobel Prize

Sir C.V. Raman conducted his groundbreaking research on light physics directly at the IACS laboratories in Kolkata. This monumental discovery

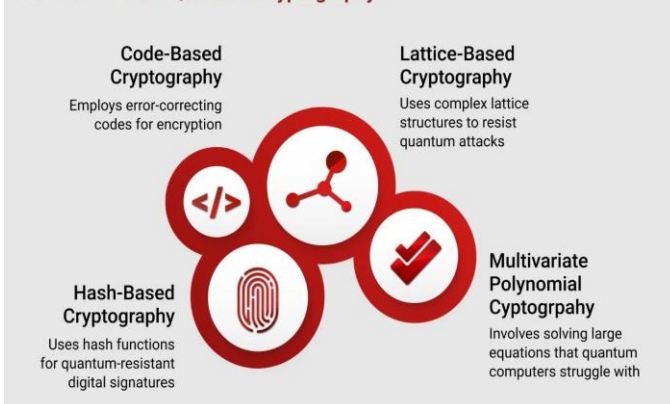
earned him the **Nobel Prize in Physics in 1930**, marking India's first-ever Nobel Prize in Science.

Physics of the Raman Effect:

- **Inelastic Scattering:** The Raman Effect is the **inelastic scattering of light** by molecules, which results in a distinct shift in the wavelength and energy of the scattered photons.
- **Energy Exchange:** When a beam of monochromatic light (light of a single wavelength) strikes a substance, the vast majority of the photons scatter elastically (Rayleigh scattering) with no change in energy. However, a tiny fraction of these photons exchange kinetic energy with the target molecules, emerging with changed wavelengths that reveal the substance's molecular fingerprint.

DST Task Force Recommends Phased Adoption of Post-Quantum Cryptography

Overview of Post-Quantum Cryptography



Why in News?

A specialized task force constituted by the **Department of Science & Technology (DST)** recommended that India's critical sectors begin a phased adoption of **Post-Quantum Cryptography (PQC)**. This strategic shift is designed to secure the nation's digital assets against future quantum-computing security threats.

National Migration Timeline

The task force has laid out a structured transition roadmap for entities classified under **Critical Information Infrastructure (CII)**:

- **2027:** Begin the institutional transition and technology testing phase.

- **2028:** Migrate all high-priority systems and secure data pipelines.
- **2029:** Achieve full, ecosystem-wide adoption of quantum-resistant algorithms.

The Security Threat: Why Traditional Encryption is At Risk

Modern digital security relies heavily on **Public Key Infrastructure (PKI)**, which secures data transfer using mathematical problems that are practically impossible for classical computers to solve within a human lifetime.

- **The Quantum Threat:** A powerful, fault-tolerant quantum computer could easily run **Shor's Algorithm**. This specialized algorithm can factor large integers and solve discrete logarithms at extreme speeds.
- **Vulnerable Systems:** If left unmanaged, this computational leap could compromise standard encryption protocols. This poses immediate risks to global banking networks, classified military communications, government servers, digital authentication systems, and general internet traffic.
- **The Solution:** Post-Quantum Cryptography focuses on engineering advanced mathematical systems that remain completely secure against attacks from both classical supercomputers and next-generation quantum machines.

Technical Foundations of Post-Quantum Cryptography (PQC)

- PQC (or quantum-resistant cryptography) refers to secure algorithms engineered to withstand quantum decryption methods.
- **Key Distinction:** Unlike *Quantum Cryptography* (such as Quantum Key Distribution), which relies on physical properties like quantum mechanics, PQC runs on traditional hardware. It uses complex **mathematical problems** that are computationally impossible to solve even for quantum bits (qubits).

The task force highlighted four primary mathematical frameworks for PQC:

1. Lattice-Based Cryptography

- **Mechanism:** Relies on the extreme difficulty of solving geometric problems within high-dimensional lattices, such as finding the shortest vector in a multi-dimensional space.

- **Status:** Widely considered the most promising and flexible PQC approach. It is highly versatile and fits easily into public key encryption, digital signatures, and key exchange protocols.

2. Code-Based Cryptography

- **Mechanism:** Built on the mathematical challenge of decoding random linear error-correcting codes.
- **Status:** Known for its highly stable security baseline, though it frequently requires larger cryptographic key sizes than other methods.

3. Multivariate Polynomial Cryptography

- **Mechanism:** Based on the mathematical complexity of solving systems of multivariate polynomial equations over finite fields.
- **Status:** Explored and deployed primarily for building secure, untamperable digital signature schemes.

4. Hash-Based Cryptography

- **Mechanism:** Utilizes the structural security properties of standard, one-way cryptographic hash functions.
- **Status:** Mainly applied to reinforce digital signatures. It is considered highly secure and its underlying mathematics are well understood by global security researchers.

Discovery of Gold's Atomic Defense System Against Oxidation



Why in News?

A new study published in *Physical Review Letters* has revealed exactly why gold remains largely resistant to oxidation despite its extensive use as a catalyst in chemical oxidation reactions. The research shows that the unique atomic architecture of gold's surface actively prevents oxygen from reacting easily with it.

The Science Behind Gold's Resistance to Rusting

Gold is widely classified as a noble metal due to its exceptional resistance to corrosion and chemical breakdown. While scientists previously attributed this inertness simply to a weak attraction to oxygen, advanced computer simulations have uncovered an active atomic defense mechanism:

- **The Requirement for Oxidation:** For oxidation to occur, diatomic oxygen molecules must first split apart into individual oxygen atoms to bond with the metal.
- **Surface Reconstruction:** Gold crystal surfaces—specifically the **Au(100)** and **Au(110)** facets—spontaneously rearrange their outermost atoms into tightly packed **hexagonal patterns** through a process called surface reconstruction.
- **The Energy Barrier:** These dense, quasi-hexagonal arrangements dramatically lower the metal's surface energy. This structural change creates a massive energy barrier that prevents oxygen molecules from breaking apart and bonding with the gold.
- **Geometric Sensitivity:** The study noted that if gold atoms are forced into square or rectangular arrangements instead of hexagons, oxygen interacts far more aggressively, making oxidation much easier. The hexagonal geometry reduces oxygen reactions by a factor ranging from a billion to a trillion compared to less stable arrangements.

Natural Occurrence and Extraction

- **Native State:** Gold is one of the few metals that occurs naturally in its pure, elemental form as a native metal rather than as an oxide or sulfide ore.
- **Geological Concentration:** It is concentrated through hydrothermal and tectonic activities and is primarily recovered via three primary sources:
 1. Hard rock veins (such as auriferous quartz deposits).
 2. Secondary alluvial or placer deposits formed through river erosion.
 3. Industrial byproducts extracted during base metal mining (such as copper and lead processing).

Key Applications of Gold

- **Jewelry and Ornaments:** Prized for its natural metallic luster, high durability, and resistance to tarnishing. It holds immense cultural and investment significance globally, particularly in countries like India.
- **Electronics Industry:** Functions as an excellent, non-corrosive conductor of electricity. It is widely used to coat vital contact points in smartphones, high-performance computers, and precision circuit boards.
- **Finance and Investment:** Serves as a critical safe-haven asset during times of global economic uncertainty. It is held in the form of bullion coins, bars, and Exchange-Traded Funds (ETFs), with central banks maintaining extensive gold reserves for financial stability.
- **Medical and Healthcare Uses:** Extensively utilized in dentistry, diagnostic test kits, targeted cancer treatment research, and specialized implantable medical devices due to its high biocompatibility and chemical stability inside the human body.
- **Aerospace and Space Technology:** Applied as a microscopic protective coating on satellites, spacesuits, and delicate instruments to reflect harmful solar radiation and shield equipment from extreme thermal fluctuations.
- **Catalysis and Industrial Uses:** Deployed as gold nanoparticles to accelerate targeted chemical reactions, manage pollution control systems, and develop clean-energy technologies. Understanding how to chemically "switch off" its protective hexagonal surface structure may allow future engineers to design far more efficient industrial catalysts.

□□□

Kerala's Sacred Groves (Kavu) Restoration Initiative: Blending Tradition with Biodiversity Conservation



Why in News?

- Kerala has launched a **strategic pilot programme** for the restoration and conservation of Sacred Groves (Kavus).
- The initiative integrates **traditional cultural practices** with **scientific biodiversity management**, with strong emphasis on **local community participation**.

Key Features of the Initiative

1. Kavu Nurseries

- Establishment of specialized **nurseries** for **sacred grove species**.
- Focus on propagation of **native, endemic, and medicinal plants**.
- Ensures availability of planting material for **ecological restoration**.

2. Invasive Species Management

- Systematic removal of **invasive alien species** threatening grove ecosystems.
- Cleaning of **plastic waste and other pollutants**.
- Aims to restore **ecological balance** of **micro-habitats**.

3. Eco-Restoration Activities

- Conducting **biodiversity assessments** of sacred groves.
- Development of **bio-fencing** using **native plant species**.
- Rejuvenation of **associated ponds and water bodies**.

- Supports **wildlife survival** during **dry and summer periods**.

What are Sacred Groves (Kavus)?

Definition

- Sacred Groves are **patches of natural vegetation or forest** protected by **local communities**.
- They are dedicated to:
 - Local deities
 - Ancestral spirits

Traditional Protection System

- Considered **sacred ecosystems**.
- All forms of exploitation are strictly prohibited, including:
 - Tree cutting
 - Hunting
 - Removal of fallen leaves or resources
- Function as a **community-driven in-situ conservation system**.

Sacred Groves in India (Regional Names)

- Bihar & Jharkhand: **Sarna**
- Rajasthan: **Orans**
- Maharashtra: **Deorais**
- Meghalaya: **Law Kyntangs**
- Kerala: **Kavu**
- Karnataka: **Devara Kadu**

Significance of Sacred Groves

1. Biodiversity Conservation

- Act as **refugia** for **rare, endemic, and medicinal species**.
- Preserve **native genetic diversity**.

2. Ecological Stability

- Maintain **soil moisture and microclimate balance**.
- Support **groundwater recharge** and **local hydrology**.

3. Cultural and Spiritual Value

- Represent **traditional ecological knowledge systems**.
- Strengthen **community-based conservation ethics**.

4. Climate Resilience

- Act as **carbon sinks** at **micro-ecosystem level**.

- Help buffer **climate variability impacts**.

Legal and Institutional Framework for Protection

Biological Diversity Act, 2002

- Provides legal support for conservation through **Biodiversity Management Committees (BMCs)**.
- Encourages **local participation in biodiversity protection**.

Wild Life (Protection) Amendment Act, 2002

- Introduces the concept of **Community Reserves**.
- Enables **legal protection of community-conserved areas like sacred groves**.

People's Biodiversity Register (PBR)

- Maintained by **Biodiversity Management Committees (BMCs)**.
- Documents:
 - Traditional ecological knowledge
 - Local species diversity
 - Resource use practices

Conclusion

The Kerala initiative reflects a **modern conservation approach rooted in traditional ecological wisdom**. By combining **community participation, legal frameworks, and scientific restoration methods**, sacred groves can serve as a model for **sustainable biodiversity conservation and climate resilience in India**.

Global Push Beyond COP Talks: Santa Marta Climate Conference Focuses on Fossil Fuel Phase-Out



Why in News

- Representatives from over **50 countries**, accounting for nearly **50% of global GDP**, gathered in **Santa Marta, Colombia**, for the **First International Conference on Transitioning Away from Fossil Fuels**.

- The conference has emerged amid growing dissatisfaction with the **slow and consensus-driven negotiations under the UNFCCC COP process**, which have often struggled to reach agreement on **fossil fuel phase-out commitments**.

What is the Santa Marta Climate Conference?

Background

- Co-hosted by **Colombia and the Netherlands**
- Designed as a **“coalition of the willing” platform**
- Aims to bypass deadlocks in traditional **UN climate negotiations**

Objective

- Develop **practical roadmaps** for phasing out fossil fuels
- Promote transition toward **renewable energy systems**
- Align **trade, finance, and carbon policies** with climate goals

Key Highlights of the Conference

1. Momentum for Fossil Fuel Treaty

- Strong support for a **Fossil Fuel Non-Proliferation Treaty**
- Backed particularly by **Small Island Developing States (SIDS)**
- Focus on addressing **supply-side emissions governance gaps**

2. Policy Alignment for Transition

- Calls to align:
 - **Trade policies**
 - **Climate finance**
 - **Carbon pricing systems**
- Emphasis on **phasing out fossil fuel subsidies**
- Stress on **equitable transition support for developing countries**

3. National Transition Roadmaps

- **France** announced Europe's first structured fossil fuel exit plan:
 - **Coal by 2030**
 - **Oil by 2045**
 - **Gas by 2050**

Limitations of the Conference

1. Absence of Major Emitters

- No participation from key emitters:
 - **United States**
 - **China**
 - **India**

- Limits global representativeness and impact

2. No Binding Legal Authority

- Operates outside the **UNFCCC framework**
- Outcomes are **non-binding**
- Cannot enforce global compliance

3. Financing Challenges

- Major gap in **climate finance mobilisation**
- Developing countries require large-scale **support for energy transition**
- Funding mechanisms remain unclear

Next Steps

- Continued engagement agreed among participants
- Next conference scheduled for **early 2027 in Tuvalu**
- Co-hosted by **Ireland**

UNFCCC COP Process: Background Context

About UNFCCC

- Established at the **1992 Rio Earth Summit**
- Aims to prevent **dangerous human interference in climate system**

COP Overview

- COP is the **supreme decision-making body of UNFCCC**
- First COP held in **Berlin (1995)**
- By COP30 (2025), membership reached **198 countries**
- Reviews progress and updates commitments like **NDCs**

Supporting Bodies

- **SBI**: Subsidiary Body for Implementation
- **SBSTA**: Subsidiary Body for Scientific and Technological Advice

Other Conference Roles

- **CMP**: Governs Kyoto Protocol implementation
- **CMA**: Governs Paris Agreement implementation

COP Hosting System

- Rotates across five UN regions:
 - Africa
 - Asia-Pacific
 - Eastern Europe
 - Latin America & Caribbean
 - Western Europe & Others
- Host selection is based on **regional consensus**

Upcoming COP Hosts

- **COP31 (2026): Türkiye**
- **COP32 (2027): Ethiopia (Addis Ababa)**

Conclusion

The Santa Marta Conference reflects a growing shift toward **parallel climate diplomacy platforms** that aim to accelerate action on fossil fuel transition. However, its effectiveness will depend on **inclusion of major emitters, financial commitments, and integration with the UNFCCC framework.**

Suspected Canine Distemper Virus Outbreak Reported in Kanha Tiger Reserve



Why in News

- A tigress and her four cubs have died in the **Kanha Tiger Reserve, Madhya Pradesh**, with wildlife officials suspecting a possible outbreak of **Canine Distemper Virus (CDV)** linked to severe **lung infection**.
- The incident has raised concerns over **disease transmission from domestic animals to wildlife**, particularly in protected tiger habitats.

What is Canine Distemper Virus (CDV)?

About

- CDV is a **highly contagious viral disease**
- Affects mainly **carnivorous animals**
- Causes serious illness in wildlife and domestic animals

Symptoms

- **Respiratory problems**
- **Gastrointestinal infection**
- **Neurological disorders**

Transmission

- Spread through:

- Direct contact with infected animals
- Contaminated food, water, or surfaces
- Commonly transmitted from:
 - **Stray or domestic dogs to wild carnivores**

Impact on Wildlife

- High mortality in susceptible species
- Threatens **tiger and other carnivore populations**
- Increases risk in areas near **human settlements and livestock zones**

About Kanha Tiger Reserve

Location and Establishment

- Located in **Madhya Pradesh**
- Established as a **National Park in 1955**
- Included under **Project Tiger in 1973**
- Situated in the **Maikal range of Satpura Hills**
- Part of the **Central Indian highlands**

Ecological Significance

Biodiversity

Kanha Tiger Reserve supports rich flora and fauna, including:

- **Royal Bengal Tiger**
- **Leopard**
- **Barasingha (Hard-ground swamp deer)**
- **Sloth Bear**
- **Wild Dog (Dhole)**

Conservation Success

- Known globally for the recovery of **Barasingha**
- Species was once near extinction and revived through targeted conservation efforts

Habitat Features

- Dense **sal forests**
- Extensive **bamboo forests**
- Open **grasslands (meadows)**
- Wetlands and water bodies

These diverse ecosystems make Kanha a major **biodiversity hotspot** in India.

Wildlife Corridors

- Connected with:
 - **Pench Tiger Reserve**
 - **Achanakmar Tiger Reserve**
- These corridors support:
 - **Tiger gene flow**
 - Landscape-level conservation
 - Reduced habitat fragmentation

NGT Pushes States to Strengthen Clean Air Implementation Under NCAP



Why in News

- The **National Green Tribunal (NGT) Southern Zone** has directed Southern States and Puducherry to strictly implement **State Action Plans (SAPs)** under the **National Clean Air Programme (NCAP)**.
- It warned that states failing to effectively utilise NCAP funds may face **“environmental compensation” (penalties)** for poor implementation and under-performance in air quality management.

What are the Core Issues Flagged by NGT?

1. Skewed Fund Utilisation

- States like Karnataka have spent:
 - **86% on road dust control**
 - Only **6.6% on vehicular emissions**
 - Only **4.1% on biomass burning**
- Indicates **imbalanced pollution control strategy**

2. Severe Air Quality Breaches

- Cities such as:
 - Eloor
 - Kalaburagi
 - Hyderabad
 - Visakhapatnam
- **PM2.5 and PM10 levels are 4–6 times higher than WHO safe limits**
- Highlights persistent **urban air pollution crisis**

3. Airshed-Based Planning Approach

- NGT emphasized **airshed-level coordination**
- Air pollution management should follow:
 - **Geographical and meteorological boundaries**
 - Not political/state boundaries

- Encourages **inter-state coordination for pollution control**

What is the National Clean Air Programme (NCAP)?

About

- Launched in **2019** by **MoEFCC**
- India's first **national framework for air pollution reduction**
- Designed as a **long-term air quality improvement strategy**

Targets

- Initial goal: **20–30% reduction in PM10 by 2024–25**
- Revised target: Up to **40% reduction or compliance with 60 µg/m³ standard by 2025–26**
- Targets remain **largely unmet so far**

Coverage

- Focuses on **130 Non-Attainment Cities**
- These are cities that consistently fail to meet **National Ambient Air Quality Standards (NAAQS)** for 5 years

Implementation Mechanism

- **CPCB (Central Pollution Control Board):** National monitoring
- **SPCBs (State Pollution Control Boards):** State-level execution

City Action Plans

- Focus on:
 - Road dust control
 - Vehicular emission reduction
 - Waste management
 - Industrial pollution control

State Action Plans (SAPs)

- Cover entire **state/UT**, not just NCAP cities
- Based on:
 - Emission inventories
 - Sector-wise reduction strategies
- Integrated with state-level policy measures

Institutional Framework

- Apex Committee under **MoEFCC**
- State-level and city-level committees for implementation

Funding Sources

- **15th Finance Commission grants**
- Schemes such as:
 - Swachh Bharat Mission (Urban)
 - Smart Cities Mission
 - FAME-II

Monitoring System

- **PRANA Portal** provides:
 - Air quality data
 - Project monitoring
 - Financial tracking

Conclusion

The NGT directive highlights the urgent need for **balanced, science-based, and coordinated air pollution control strategies**. Strengthening **airshed-based planning, inter-state coordination, and effective fund utilisation under NCAP** is crucial for improving India's urban air quality outcomes.

Rusty-Spotted Cat Breeding Evidenced in Aravallis



Why in News?

- Wildlife researchers have captured the first photographic proof of a **rusty-spotted cat (Prionailurus rubiginosus)** breeding inside the Aravalli landscape of Delhi-NCR and Haryana.
- This discovery confirms that the species is actively reproducing outside of strictly protected forest reserves.

About the Rusty-Spotted Cat

- **Size:** Known as the "hummingbird of the cat family," it is recognized as the smallest wild cat species in the world, weighing only **1 to 1.5 kg**.
- **Appearance:** It is identified by its light fawn-grey fur, which is covered with distinct rust-colored spots along its back and sides.
- **Behavior:** These cats are mostly active at night (nocturnal), are excellent climbers (arboreal), and are highly fast and agile. They mainly hunt insects, rodents, frogs, and small birds.

Geographic Distribution and Habitat

- **Range:** This species is native to the Indian subcontinent, living primarily in India, Sri

Lanka, and Nepal. Notably, India is home to about **80%** of its total global population.

- **Indian Spread:** Within India, its presence is documented across a wide area ranging from Tamil Nadu all the way north to Jammu and Kashmir, including states like Madhya Pradesh, Gujarat, and Odisha.
- **Living Spaces:** They usually live in moist and dry deciduous forests, scrublands, rocky areas, and grasslands. They are also showing an ability to adapt to farmland borders and areas altered by humans.

Ecological Significance of the Sighting

- Finding a breeding population in Haryana's Aravalli scrublands challenges the long-held belief that these cats strictly avoid human presence.
- It also highlights how the Aravalli hills continue to serve as a crucial wildlife corridor for biodiversity, even while facing rapid city growth and urban expansion.

Conservation Status and Threat Profile

1. Legal and Global Status

- **IUCN Red List:** Near Threatened
- **Wildlife (Protection) Act, 1972:** Schedule I (affording it the highest level of legal protection in India)
- **CITES:** Appendix I (for the Indian population); Appendix II (for the Sri Lankan population)

2. Major Threats

- **Habitat Destruction:** Loss of continuous forest and scrub cover due to real estate projects, expanding farms, and logging.
- **Human-Wildlife Conflict:** High risks of being hit by vehicles on roads cutting through habitats, alongside retaliatory killings by farmers looking to protect their small livestock and poultry.

First International Big Cat Alliance (IBCA) Summit



Why in News?

- India has announced that it will play host to the inaugural **International Big Cat Alliance (IBCA) Summit** in New Delhi, scheduled to take place from **1-2 June 2026**.

Core Focus and Expected Deliverables

1. The Delhi Declaration

- The international gathering is anticipated to endorse the '**Delhi Declaration**'.
- This will mark the premier global charter centered strictly on big cat preservation, mapping out mutual goals, transboundary alliances, and a landscape-centric methodology to safeguard these predators along with their wilderness habitats.

2. Operational Theme

- The core ideology driving the 2026 summit is captured under the slogan: "**Save Big Cats, Save Humanity, Save Ecosystem.**"

Organizational Framework of the IBCA

1. Genesis and Approval

- The alliance was originally introduced by Prime Minister Narendra Modi in 2023 to commemorate the 50th anniversary of Project Tiger. It subsequently secured formal regulatory approval from the Union Cabinet in February 2024.

2. Institutional Control

- The initiative is executed through the **National Tiger Conservation Authority (NTCA)**, operating under the aegis of the Ministry of Environment, Forest & Climate Change (MoEFCC). It serves as a centralized international clearinghouse to exchange field expertise, distribute project funding, and compile technical knowledge databases.

3. Targeted Species

The program dedicates its structural resources to the survival and recovery of **7 distinct big cat species**:

- Tiger
- Lion
- Leopard
- Snow Leopard
- Cheetah
- Jaguar
- Puma

4. Global Membership Rules

- The alliance currently counts 24 member nations alongside 5 designated observer states: **Kazakhstan, Namibia, Thailand, Ecuador, and Vietnam**. It also encompasses various range countries that form the natural wild geographic zones of these animals. Structurally, membership channels remain accessible to all sovereign United Nations member states.

Strategic Necessity and Funding Models

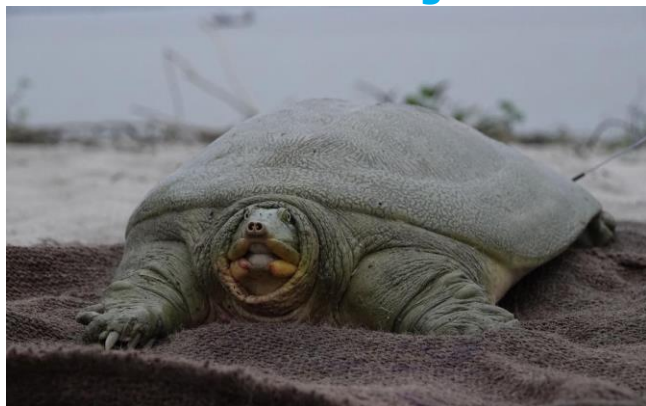
1. Countering Contemporary Threats

- The establishment of a global platform is driven by sharp population declines caused by severe habitat fragmentation, illicit poaching networks, accelerating climate variations, and escalating human-wildlife encounters. Reversing these negative trends necessitates coordinated, multi-nation policy frameworks.

2. Financial Architecture

- To anchor the initial rollouts, the Government of India has pledged an institutional funding package of **Rs 150 crore spanning a 5-year timeline (2023-2028)**. Concurrently, administrators are looking to mobilize additional resource streams via bilateral frameworks, multilateral forums, and international donor organizations.

Satellite-Tagging of Ganges Soft-Shell Turtle in Kaziranga



Why in News?

India's first satellite-tagged **Ganges soft-shell turtle**, an endangered freshwater reptile, was released into Assam's **Kaziranga National Park and Tiger Reserve**. This milestone in wildlife conservation took place on **Endangered Species Day**.

Key Highlights of the Project

- **Pioneering Tracking Initiative:** This is the first time India has used satellite-tagging on a Ganges soft-shell turtle. The tag will help researchers monitor seasonal movements, home ranges, and vital nesting or breeding grounds within the **Brahmaputra river basin**.
- **Collaborative Execution:** The project was carried out by the **Wildlife Institute of India (WII)** under the Ministry of Environment, Forest and Climate Change (MoEFCC), working alongside the **Assam Forest Department**. Financial backing was provided by the **National Geographic Society**.

Profile of the Ganges Soft-Shell Turtle

- **Physical Identification:** This species stands out from other river turtles due to distinct **arrowhead-shaped markings** on the top of its head. It mostly lives in large rivers, deep lakes, and reservoirs.
- **Ecological Service:** Operating as a major river predator that eats dead and decaying animal matter, the turtle serves as an essential **scavenger**. This role helps naturally clean and maintain the health of the river ecosystem.

Protection and Conservation Status

- **Wildlife Protection Act (WPA), 1972:** Schedule I (offering the highest level of legal protection).
- **IUCN Red List Status:** Endangered.
- **CITES:** Appendix I (banning international commercial trade).

Regional Importance and Biodiversity

- **Turtle Hotspot:** Assam shelters **21 different species of turtles**, making it one of the richest turtle habitats in Asia.
- **Global Priority Zone:** The region is a top global priority for freshwater turtle safety. In fact, **five of India's eight soft-shell turtle species** live within the Kaziranga landscape.

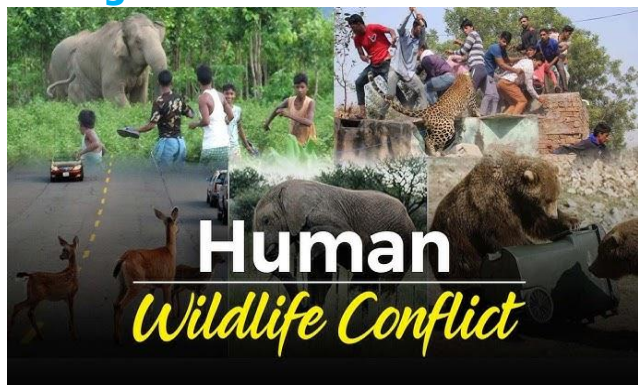
About Endangered Species Day

- **Timeline:** Observed every year on the **third Friday of May** to highlight global biodiversity loss and protect wildlife facing extinction risks.
- **Origins:** Founded in **2006** by conservation groups in the US, the day stresses that

threatened wildlife serves as a key indicator of overall ecosystem health.

- **Warning Signs:** The decline of these species directly points to wider environmental crises like **habitat destruction, overexploitation, pollution, and climate change.**

Human-Wildlife Conflict: A Socio-Ecological Crisis



Why in News?

- Human-wildlife conflict has evolved into a critical socio-ecological crisis.
- The intersection of expanding civic infrastructure and shrinking natural habitats has turned conservation success into a management challenge.
- Moving forward, India must transition from reactive compensation to landscape-level planning.

Defining Human-Wildlife Conflict

Human-Wildlife Conflict (HWC) involves negative interactions between people and wild animals. These encounters lead to severe consequences for both sides, including loss of human life, heavy crop damage, livestock predation, and the retaliatory killing of wildlife.

The Human and Animal Toll (Data Snapshot)

Category	Impact on Humans	Toll on Wildlife
Regional Fatalities	Odisha recorded 171 human deaths from wildlife encounters, with 153 caused specifically by elephant attacks.	166 tiger deaths were recorded globally, marking a historic peak driven by territorial disputes from habitat shrinkage.
Ecological Specifics	Kerala reported 67 deaths , where nearly 50% (34 deaths) were caused by snakebites. The state includes snakebites in HWC stats for compensation.	India loses approximately 100 elephants annually to non-natural causes, including electrocution, train hits, and poisoning.
Global and National Scale	Elephants kill an average of 500 people annually across India, mostly concentrated in Odisha, West Bengal, and Assam.	Conflict-related retaliatory killing impacts more than 75% of the world's wild cat species , according to WWF and UNEP reports.

Socio-Economic Pressures

- **Crop Raiding Volatility:** Around **500,000 families** in India face crop-raiding annually. In Odisha alone, over **12,337 farmers** sustained damage to nearly **3,000 acres of farmland.**
- **Financial Strain:** A single elephant raid can wipe out up to **one-fifth of a marginal farmer's annual crop income**, driving families into debt.
- **Ex-Gratia Relief Exertion:** State governments spend millions annually on relief. Odisha recently raised its human death compensation from **Rs 6 lakh to Rs 10 lakh.**

Causes and Consequences of Regional Conflicts

1. Underlying Triggers

- **Habitat Pocketing:** Large development projects like highways, rail lines, and irrigation canals cut through migration pathways, forcing animals to traverse human settlements.
- **Agricultural Lures:** Converting forest fringes into farmland replaces natural forage with nutrient-rich cash crops like sugarcane or maize, which act as bait for herbivores.
- **Invasive Species and Climate Stress:** The spread of invasive weeds like *Lantana* chokes out native grasses, starving herbivores. Summer water scarcity further pushes wildlife toward village ponds.
- **The Success Paradox:** Successful conservation models have increased predator numbers (such as tigers), sometimes exceeding the carrying capacity of protected reserves and forcing them into buffer zones.

2. Major Repercussions

- **Loss of Biodiversity:** Accidental deaths and localized isolation limit genetic migration, leading to inbreeding and sudden population crashes.
- **Retaliatory Actions:** Frustrated by slow compensation timelines, local communities resort to poisoning or using illegal electric fencing to protect their families, widening the trust deficit with forest departments.

Policy and Technology Framework in India

1. Legal and Policy Foundations

- **Constitutional Mandate:** **Article 51A(g)** establishes a Fundamental Duty for citizens

to protect wildlife. The Supreme Court backed animal rights in the landmark *Animal Welfare Board of India vs. A. Nagaraja (2014)* case.

- **Statutory Laws:** The **Wildlife Protection Act (WPA), 1972**, serves as the primary legal shield, utilizing its **2006 Amendment** to formally recognize and safeguard wildlife corridors.
- **Disaster Categorization:** National Disaster Management Authority (NDMA) guidelines now categorize human-wildlife conflict as a **disaster risk**, pushing for early warning tech in infrastructure planning.

2. Technical Interventions and Landscape Projects

- **The Gajraj System:** An AI-driven surveillance tool used by Indian Railways that relies on **fiber-optic sensors** along tracks to warn loco pilots of nearby elephants and prevent train collisions.
- **TrailGuard AI:** A real-time camera network deployed inside reserves to spot poachers and unauthorized human entry instantly.
- **Project Tiger (1973):** Uses a **core-buffer management strategy**, complemented by the *Tigers Outside Tiger Reserves (TOTR)* initiative to manage the 30% of tigers living outside notified zones.
- **Project Elephant (1992):** Focuses on map Delineation and securing migratory paths to prevent crop raiding.

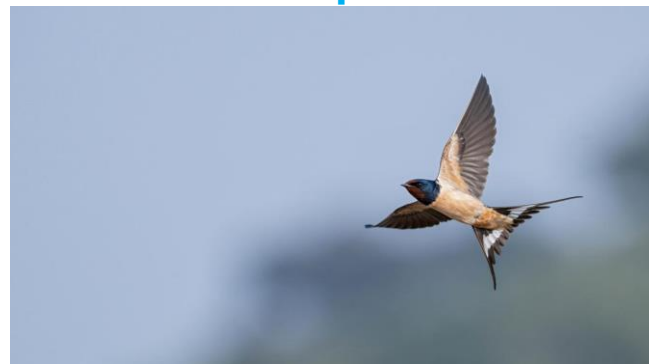
Global Best Practices

- **Botswana & Namibia:** Use community-based natural resource management to link local economic rewards directly with wildlife preservation.
- **Costa Rica:** Focuses heavily on weaving structural ecological corridors into national land-use planning.
- **Finland:** Relies on real-time wildlife tracking maps and rapid municipal compensation to reduce social resentment among farmers.
- **Bhutan & Nepal:** Deploy community-managed forests, coordinated grazing schedules, and predator-proof livestock corrals.

Way Forward

- **Restoring Migratory Corridors:** Legally notify and protect traditional animal pathways to prevent herds from getting trapped in small forest pockets.
- **Early Warning Networks:** Deploy AI-powered cameras, seismic ground sensors, and satellite GPS collars to send automated SMS alerts to villagers when wildlife approaches.
- **Bio-Fencing Solutions:** Install non-lethal deterrents like **bee-hive fencing**, **chili-smoke barriers**, or dense thorny bushes to keep elephants away from crop fields without causing harm.
- **Digital Ex-Gratia Portals:** Launch streamlined digital verification setups to disburse instant financial relief for crop and livestock losses, lowering the motivation for revenge killings.
- **Village Response Teams:** Train local youths as primary **Rapid Response Teams (RRTs)** to safely manage animal drive-outs using standard operating procedures before forest officials arrive.

Resident Breeding Status of Barn Swallows in Manipur



Why in News?

A research study by the **Wildlife Institute of India (WII)** has shown that the **barn swallow**, historically known as a seasonal migratory bird in Northeast India, has formed a permanent, year-round breeding population in the **Imphal Valley of Manipur**.

Causes Behind the Behavioral Shift

- **Evolutionary Drivers:** The bird's shift from migratory to non-migratory behavior is linked to climate change, updates in land use, and excellent local conditions. The valley offers a temperate climate, plenty of flying insects, and secure nesting sites.

- **Human-Habitated Adaptability:** Operating as a **synanthropic species**—an animal that thrives by living close to human settlements—the barn swallow utilizes residential and commercial buildings across the Imphal Valley to build its cup-shaped mud nests.
- **Cultural Safeguards:** The indigenous **Meitei community** holds the barn swallow in high regard as a symbol of prosperity and Goddess Lakshmi. This deep cultural respect ensures that local households actively protect the bird nests built on private properties.

Profile of the Barn Swallow

- **Physical Characteristics:** A small-to-medium-sized migratory songbird belonging to the **Hirundinidae family**. It features deep, shiny blue-black upper feathers, a long forked tail with white markings, and a light-colored belly. A narrow blue-black band separates its stomach from a dark chestnut throat. Adult males typically display longer tail feathers and more vivid colors than females.
- **Reproductive Patterns:** The breeding window is timed to match peak insect populations. The birds build mud nests and generally raise two sets of offspring per season. Both parents vocalize with continuous chirping during mating and egg-laying phases.
- **Dietary Habits:** These birds are active during the day and feed entirely on insects. They use their high agility in flight to catch prey like flies, beetles, wasps, and butterflies in mid-air.
- **Global Movement:** The species maintains a massive worldwide footprint. It traditionally flies from the colder parts of the Northern Hemisphere to tropical zones to spend the winter months.

Ecological Value and Conservation

- **Natural Pest Control:** Barn swallows act as an essential biological pest management force. By heavily feeding on flying insects, they help maintain the environmental balance in surrounding wetlands and agricultural fields.
- **IUCN Red List Status:** Least Concern.
- **Wildlife Protection Act (WPA), 1972:** Schedule II.

Genomic Mapping of Illegal Pangolin Trafficking Routes



Why in News?

- A research study published in the journal *PLoS Biology* has introduced a DNA-based **genetic map** designed to trace the geographic origins and smuggling routes of illegally traded pangolins.
- This technological tool boosts international law enforcement efforts to dismantle global wildlife crime rings.

Key Highlights of the Mapping Project

- **Pinpointing Extraction Hotspots:** The genomic database successfully located three major transnational poaching zones:
 - Southwestern Cameroon (affecting white-bellied pangolins)
 - Southwestern Borneo (affecting Sunda pangolins)
 - The international border zones surrounding Myanmar (affecting Chinese pangolins)
- **The Northeast India-China Axis:** The genetic data uncovered an active smuggling network originating in northeastern India (specifically around Assam and Arunachal Pradesh) and potentially parts of Bhutan. This route directly feeds black markets in China's Yunnan province.
- **Overlapping Trade Networks:** The research proved that local and international trafficking operations are not separate. Instead, domestic supply centers directly connect to and supply massive global networks heading toward China and Vietnam.

Profile of the Pangolin

- **Behavior and Ecosystem Value:** Pangolins are shy, solitary, and primarily nocturnal mammals that eat only ants and termites. They serve a vital environmental role by aerating and enriching the soil when they dig

for food. Because of their secretive nature and slow reproduction—with females typically bearing just one pup a year—their wild populations recover slowly from losses.

- **Habitat Flexibility:** These mammals adapt well to a wide range of environments, including primary and secondary tropical forests, bamboo groves, open grasslands, and local agricultural fields.
- **Global Species Diversity:** There are eight distinct species worldwide, split evenly between two continents:
 - **Africa:** Black-bellied, White-bellied, Giant Ground, and Temminck's Ground pangolins.
 - **Asia:** Indian, Philippine, Sunda, and Chinese pangolins.
- **Evolutionary Defenses:** They are covered in unique, overlapping scales made of keratin. When threatened by predators, they use an evolutionary defense tactic called **volvation** (rolling up into an unbreakable, tight ball).
- **Anatomical Structure:** Pangolins are completely toothless. They capture insects using an exceptionally long, sticky tongue. This muscular tongue is uniquely anchored deep near their pelvis and rear ribs rather than inside the jaw.

Indian Status and Conservation Protections

- **Geographic Distribution:** The Indian Pangolin (*Manis crassicaudata*) is widely distributed across the broader Indian subcontinent. In contrast, the Chinese Pangolin (*Manis pentadactyla*) is extremely rare in India and is found mostly within the northeastern states.
- **Global Trade Ban:** All eight international species are strictly protected under **Appendix I of CITES**, which bans commercial trade.
- **IUCN Red List Status:**
 - Indian Pangolin: Endangered (EN)
 - Chinese Pangolin: Critically Endangered (CR)
- **Domestic Legal Shield:** Within India, both the Indian and Chinese variants are given maximum legal protection under **Schedule I of the Wildlife (Protection) Act, 1972**.
- **Global Awareness:** World Pangolin Day is celebrated annually on the **third Saturday of February** to educate the public on saving the species.

EDITORIALS

Crux of The Hindu & Indian Express

Ecology & Environment

Complex Communication and Vocal Nuance in Sperm Whales



Why in News?

- A research study published in the journal *Proceedings of the Royal Society B* has revealed that sperm whale communication is significantly more intricate than previously thought.
- The study found that their sound categories, timing patterns, and sequencing structures closely resemble human phonology (the systematic organization of sounds).
- The discovery suggests that humans and sperm whales may have independently developed complex vocal systems as an evolutionary response to their advanced, highly structured social behaviors.

Profile of the Sperm Whale

- **Physical Characteristics:** Sperm whales are the largest of all toothed whales. They typically display a dark gray to brownish coloration, with some individuals featuring distinct white patches across their underbelly.
- **Anatomical Peculiarities:** They possess an exceptionally large head that accounts for roughly one-third of their entire body length. They are also the only living cetaceans with a single, asymmetrical blowhole located on the front-left side of their head.

- **The Spermaceti Organ:** The species derives its name from **spermaceti**—a large sac filled with waxy oil located in the head that acts as an acoustic lens to focus sound waves. They also possess the largest brain of any animal on Earth.
- **Dietary Needs:** These marine mammals feed primarily on deep-sea species, including large squid, sharks, skates, and various deep-water fish. They consume an amount equal to roughly 3 to 3.5% of their total body weight every day.

Social Structure, Life Cycle, and Movement

- **Reproduction and Growth:**
 - **Females:** Reach maturity around 9 years of age, undergo a long gestation period of 14 to 16 months to give birth to a single calf, and reproduce once every 5 to 7 years.
 - **Males:** Grow significantly larger than females and reach full physical maturity around 50 years of age. They typically do not participate in active breeding until their late twenties.
- **Social Unit Bifurcation:** Females spend their lives in highly stable, family-based social groups within tropical waters. In contrast, young males split off to form temporary "bachelor pods," while older, mature males tend to live solitary lives or migrate toward colder polar zones.
- **Global Distribution:** Sperm whales maintain one of the widest geographical ranges among marine mammals, inhabiting deep open oceans stretching from equatorial waters to the outer edges of the Arctic and Antarctic pack ice. Their movements are dictated by food density, age, sex, and breeding cycles.

Environmental Perils and Conservation Protection

- **Primary Threats:** The species faces severe hazards from large vessel strikes, accidental entanglement in commercial fishing gear, anthropogenic (human-made) ocean noise, ingestion of marine plastic debris, and climate-driven changes that alter prey availability.

- **IUCN Red List Status:** Vulnerable
- **CITES Classification:** Appendix I (prohibiting international commercial trade)
- **Convention on Migratory Species (CMS):** Appendix I
- **Wildlife (Protection) Act, 1972 (India):** Schedule I (affording maximum legal immunity)

India's Abstention on the UNGA Climate Resolution

The Jurisdiction of the International Court of Justice (ICJ)

The ICJ is a permanent international court created in 1945 by the United Nations Charter as "the principal judicial organ of the United Nations."

The ICJ's functions are set out in the Statute of the ICJ—an annex to and "an integral part" of the UN Charter.

The ICJ was created to provide a peaceful means for resolving disputes.

Only states, and not government officials or other individuals, may be parties in cases before the ICJ. Some UN bodies may also appear before the ICJ to seek its opinion.

Two Types of ICJ Case Jurisdiction

1. Contentious Jurisdiction

Jurisdiction to Decide Disputes Between States
All states that are parties to the case must consent to the ICJ's jurisdiction in one of three ways:

- Consent to Compulsory Jurisdiction**
A state may consent to the compulsory jurisdiction of the ICJ to resolve disputes with another state accepting the same obligation. The United States consented in 1946 but withdrew from the ICJ's compulsory jurisdiction in 1985.
- Consent to Jurisdiction in a Treaty**
A state may consent to jurisdiction by including a specific clause in a treaty known as a compromissory clause. Most of the cases involving the United States have been based on compromissory clauses setting forth the terms for all future disputes related to the treaty.
- Consent to Jurisdiction Over a Specific Dispute**
A state may consent to jurisdiction via a special agreement reached between the parties to resolve a particular dispute after it has occurred. For example, in 1981, the United States and Canada entered into a special agreement regarding a maritime boundary.

2. Advisory Jurisdiction

Jurisdiction to Answer a Question of International Law
The ICJ has jurisdiction to decide questions of international law that are submitted by:

- The UN Security Council**
The Security Council, which has "primary responsibility for the maintenance of international peace and security," may request an advisory opinion on any legal question. The United States is a permanent member of the Council.
- The UN General Assembly**
The General Assembly, which is the "main policy-making organ" of the UN, may request an advisory opinion on any legal question. The United States is a member of the General Assembly.
- Another U.N. body or specialized agencies**
The UN Charter provides that "to other organs of the United Nations and specialized agencies... may also request advisory opinions of the Court on legal questions arising within the scope of their activities." An example is the International Fund for Agricultural Development, of which the United States is a member.

The Effect and Enforcement of ICJ Decisions

- The UN Charter requires parties to contentious cases to comply with judgments.
- If a state does not comply, an opposing state party in the case may request enforcement by the Security Council.

Advisory opinions are nonbinding.

The ICJ's opinions in all cases can contribute to the development of international law and are generally considered to be authoritative by many states and the international community more broadly.

ICJ in Practice: Examples from the Court's Docket

Nicaragua v. Germany

In March 2024, Nicaragua filed a case against Germany alleging that Germany's provision of arms to Israel for use in its military campaign in Gaza violates:

1. international humanitarian law as codified in the Geneva Conventions, and
2. the Convention on the Prevention and Punishment of Genocide (Genocide Convention).

Nicaragua invoked two bases of the ICJ's contentious-case jurisdiction:

1. compulsory jurisdiction, which Nicaragua and Germany had accepted; and
2. jurisdiction under the compromissory clause of the Genocide Convention. (Article IX)

Obligations of States in respect of Climate Change

In April 2023, the General Assembly requested an advisory opinion on the international legal obligations related to climate change. Ninety-one states and entities filed statements on the matter; the highest number to have been filed in an advisory proceeding.

In July 2025, the ICJ issued its opinion. The ICJ concluded that states have certain obligations to protect the climate system under various sources of international law and may be responsible for a failure to meet those obligations.

Why in News?

India chose to abstain from voting on a **United Nations General Assembly (UNGA)** resolution that calls on member states to comply with climate change obligations based on an advisory opinion from the **International Court of Justice (ICJ)**.

Voting Results and Legal Context

- **The Vote Breakdown:** Originally introduced by the Pacific island nation of **Vanuatu**, the resolution passed the 193-member UNGA. It received **141 votes in favor**, **8 against** (including the US and Russia), and **28 abstentions** (including India).

- **The ICJ Advisory Opinion:** The court ruled that nations have an explicit legal obligation to combat human-driven climate change and safeguard environmental systems for both present and future generations.
- **Due Diligence and NDCs:** The ICJ declared that a nation's **Nationally Determined Contributions (NDCs)** fall under the principle of due diligence. This means countries must enforce strict administrative measures to ensure their climate targets reflect their highest possible ambition.
- **Legal Weight:** Although ICJ advisory opinions are **non-binding**, they carry significant legal weight and moral authority. They are expected to heavily influence domestic climate lawsuits and shape the future of international environmental law.

Core Reasons for India's Abstention

1. Protecting the UNFCCC Architecture

- India expressed strong concerns that the resolution attempts to treat a non-binding judicial opinion as a binding mandate. New Delhi asserted that its climate commitments must arise only from consensus-driven agreements negotiated under the **UN Framework Convention on Climate Change (UNFCCC)**, rather than through external judicial channels.

2. Shielding Domestic Climate Goals (NDCs)

- The resolution introduces specific mitigation pathways and external benchmarks. India argued that this approach threatens the bottom-up, country-driven design of the **Paris Agreement**, potentially exposing domestic targets to international judicial review or penalties.

3. Omission of Climate Finance

- India strongly objected to the fact that the term "**climate finance**" was completely missing from the resolution's text. India's representative called this a serious omission, noting that the draft demands heavy environmental compliance without reaffirming the financial duties of developed nations regarding technology transfers and predictable funding.

4. Dilution of the CBDR-RC Principle

- The draft failed to properly distinguish between the responsibilities of historical industrial emitters and developing economies. India reiterated the core principle of **Common But Differentiated Responsibilities and Respective Capabilities (CBDR-RC)**, emphasizing that any global energy transition must be fair, orderly, and equitable so it does not hinder poverty eradication in the Global South.

5. Geopolitical Balance with Small Island Nations

- Despite these structural disagreements, India chose to **abstain rather than vote against** the text (separating itself from the stance of the US and Russia). This balanced decision allowed India to register its policy objections while still showing diplomatic solidarity with Small Island Developing States (SIDS), like Vanuatu, which face severe vulnerabilities from rising sea levels.

Rare Dragonfly Species Rediscovered in Arunachal Pradesh After 112 Years



Why in News?

- A rare dragonfly species, **Gynacantha khasiaca** (commonly known as the **long-tailed duskhawker**), has been rediscovered in Arunachal Pradesh's Changlang district. The species was last officially recorded from the erstwhile Abor Hills in 1914.
- This significant ecological sighting was documented inside the **Namdapha National Park and Tiger Reserve**, located approximately 600 km east of its historical 1914 collection site.

Gynacantha khasiaca

- **Order Classification:** Alongside damselflies, dragonflies belong to the order **Odonata**. They function as critical indicator species in freshwater ecosystems, serving simultaneously as apex invertebrate predators and primary prey within aquatic food webs.
- **Morphological Features:** The long-tailed duskhawker possesses two massive compound eyes. Each eye contains thousands of microscopic lenses and photoreceptor clusters, giving the insect exceptional visual acuity and motion-detection capabilities.
- **The Genus Gynacantha:** Members of this genus are typically large-bodied dragonflies characterized by distinct pale brown and green coloration. They exhibit **crepuscular behavior**, meaning they are primarily active during twilight hours (dawn and dusk).
- **Taxonomic Diversity:**
 - **Global:** The genus *Gynacantha* comprises 92 species worldwide, with around 30 found in Southeast Asia.
 - **National:** India is home to 10 recognized species within this genus.
- **Geographic Distribution:** Outside of India, the long-tailed duskhawker is documented across Bangladesh, Myanmar, and Nepal. Within Indian borders, its presence has been verified in Arunachal Pradesh, Assam, Maharashtra, Meghalaya, Uttarakhand, and West Bengal.

Odonata Diversity Matrix

- **Associated Survey Findings:** The field study recorded a total of 17 distinct Odonata species within the national park. Notable among these were *Trithemis aurora*, *Neurothemis fulvia*, *Orthetrum glaucum*, *Aristocypha spuria*, and *Neurobasis chinensis*.

Ecological Profile of Namdapha National Park

- **Geographic Alignment:** Situated in the Changlang district of Arunachal Pradesh along the international India–Myanmar border, the park is nestled between the

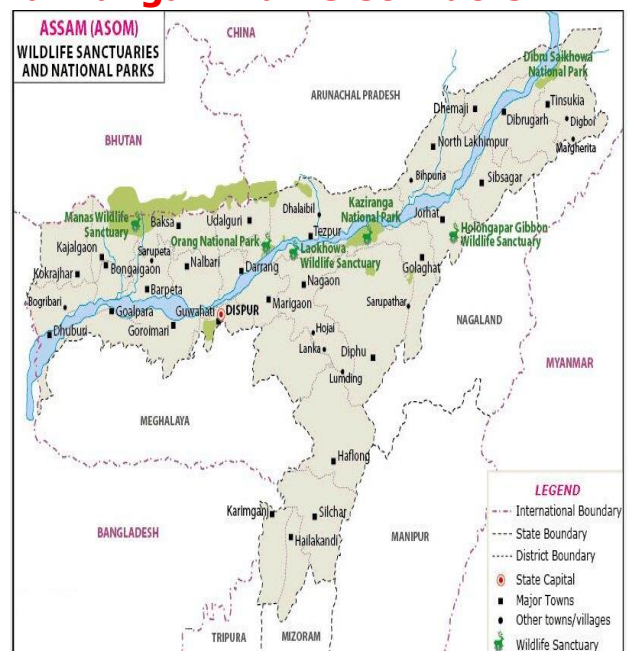
Dapha Bum range of the Mishmi Hills and the Patkai mountain range.

- **Hydrological Network:** The entire protected area is drained by the **Noa-Dihing River**, which serves as a major tributary of the Brahmaputra River system.
- **Conservation History:** The habitat was originally designated as a Wildlife Sanctuary in 1972, before being elevated to the status of a National Park and Tiger Reserve in **1983**.
- **Altitudinal Vegetation Zones:** Due to its extreme variation in elevation, Namdapha features diverse biomes, ranging from low tropical evergreen and moist deciduous forests to high subtropical, temperate, and alpine vegetation.

Specialized Wildlife Populations:

- **The Four Big Cats:** Namdapha is one of the few contiguous habitats in the world known to host four distinct big cat species simultaneously: the **tiger, leopard, snow leopard, and clouded leopard**.
- **Primate and Avian Rarity:** The park shelters the endangered **Hoolock Gibbon** (India's only native ape species). It also serves as a critical nesting habitat for rare avifauna, including the White-winged Wood Duck and the Great Indian Hornbill.

Environmental Appeal Over Kaziranga Wildlife Corridors



Why in News?

An environmental activist has filed a formal appeal with the Supreme Court-mandated **Central Empowered Committee (CEC)**. The petition alleges illegal construction activities inside the vital wildlife corridors that link Assam's Kaziranga National Park with the neighboring Karbi Anglong Hills.

The Wildlife Corridor Dispute

Following a 2019 directive from the Supreme Court that banned any new construction on private lands within migratory pathways, the Assam government officially mapped out **nine distinct wildlife corridors** in 2022.

These corridors serve as critical safety routes for wildlife moving between Kaziranga National Park and the Karbi Anglong Hills. They are especially vital during seasonal floods, helping animals safely cross **National Highway-37 (NH-37)**, which cuts directly through and fragments the natural landscape.

Profile of Kaziranga National Park

1. Geography and Ecosystem

- **River Systems:** The park is situated alongside the **Brahmaputra River**, which regularly deposits rich nutrients across the plains but also causes significant land loss through bank erosion. The **Diphlu River** also winds directly through the park's interior.
- **Water Bodies:** The local ecosystem includes more than 250 seasonal water bodies that support diverse wildlife.

2. Conservation Timeline and Recognition

- **1908:** Established initially as a Reserve Forest with the primary goal of protecting the dwindling population of the Indian rhinoceros.
- **1950:** Upgraded to a Wildlife Sanctuary.
- **1974:** Officially designated as a National Park.
- **1985:** Named a **UNESCO World Heritage Site** due to its unique global ecological value.
- **2007:** Declared a Tiger Reserve to protect its exceptionally high density of wild tigers.

3. The "Big Five" Species

Kaziranga is famous for sheltering a group of large mammals known as the **Big Five**:

- Greater One-Horned Rhinoceros
- Royal Bengal Tiger
- Asian Elephant
- Asiatic Wild Buffalo

- Eastern Swamp Deer (The park holds almost the entire remaining global population of this specific subspecies)

Decoupling Climate Action: Decentralized Environmental Governance in India



Why in News?

India is experiencing a distinct shift in environmental administration. State governments are moving away from broad, top-down State Action Plans on Climate Change (SAPCCs) to implement hyper-localized, data-driven frameworks designed to combat specific regional threats, such as the Urban Heat Island (UHI) effect.

Evolution of Localized Climate Governance

1. Innovative Environmental Finance

Regional governments are building dedicated financial pipelines to fund decentralized environmental policies:

- **Tamil Nadu:** Established the Tamil Nadu Green Climate Company (TNGCC) in 2024 to serve as a central operational body, targeting a **Rs 1,000-crore** sustainability corpus.
- **Odisha:** Integrated precise, trackable climate budgeting lines directly into state fiscal planning.
- **Kerala:** Upgraded local risk management via advanced disaster monitoring frameworks.
- **Madhya Pradesh:** Built a centralized digital climate knowledge platform to streamline public and academic information sharing.

2. Targeted Heat Island Interventions

- Metropolitan areas are deploying direct structural solutions to address the Urban Heat Island effect.

- For instance, cities like Chennai are isolating urban hot spots and applying localized mitigation steps, including passive architectural cooling models, mechanical cross-ventilation upgrades, and timely public operational advisories during high-temperature spells.

3. Institutional Accountability Mechanisms

To ensure policy goals translate into on-ground executive actions, states are introducing strict oversight measures:

- **Responsibility Matrices:** Municipal bodies, such as Thane's dedicated heat wave task force, are assigning specific operational targets to individual administrative heads.
- **Legislative Reporting:** State environment departments are legally required to present detailed annual progress summaries directly to State Assemblies.

4. Data-Driven Infrastructural Support

- **Revamped Distribution Sector Scheme Portal:** Optimizes the efficiency of state power distribution networks by publishing detailed infrastructure enhancement metrics and transmission loss data to streamline funding allocations.
- **PM Surya Ghar Portal:** Monitors and tracks real-time household rooftop solar installation across individual states, providing public data that enables planners to identify regional structural gaps and modify localized adoption campaigns.

5. Shift in Central Regulatory Status

- The 16th Finance Commission has recommended reclassifying extreme heatwaves as a nationally notified natural disaster.
- This regulatory change is anticipated to clear significant federal financial resources directly for municipal-level climate resilience projects.

Core Architecture of State Action Plans on Climate Change (SAPCCs)

1. Origin and Context

- SAPCCs were established as sub-national policy vehicles under India's National Action Plan on Climate Change (NAPCC), which launched in 2008.

- Recognizing that environmental risks are geographically diverse—such as coastal vulnerabilities in Odisha versus high-altitude hazards in Himachal Pradesh—the central government directed states to formulate separate, regional climate frameworks.

2. Primary Objectives

The plans focus on building long-term community resilience through adaptive lifestyle programs while implementing carbon reduction and waste processing initiatives to lower greenhouse gas emissions.

3. Common Focal Sectors

Sector	Primary Focus & Policy Mechanism
Agriculture	Engineering climate-resilient crop varieties and rolling out advanced water-saving irrigation infrastructure.
Water Resources	Establishing rainwater collection networks and accelerating artificial groundwater table recharge.
Forests & Biodiversity	Expanding regional green canopy cover to function as active carbon sinks and protecting fragile local ecosystems.
Public Health	Tracking and responding to spikes in vector-borne diseases and heat-induced medical emergencies.
Urban Habitat	Enforcing energy-efficient structural codes for buildings and backing sustainable municipal transport networks.

Legal Recognition of Ecocide as an International Crime



Why in News?

- The concept of "ecocide" has returned to the center of global debate following accusations that military campaigns in recent conflicts, such as operations in Gaza and Southern Lebanon, have inflicted widespread ecological devastation.
- Additional concerns emerged after strikes on fuel storage facilities in Tehran. These events have intensified international demands to formally categorize mass environmental destruction as a distinct global crime.

Understanding 'Ecocide'

- **Core Definition:** "Ecocide" translates to "killing our home." It denotes the extensive destruction, degradation, or collapse of ecosystems and the natural environment by human actions or other triggers, severely reducing the quality of life for its inhabitants.
- **Origin:** The phrase was coined in 1970 by Yale plant biologist Professor Arthur W. Galston to describe the long-term ecological damage caused by the US military's deployment of the chemical herbicide Agent Orange during the Vietnam War.
- **Modern Legal Formulation:** In 2021, an expert panel organized by *Stop Ecocide International* drafted a standardized legal definition:
- "Unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment."
- **Early Adoption:** Swedish Prime Minister Olof Palme introduced the term to the international community at the 1972 UN Stockholm Conference. In 1990, Vietnam became the first nation to incorporate ecocide into its domestic criminal code.
- **Current Standing:** Although countries like France, Belgium, Russia, and Ukraine have integrated the concept into domestic legislation, ecocide lacks universal recognition as an international crime.

Legal Status of Ecocide in India

India does not currently recognize ecocide as a specific criminal offense under a single comprehensive statute. Instead, environmental offenses are managed through a decentralized framework of civil and regulatory laws:

- The Environment Protection Act, 1986
- The Wildlife Protection Act, 1972
- The Forest Conservation Act, 1980

Penalties under these laws generally consist of minor financial fines or short-term detentions, treating ecological damage as a regulatory violation or civil wrong rather than a major criminal act.

Notable Judicial Mechanisms

- **Constitutional Groundwork:** In the landmark *M.K. Ranjitsinh vs. Union of India (2024)*

ruling, the Supreme Court recognized the "Right against the adverse impacts of climate change" as an extension of Article 14 (Right to Equality) and Article 21 (Right to Life). While it stopped short of criminalizing ecocide, it established a constitutional basis for penalizing actions leading to ecological collapse.

- **The "Continuing Offense" Principle:** The National Green Tribunal (NGT) routinely categorizes major pollution incidents as a continuing wrong against public trust. Using the **Polluter Pays Principle**, the NGT levies substantial financial compensation penalties against state entities and corporations as a form of restitution for severe degradation.

Current Scope of International Crimes

Global crimes are recognized as the most severe violations of international law, demanding personal criminal accountability across borders. Under the foundational **Rome Statute (1998)**, the International Criminal Court (ICC) holds jurisdiction over four core categories:

1. **Genocide:** Acts committed with the intent to destroy a national, ethnic, racial, or religious group.
2. **Crimes Against Humanity:** Widespread or systematic attacks targeting civilian populations.
3. **War Crimes:** Grave violations of the 1949 Geneva Conventions and associated protocols.
4. **Crime of Aggression:** The unlawful deployment of state military force against another sovereign nation.

The United Nations assists in codifying these laws via the International Law Commission (ILC), while the UN Security Council retains the authority to establish specialized tribunals or refer cases directly to the ICC.

How Armed Conflict Impacts the Environment

- **Soil and Water Toxicification:** Heavy artillery, missile systems, and chemical agents deposit heavy metals and unexploded ordnance (UXOs), contaminating water tables and topsoil for generations.
- **Infrastructure Collapses:** Targeted strikes on industrial clusters, oil storage facilities, and

dams (such as the Kakhovka Dam breach in Ukraine) trigger toxic chemical releases and severe flooding that disrupt regional biodiversity.

- **Military Emissions:** The global defense sector generates roughly 5.5% of total worldwide greenhouse gas emissions. Regarded as a single national entity, the world's combined militaries would possess the fourth-largest carbon footprint globally.
- **Habitat Fragmentation:** Large-scale deforestation executed for strategic military positioning alters local micro-climates and destroys wildlife habitats.

Current International Laws on War and Environment

- **Geneva Conventions (Additional Protocol I, 1977):** Articles 35 and 55 explicitly forbid warfare tactics designed or expected to cause "widespread, long-term and severe damage" to nature.
- **ENMOD Convention (1976):** The Environmental Modification Convention bans the hostile manipulation of environmental processes to serve as weapons (e.g., triggering artificial earthquakes or tsunamis).
- **The Rome Statute (1998):** Section 8(2)(b)(iv) criminalizes attacks launched with the foreknowledge that they will cause widespread, long-term, and severe environmental destruction that is disproportionate to the expected military advantage.

Limitations of Existing International Laws

1. Anthropocentric Bias

Current global treaties protect nature primarily as property or strictly in terms of how its loss impacts human survival (such as displacement or starvation). They lack an **ecocentric model**, which would treat the environment as an independent victim with inherent legal rights.

2. High Cumulative Evidentiary Threshold

Under the Rome Statute, environmental destruction is only prosecutable if it is proven to be simultaneously **widespread, long-term, AND severe**. Meeting all three elements creates an exceptionally high evidentiary barrier that prosecutors struggle to satisfy in court.

3. The Proportionality Loophole

The Rome Statute allows environmental destruction if a military commander can argue it was not "clearly excessive" relative to the anticipated direct military advantage, legally converting severe ecological damage into acceptable collateral harm.

4. Jurisdiction and Intent

- **Conflict Limitations:** The environmental provisions apply primarily to state-on-state conflicts (International Armed Conflicts), leaving ecosystems vulnerable during internal civil wars where extensive modern damage occurs.
- **Peacetime Exclusion:** Major ecological destruction caused by corporate industrial neglect during peacetime cannot be prosecuted under the current ICC war crimes framework.
- **Proving Criminal Intent:** Prosecutors face the difficult challenge of proving *mens rea* (criminal intent)—demonstrating that an actor specifically intended to destroy an ecosystem rather than causing it as a byproduct of targeting a military asset.

Challenges in Enforcing Ecocide

- **Lack of Legal Precedent:** To date, no international prosecution has successfully penalized wartime environmental destruction at the global level.
- **Enforceability and Major Powers:** International enforcement relies on the voluntary compliance of powerful nations. If major global states refuse to ratify these statutes, the laws lose their punitive bite. For instance, the International Union for Conservation of Nature (IUCN) recognized ecocide as a crime in October 2025, but this serves purely as a policy recommendation rather than a binding legal mechanism.
- **Amending the Rome Statute:** Adding a fifth crime requires a formal proposal by a member state, a two-thirds majority vote from all member nations, and subsequent domestic ratifications, making the structural update difficult to achieve.

Way Forward

- **Amending the Rome Statute:** The international community should formally

adopt ecocide as the fifth international crime to deter catastrophic environmental destruction during both peacetime activities and armed conflicts.

- **Lowering Evidentiary Barriers:** The cumulative "widespread, long-term, and severe" requirement should be uncoupled to a disjunctive "widespread or long-term" standard to make prosecutions viable.
- **Transitioning to Ecocentrism:** Legal frameworks must evolve to recognize the intrinsic value of nature, granting ecosystems distinct legal standing independent of human utility.
- **Strengthening Domestic Laws:** Individual nations should introduce ecocide into their domestic penal codes to hold state and corporate actors accountable prior to achieving an international global consensus.

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Geography

Bandipur Tiger Reserve: Workers' Strike Highlights Administrative Concerns



Why in News?

Temporary forest workers at the **Bandipur National Park (Tiger Reserve)** have launched an **indefinite strike**, demanding:

- Removal of the **outsourcing system**
- Direct **wage payment from the Forest Department**

The protest highlights ongoing concerns related to **labour rights and administrative arrangements in protected forest areas.**

About Bandipur Tiger Reserve

Location and Establishment

- Located in **Karnataka.**
- Established as a **National Park in 1974.**
- Later brought under **Project Tiger** for tiger conservation.

Ecological Significance

- Part of the **Western Ghats landscape**, one of the world's major biodiversity hotspots.
- Supports nearly **one-eighth of the global tiger population.**
- Included in the **Nilgiri Biosphere Reserve (1986)**, India's first biosphere reserve.
- Also part of the **Mysore Elephant Reserve**, hosting one of the largest populations of **Asian Elephants.**

Landscape Connectivity

- Connected with:
 - **Nagarhole National Park**
 - **Mudumalai National Park**
 - **Wayanad Wildlife Sanctuary**
- Forms a continuous ecological corridor known as the:
 - **Bandipur–Nagarhole–Wayanad–Mudumalai–Sathyamangalam landscape**
- Spans across **Karnataka, Tamil Nadu, and Kerala.**

Flora and Vegetation

- Dominated by:
 - Dry deciduous forests
 - Moist deciduous forests
 - Scrub vegetation
- Supports high levels of **ecological diversity and habitat variety.**

Fauna

- Rich wildlife diversity includes:
 - Tiger
 - Asian Elephant
 - Leopard
 - Gaur (Indian bison)
 - Deer species
- Recognized as a **critical tiger and elephant conservation landscape.**

Conclusion

The ongoing strike at **Bandipur Tiger Reserve** highlights the intersection of **conservation management and labour welfare issues** in protected areas. While Bandipur remains a key pillar of India's **tiger and elephant conservation strategy**, sustainable management also requires addressing the **rights, working conditions, and welfare of frontline forest workers** who support conservation on the ground.

CEA Highlights Inland Waterways as Key to India's Supply Chain Resilience



Why in News

- The **Chief Economic Advisor (CEA)** emphasized the importance of **inland waterways** in strengthening India's **supply chains and logistics efficiency**
- The statement comes amid **global shipping disruptions**, especially due to the **West Asian conflict (2026)**
- Focus is on building **resilient domestic transport systems** to ensure **economic stability and uninterrupted trade**
- Inland waterways are being promoted as a key pillar of **cost-efficient, sustainable, and shock-resistant logistics infrastructure**

Key Significance of Inland Waterways

1. Cost-Effective Transport System

- Inland Water Transport (IWT) is the **cheapest mode of freight movement**
- Approx. cost:
 - ₹0.25–₹0.30 per ton-km (waterways)
 - ₹1.0 per ton-km (rail)
 - ₹1.5 per ton-km (road)
- Helps reduce overall **logistics cost** and improve **global competitiveness**

2. High Bulk-Carrying Capacity

- A single **2,000-tonne vessel = 125 trucks**
- Ideal for transporting:
 - Coal
 - Cement

- Fertilizers
- Food grains
- Enhances efficiency in **bulk commodity movement**

3. Reduces Road and Rail Congestion

- Shifts heavy cargo away from **overburdened highways and rail corridors**
- Reduces:
 - Traffic congestion
 - Infrastructure wear and tear
 - Freight delays

4. Protection from Global Disruptions

- Inland waterways are **domestic and insulated from global shocks**
- Unlike sea routes, they are not affected by:
 - Geopolitical conflicts
 - Shipping lane disruptions
 - Rising insurance or freight costs

5. Environment-Friendly Mode

- Uses **3–6 times less energy than road transport**
- Produces significantly lower **greenhouse gas emissions**
- Supports India's **climate goals (Panchamrit targets)**

6. Integrates Hinterland Regions

- Connects inland states like:
 - Bihar
 - Jharkhand
 - Northeast India
- Links rivers such as:
 - **Ganga (NW-1)**
 - **Brahmaputra (NW-2)**
- Helps integrate **MSMEs and farmers** into national supply chains

7. High Reliability and Expansion Potential

- Offers **predictable transit times without traffic congestion**
- India has over **20,000 km of navigable waterways**, largely underutilised
- Requires relatively **low land acquisition costs**

What are Inland Waterways?

Definition

- Inland waterways are **navigable water routes within a country**
- Includes:
 - Rivers
 - Canals
 - Lakes
 - Estuaries

Criteria (National Transport Policy Committee, 1980)

- Minimum:
 - 45 m channel width
 - 1.5 m depth
 - 50 km continuous stretch

Types of Inland Waterways

- **Open River Waterways:** Natural rivers with minimal modification
- **Canalised Waterways:** Modified rivers using dams and locks
- **Canals:** Fully man-made navigation channels

Current Status of Inland Waterways in India

Network Overview

- **111 National Waterways (2016 Act)**
- Total length: **20,187 km**
- Operational waterways: **32 (5,155 km as of 2026)**
- Target expansion: **52 waterways**

Cargo and Traffic Growth

- Cargo movement (2025–26): **~198 MMT**
- Major corridors:
 - **National Waterway-1 (Ganga)**
 - **National Waterway-2 (Brahmaputra)**
- Turnaround time reduced:
 - 41.76 hrs (2013–14) → 28.5 hrs (2024–25)
- Passenger traffic increased sharply:
 - 1.61 crore → 7.6 crore

Modal Share

- Waterways: **<2% of freight**
- Road: **65%**
- Rail: **27%**
- Target:
 - **5% modal share by 2030**
 - **200 MMT cargo by 2030**
 - **500 MMT by 2047**

Challenges in Inland Waterways

- **Low draft depth** due to siltation and seasonal water variation
- Lack of **modern terminals and Ro-Ro facilities**
- **Low bridge clearances** restricting vessel movement
- Competing uses (irrigation and drinking water needs)
- Regulatory and investment barriers for **private sector participation**

Government Initiatives

- **IWAI Act, 1985** – Establishes Inland Waterways Authority of India

- **National Waterways Act, 2016** – Framework for development
- **Inland Vessels Act, 2021** – Uniform safety standards
- **Jalvahak Scheme (2024)** – Incentives for cargo shift
- **Harit Nauka Guidelines (2024)** – Green vessel transition
- **Jal Marg Vikas Project (JMVP)** – Development of NW-1
- **Coastal Shipping Act, 2025** – Multimodal integration
- **River Cruise Tourism Roadmap 2047** – Tourism development

Digital Initiatives

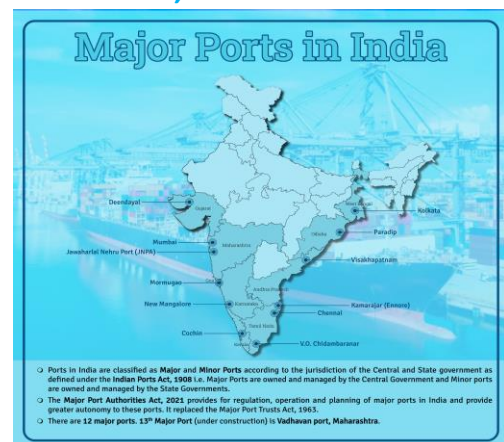
- **CAR-D Portal** – Cargo data tracking system
- **LADIS** – Real-time water depth information
- **RIS** – Vessel tracking and navigation safety
- **Jal Samridhhi Portal** – Online approvals for terminals
- **JALYAN & NAVIC Portal** – Integrated vessel management

Way Forward

- Ensure **year-round navigability through dredging**
- Integrate waterways with **PM Gati Shakti infrastructure plan**
- Promote **green vessels (hydrogen, electric, hybrid)**
- Expand **PPP investment models**
- Strengthen **domestic shipbuilding under Make in India**
- Improve **river information systems for safety and efficiency**

India Moves Toward Port

Corporatisation Under Major Port Authorities Act, 2021



Why in News

- India is transitioning from the **Major Port Trusts Act, 1963** to the **Major Port Authorities Act, 2021**
- The reform aims at **corporatisation of major ports** to improve:
 - **Efficiency**
 - **Operational autonomy**
 - **Global competitiveness**
- The move is part of broader initiatives under:
 - **Maritime India Vision 2030**
 - **Sagarmala Programme**
- After **Kamarajar Port (Ennore)** became the first corporatised major port, the government is now modernising the remaining **11 major ports**

What is Corporatisation of Ports?

- Corporatisation means converting a **government-run statutory body (port trust)** into a **corporate entity**
- Operates with:
 - **Professional management**
 - **Board of Directors**
 - **Commercial decision-making**
- Ownership remains with the **Government of India**

Need for Corporatisation of Major Ports

1. Economic Importance

- Major ports handle **55–60% of India's cargo**
- Around **95% of trade by volume and 70% by value** moves via sea routes
- Efficient ports are essential for **national logistics performance**

2. Greater Operational Autonomy

- Faster decisions without bureaucratic delays
- Freedom in:
 - Land leasing
 - Procurement
 - Infrastructure planning
- Enables **commercially driven functioning**

3. Adoption of Landlord Model

- Port authority acts as a **landowner and regulator**
- Private players handle:
 - Cargo handling
 - Berthing operations
- Improves **efficiency and investment inflow**

4. Financial Independence

- Ports can:
 - **Raise loans and bonds**
 - **Access capital markets**
- Helps fund large projects like:
 - **Sagarmala Programme**
 - **Vadhavan Port**

5. Competitive Parity with Private Ports

- Private ports (e.g., Mundra, Krishnapatnam) have grown due to flexibility
- Corporatisation enables major ports to:
 - **Adopt market-linked tariffs**
 - **Compete effectively in logistics markets**

6. Technological Modernisation

- Enables adoption of:
 - **Digital Twin systems**
 - **Blockchain logistics**
 - **National Logistics Portal (Marine)**
- Improves India's **Logistics Performance Index (LPI)** ranking

What are Major Ports in India?

- Governed under **Major Port Authorities Act, 2021**
- India has **12 major ports + Kamarajar (corporatised major port)**

Major Ports of India

West Coast Ports

- **Deendayal (Kandla) Port – Gujarat**
- **Mumbai Port – Maharashtra**
- **JNPT (Nhava Sheva) – Maharashtra**
- **Mormugao Port – Goa**
- **New Mangalore Port – Karnataka**
- **Cochin Port – Kerala**

East Coast Ports

- **V.O.C. (Tuticorin) Port – Tamil Nadu**
- **Chennai Port – Tamil Nadu**
- **Kamarajar (Ennore) Port – Tamil Nadu**
- **Visakhapatnam Port – Andhra Pradesh**
- **Paradip Port – Odisha**
- **Syama Prasad Mookerjee (Kolkata) Port – West Bengal**

Key Challenges in Indian Ports

1. Depth Limitations

- Average depth: **12–14 meters**
- ULVC requirement: **16–18 meters**
- Leads to dependence on foreign hubs like **Colombo and Singapore**

2. High Transshipment Dependence

- Around **75% container cargo transhipped abroad**
- Extra cost: **USD 80–100 per container**

3. Poor Last-Mile Connectivity

- Weak road and rail connectivity causes **cargo congestion at ports**
- Increases overall **logistics cost (13–14% of GDP)**

4. High Turnaround Time

- India: **~2 days**
- Global benchmark (Singapore): **<24 hours**

5. Regulatory and Labour Concerns

- Resistance from labour unions over **job security fears**
- Transition challenges under **landlord model**

6. Environmental Concerns

- Dredging leads to:
 - Coastal erosion
 - Marine ecosystem damage
- Risks from:
 - Oil spills
 - Ballast water discharge

Government Initiatives for Port Development

- **Sagarmala Programme**
- **Major Port Authorities Act, 2021**
- **Maritime India Vision 2030**
- **National Logistics Portal (Marine)**
- **Transshipment Hubs (Vizhinjam, Galathea Bay)**
- **Harit Sagar (Green Port Guidelines)**

Way Forward for Global Port Competitiveness

1. Infrastructure Upgradation

- Increase depth to **18+ meters**
- Upgrade cranes and cargo handling systems

2. Digitalisation of Ports

- Integrate **AI, Blockchain, IoT**
- Reduce **dwell time and delays**

3. Better Multimodal Connectivity

- Link ports with:
 - Dedicated Freight Corridors
 - Highways and rail networks
- Promote **sea-to-river transport systems**

4. Green Port Development

- Use:
 - **Green Hydrogen**
 - **LNG bunkering**
- Introduce **shore-to-ship electricity supply**

5. Port-Led Industrialisation

- Develop **Coastal Economic Zones (CEZs)**
- Follow models like **Shenzhen (China)**
- Promote manufacturing near ports to reduce logistics cost

Nepal Raises Concerns Over Kailash Mansarovar Yatra Route via Lipulekh Pass



Why in News

- Nepal has formally raised **“concerns” with India and China** over the planned **Kailash Mansarovar Yatra route through the Lipulekh Pass**.
- Kathmandu has reiterated its claim that the **Kalapani–Limpiyadhura–Lipulekh region** falls within its sovereign territory, a position firmly rejected by India, keeping the boundary dispute once again in focus.

What are the Differing Territorial Claims of Nepal and India?

Nepal's Stand

- Claims **Limpiyadhura, Lipulekh, and Kalapani** lie east of the **Mahakali River**
- Argues these areas have belonged to Nepal since the **Treaty of Sugauli (1816)**
- Considers the **Mahakali River boundary** as originating from Limpiyadhura

India's Stand

- Rejects Nepal's claims as **not based on historical evidence**
- States that **Lipulekh Pass has been used since 1954** for the Kailash Mansarovar Yatra
- Argues the **Kali River originates eastwards**, placing **Kalapani in Uttarakhand's Pithoragarh district**
- Maintains a **security presence since the 1960s**

Diplomatic Position

- India has reiterated willingness for **bilateral dialogue**
- Emphasis on resolving boundary issues through **structured diplomacy**

Key Developments in the Dispute

Recent Political and Administrative Steps

- **2020:** Nepal released a new political map including **Kalapani, Lipulekh, and Limpiyadhura**
- Nepal also updated these claims in its **100-rupee currency note**
- India objected to Nepal's map and reaffirmed its territorial position

Infrastructure and Border Tensions

- India's construction of a road link via **Lipulekh to Tibet (2020)** triggered Nepal's protest
- Nepal termed it a **violation of sovereignty**

Trade and Border Regulation

- **April 2026:** Nepal enforced customs duty rules on goods above **100 NPR**
- Aim: curb informal trade and protect local traders
- India responded that the rule was pre-existing but sought safeguards against **harassment of civilians**

Key Facts About Kailash Mansarovar Yatra

About the Yatra

- Organised by the **Ministry of External Affairs (India)**
- Pilgrimage to:
 - **Mount Kailash (6,638 m)**
 - **Lake Mansarovar (4,600 m)**
- Located in **Tibet Autonomous Region (China)**

Spiritual Activities

- **Parikrama (Kora)** around Mount Kailash
- Trek reaches **Dolma La Pass (~18,600 ft)**
- Ritual bathing in **Lake Mansarovar (~15,000 ft)**

Religious Significance of Mount Kailash

Religion	Significance
Hinduism	Abode of Lord Shiva and Goddess Parvati; spiritual centre of the universe
Buddhism	Known as <i>Kang Rinpoche</i> ; abode of Demchok symbolising bliss
Jainism	Mount Ashtapad; site of Rishabhanatha's moksha
Bon	"Nine-Story Swastika Mountain"; sacred cosmic centre

Physical Features

- Unclimbed mountain due to **religious sanctity**
- Source of major rivers:
 - **Brahmaputra**
 - **Indus**
 - **Sutlej**
 - **Karnali**
- High risk of **Acute Mountain Sickness (AMS)** due to altitude

Official Yatra Routes

1. Lipulekh Pass (Uttarakhand)

- Shortest route (~50 km from border; ~200 km trekking)
- First opened for trade with China in **1992**
- Historically used for pilgrimage since **1954**

2. Nathu La Pass (Sikkim)

- Fully motorable route (~1,500 km)
- Opened for pilgrims in **2015**
- One of the **world's highest motorable roads**
- Connects India with Tibet via ancient Silk Route

Way Forward

1. Diplomatic Engagement

- Revive **Foreign Secretary-level talks (2014 mandate)**
- Activate **Boundary Working Group**
- Develop **joint mechanism for Lipulekh route management**

2. Trust-Building Measures

- Follow principles of **Gujral Doctrine**
- Promote non-reciprocal goodwill measures

3. Economic and Trade Cooperation

- Address border trade issues via **Inter-Governmental Committee**
- Balance anti-smuggling steps with **border livelihoods**

4. Infrastructure and Energy Integration

- Complete key projects like **Arun-III hydropower**
- Implement commitment for **10,000 MW electricity import from Nepal**

5. Cultural and Religious Connectivity

- Promote:
 - **Ramayana Circuit (Ayodhya–Janakpur)**
 - **Buddha Circuit (Bodhgaya–Lumbini)**

6. Strengthening People-to-People Ties

- Expand:
 - Scholarships
 - Skill development
 - Digital cooperation (e.g., **UPI integration**)
- Leverage open border for socio-cultural integration

Mission for Cotton Productivity Approved to Boost Yield and Farmer Income



Why in News

- The Union Cabinet has approved a **₹5,659 crore “Mission for Cotton Productivity”** for the period **2026–27 to 2030–31**.
- The mission aims to address **stagnant yields, pest attacks, climate stress, and quality issues** in cotton production while strengthening India’s global competitiveness in the textile sector.

What is the Mission for Cotton Productivity?

About

- Announced in **Union Budget 2025–26**
- A **5-year national mission** to improve:
 - Cotton productivity
 - Fibre quality
 - Farmer income
- Focuses on **climate-smart, pest-resistant, high-yielding cotton varieties**

Core Focus Areas

- Development of **Extra Long Staple (ELS) cotton**
- Use of:
 - Advanced breeding techniques
 - Biotechnology tools
 - Climate-resilient seeds
- Strengthening the **cotton value chain**

Implementing Agencies

- Ministry of Agriculture & Farmers Welfare

- Ministry of Textiles
- Supported by:
 - ICAR institutes
 - CSIR laboratories (10 institutes)

Coverage

- **140 districts**
- Across **14 major cotton-growing states**
- Targeted rollout of modern farming technologies

Alignment with 5F Vision

- Farm → Fibre → Factory → Fashion → Foreign
- Aims to create a **fully integrated and export-ready textile ecosystem**

Key Targets (by 2031)

- Cotton production: **498 lakh bales**
- Productivity: **755 kg/ha (from ~440 kg/ha)**
- Direct benefit to **~32 lakh cotton farmers**

What is ELS Cotton?

- Derived mainly from *Gossypium barbadense*
- Known as **“gold standard” cotton**
- Features:
 - Fibre length ≥ 30 mm
 - High-quality textile output
- Used in **premium garments and global fashion industry**

Why is the Mission Needed?

1. Low Productivity

- India: **~440 kg/ha**
- Global average: **~770 kg/ha**
- Despite being a major producer, yields remain stagnant

2. Pest Infestation

- Severe impact of:
 - Pink Bollworm
 - Whitefly
- Leads to high input costs and crop losses

3. Climate Vulnerability

- **~65% cotton is rainfed**
- Highly exposed to:
 - Erratic monsoons
 - Drought-like conditions

4. Quality Issues

- High contamination due to manual processing
- Reduces competitiveness in global markets

5. Import Dependence

- India imports **ELS cotton** for high-end textile production
- Major suppliers: Egypt, USA

Status of Cotton in India

- Known as **“White Gold”**
- India is:
 - 2nd largest producer and consumer globally
 - Largest area under cotton cultivation
- Contributes **~20% of global cotton production**

Major Cotton-Producing States

- Maharashtra
- Gujarat
- Telangana
- Karnataka

Agro-Climatic Zones

- Northern Zone: Punjab, Haryana, Rajasthan
- Central Zone: Gujarat, Maharashtra, Madhya Pradesh
- Southern Zone: Telangana, Andhra Pradesh, Karnataka
- Also grown in Odisha and Tamil Nadu

Key Features

- Kharif crop
- Requires warm, frost-free climate
- Grown in:
 - Black soil (central India)
 - Alluvial soil (north India)
- Sensitive to waterlogging

Bt Cotton

- Genetically modified for pest resistance
- Effective mainly against bollworms
- Herbicide-tolerant GM cotton not approved in India

Government Initiatives for Cotton Sector

- Cotton Development Programme under NFSM
- National Technical Textiles Mission
- MITRA (Mega Investment Textile Parks)
- Cotton Corporation of India (CCI)
- Cott-Ally mobile app

Key Challenges

1. Climate and Irrigation Gaps

- Dependence on rainfall limits success of modern techniques like HDPS

2. Soil Degradation

- Decline in soil organic carbon due to monocropping

3. Pest Resistance

- Bt cotton losing effectiveness due to pest adaptation

4. Small Landholdings

- Majority farmers have <2 hectares
- Limits mechanisation and scale efficiency

5. Lack of Mechanisation

- High cost of harvesting machines
- Dependence on manual labour

6. Quality and Processing Issues

- High contamination in cotton
- Need for improved ginning and processing systems

7. Market Risks

- Input cost inflation
- Price volatility and income uncertainty

Way Forward

Strengthen Extension Services

- Role of KVKs and SAUs for farmer training

Promote Mechanisation

- Subsidised cotton harvesters
- Custom Hiring Centres (CHCs)

Improve Irrigation

- Integration with PMKSY
- Focus on micro-irrigation

Integrated Pest Management (IPM)

- Pheromone traps and biopesticides
- Refuge crop cultivation
- Reduce pesticide dependence

Farmer Health Protection

- Promote safe pesticide handling
- Provide protective gear
- Address occupational health risks

Digital Agriculture

- Use AI and satellite-based advisories
- Real-time pest and weather alerts

Mayon Volcano Eruption



Why in News?

The Mayon Volcano in the Philippines has recently erupted, forcing local residents to leave their homes. Authorities raised the danger alert to **Level 3** on a 5-step scale because flowing lava and falling ash are threatening Albay province.

About Mayon Volcano

- **Type and Shape:** It is a classic stratovolcano (a volcano built up of alternate layers of ash and lava) with steep upper sides and a small opening at the top. It is famous worldwide for its "perfect cone" shape because its structure is highly even on all sides.
- **Location:** It is found in Albay province on Luzon Island in the Philippines.
- **Common Hazards:** During eruptions, it usually produces fountain-like lava explosions, flowing lava, fast-moving flows of hot gas and ash, and mudflows.

Geological and Tourist Importance

- **Plate Tectonics:** Like most volcanoes in this region, it is part of the **Pacific Ring of Fire**. It was created when the Philippine Sea Plate slid underneath the Philippine Mobile Belt.
- **Tourism:** The volcano is a famous tourist spot and serves as the main attraction of the Mayon Volcano Natural Park.

Past Eruptions

- **The 1814 Disaster:** Mayon has a long history of erupting. Its most destructive eruption happened in February 1814, when it buried the entire town of Cagsawa under ash and lava, killing over **1,200** people.

The Pacific Ring of Fire

The Pacific Ring of Fire (also called the Circum-Pacific Belt) is a massive, horseshoe-shaped path around the Pacific Ocean known for frequent earthquakes and volcanic eruptions.

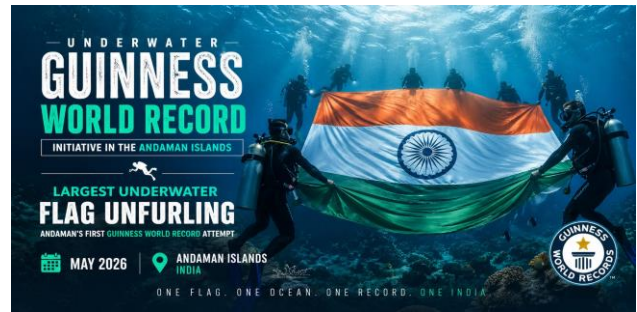
- **Size:** It stretches for about **40,000** kilometers and contains nearly **75%** of all active and dormant volcanoes in the world.
- **Why it is Active:** The constant activity is caused by the movement of tectonic plates, especially at subduction zones where an ocean plate slides beneath a land plate.

Where is it Located?

The Ring of Fire forms a massive loop that goes through:

- The bottom tip of South America, up along the Andes mountains, and through Central America.
- The West Coast of the United States and Canada.
- Across the Aleutian Islands in Alaska, and down through Japan.
- Through the Philippines, Indonesia, Papua New Guinea, and down to New Zealand.

Underwater Guinness World Records in Andaman and Nicobar Islands



Why in News?

The Andaman and Nicobar Islands recently served as the venue for two unique underwater Guinness World Records at Swaraj Dweep (Havelock Island). The initiative was organized to boost eco-tourism and highlight the archipelago's potential as a prime adventure destination.

Details of the Record-Breaking Events

1. Largest National Flag Unfurled Underwater

- **Location:** Conducted in the shallow waters near the famous Radha Nagar Beach.
- **The Achievement:** More than 200 trained scuba divers successfully deployed a massive Indian national flag beneath the sea surface.
- **Scale:** The tricolor measured **60 meters by 40 meters** (totaling **2,400 square meters**), breaking the previous global record of 2,028 square meters held in Egypt.

2. Tallest Human Stack Underwater

- **Location:** Executed near the Lighthouse dive site.
- **The Achievement:** A team of 14 professional scuba divers built a vertical human tower under the sea by standing on each other's shoulders.
- **Scale:** The final stack reached an official height of **22.3 meters**—well over the initial

10-meter baseline goal—and remained perfectly stable for a duration of **3 minutes**.

Inter-Agency Support: The twin record attempts were led by the island's Lieutenant Governor, Admiral D.K. Joshi (Retd), with active operational support from the local administration, Andaman and Nicobar Police, Forest Department, Indian Navy, Indian Coast Guard, and regional diving hubs.

Profile of the Andaman and Nicobar Islands

1. Geography and Topography

- **Structure:** A prominent Union Territory of India consisting of a cluster of **836** islands, islets, and isolated rocky structures situated in the Bay of Bengal. Its administrative headquarters is located at Port Blair.
- **Swaraj Dweep:** Formerly known as Havelock Island, it belongs to Ritchie's Archipelago. The destination was renamed by the government in 2018 to honor India's historic freedom struggle and reinforce national identity.
- **The Ten Degree Channel:** Positioned at the 10° north latitude line, this natural marine passage geographically separates the northern Andaman group from the southern Nicobar group.
- **Great Nicobar Island:** This represents the largest landmass within the Nicobar cluster, spanning roughly **910 square kilometers**. It contains **Indira Point**, which marks the absolute southernmost tip of Indian territory.

2. Tribal Groups and Indigenous Communities

The islands act as an isolated sanctuary for five distinct Particularly Vulnerable Tribal Groups (PVTGs):

- Great Andamanese
- Jarwa
- Onge
- Shompen
- Sentinelese

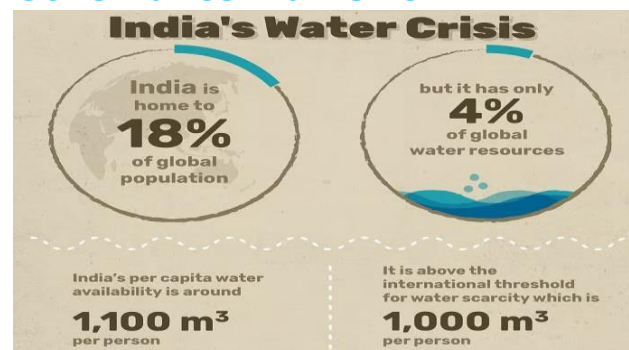
3. Ecology and Adventure Tourism

The territory is widely recognized for its rich, pristine marine and terrestrial biodiversity, featuring dense tropical rainforests, protective mangrove belts, and fragile coral reef networks filled with endemic plants and wildlife. This ecosystem makes the region a core destination for sustainable activities, including eco-tourism and commercial scuba diving.

4. Strategic Geopolitical Significance

The archipelago occupies a critical geopolitical position due to its close proximity to the Strait of Malacca, which ranks among the busiest maritime trade routes on Earth. Reflecting its immense national security value, the territory serves as the permanent base for India's only integrated, tri-service military command.

Comprehensive Analysis of India's Water Crisis and Governance Framework



Why in News?

India's current water crisis presents a deeply concerning **population-resource paradox**. Despite receiving a robust **annual rainfall of nearly 4,000 billion cubic metres (BCM)**, severe infrastructure deficits and fragmented regulatory bodies undermine water security. Adopting an **integrated water governance** model is vital to achieve **Sustainable Development Goal 6 (Clean Water and Sanitation)**.

Baseline Realities of Water Availability

- **The Demographic Mismatch:** India supports approximately **18% of the global population** but possesses a mere **4% of worldwide freshwater resources**, leaving nearly **60 crore citizens** exposed to high-to-extreme water stress.
- **Plummeting Per Capita Reserves:** Available freshwater per person has crashed from **over 5,000 cubic meters in 1947 to nearly 1,400 cubic meters today**. Dipping below **1,000 cubic meters** will officially trigger a "**water-scarce**" national classification.
- **The Monsoonal Storage Gap:** Out of the 4,000 BCM of yearly precipitation, only **1,123 BCM is classified as utilisable**. This bottleneck is caused by inadequate containment infrastructure and the seasonal

nature of monsoons, where **70% of rainfall occurs within a tight 3–4 month window.**

- **Depleting Reservoirs:** The **Central Water Commission (CWC)** has flagged that water volumes across **166 monitored reservoirs have dropped below 45% of total capacity**, with the southern peninsula facing acute shortages.
- **Groundwater Overdraft:** India is the largest user of groundwater globally, accounting for **25% of global extraction.** **Central Ground Water Board (CGWB)** data reveals that **14% to 17% of surveyed units are over-exploited**, led by extreme extraction in **Punjab, Haryana, and Rajasthan.**
- **Sectoral Demand Split:** **Agriculture consumes 85–90% of freshwater**, primarily to flood-irrigate thirsty crops like rice and sugarcane. The **industrial and domestic sectors share the remaining 10–15%**, though corporate demand is climbing fast due to a rapid data centre boom.

Causes and Consequences of Rising Scarcity

Sector Category	Core Structural Causes	Resulting Socio-Economic Consequences
Agriculture & Irrigation	Deep-well pumping is driven by free or heavily subsidized electricity , encouraging the cultivation of thirsty crops in low-rainfall zones.	Water tables are dropping dangerously , making extraction expensive and causing severe land subsidence in key farming belts.
Urban Planning	Concrete development blocks natural catchment areas , paving over wetlands, lakes, and channels that recharge aquifers.	Major metro cities face recurrent "Day Zero" threats , creating a total dependence on expensive, unregulated private water tankers.
Climate & Environment	Climate change makes monsoons highly erratic, replacing steady rains with prolonged dry spells and intense cloudbursts.	Flash downpours cause massive surface runoff rather than soil absorption , accelerating desertification and land degradation.
Pollution & Quality	Nearly 70% of India's surface water is contaminated by the direct dumping of untreated chemical waste and municipal sewage.	Clean drinking options are limited, leading to widespread water-borne disease outbreaks and chronic heavy metal poisoning.
Infrastructure Gaps	Aging public utility pipelines lose nearly 40% of treated water to leakages and unauthorized line tapping.	High volumes of "non-revenue water" drain municipal budgets , leaving millions in informal settlements unserved.
Macroeconomic Risk	Historic focus on supply augmentation ignores urgent demand-side pricing reforms and conservation economic structures.	Subsidizing resource waste threatens a 6% contraction in India's GDP by 2050 due to industrial pauses and agricultural drops.

Constitutional Provisions and Institutional Framework

1. Constitutional Enactments

- **State List (List II) – Entry 17:** Water is primarily a **State subject.** State legislatures hold the authority to draft laws regarding water supply, canals, drainage embankments, irrigation networks, and water storage.
- **Union List (List I) – Entry 56:** Empowers the **Central Government** to regulate and develop inter-state rivers and valleys whenever Parliament declares such control to be in the public interest.
- **Article 262 (Dispute Adjudication):** Grants Parliament the power to arbitrate conflicts over shared inter-state river systems, explicitly allowing the **exclusion of the Supreme Court's jurisdiction** over these cases.
- **Environmental Directives: Article 48A** tasks the state with protecting the environment, while **Article 51A(g)** imposes a **Fundamental Duty on citizens** to safeguard lakes, rivers, and wildlife.

2. Specialized Public Bodies

- **Ministry of Jal Shakti:** The apex nodal ministry directing water resource development, drinking water rollout, and public sanitation.
- **Central Water Commission (CWC):** Controls surface water blueprint design, river basin alignment, and national flood-forecasting networks.
- **Central Ground Water Board (CGWB):** Conducts scientific testing of underground aquifers to guide long-term management strategies.
- **Inter-State Tribunals:** Set up under the **Inter-State River Water Disputes Act of 1956**, nine active panels (such as the *Cauvery* and *Krishna* tribunals) work to settle long-standing cross-border sharing disputes.

Key National Policy Responses

The government addresses water vulnerability through the **National Water Policy (2012)** alongside targeted flagship missions:

- **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):** Focuses on expanding physical farm access and micro-irrigation.
- **Jal Shakti Abhiyan (Catch the Rain):** Drives localized rainwater harvesting asset creation.

- **Atal Bhujal Yojana:** Implements community-led groundwater aquifer replenishment.
- **Jal Jeevan Mission (JJM):** Focuses on providing functional household tap connections to every rural home.
- **National Mission for Clean Ganga (NMCG):** Directs the ecological cleanup and rejuvenation of the Ganga basin.

Way Forward

1. Implementing a Circular Water Economy

Commercial properties and manufacturing plants must deploy **Membrane Bioreactor (MBR) facilities** to recycle greywater for secondary industrial cooling and sanitation. Selling treated urban municipal wastewater directly to neighboring thermal power units will free up pristine freshwater for farming and household taps.

2. Community-Led Groundwater Budgeting

Local Gram Panchayats should be trained to draft hyper-local water accounts, matching regional crop selections with annual groundwater recharge limits. Expanding community-led efforts like the **Jal Sanchay Jan Bhagidari (JSJB) initiative** facilitates the construction of check dams, injection wells, and **borewell recharge shafts** through public-private partnerships.

3. Precision Agricultural Shifts

Under the "Per Drop More Crop" focus of PMKSY, the state must accelerate the transition from wasteful flood irrigation to **drip and micro-sprinkler networks**, cutting farm water waste by up to 60%. Financial incentives should be used to encourage farmers in dry belts to transition away from paddy toward climate-resilient crops like millets, oilseeds, and pulses.

4. Smart Technology and Nature-Based Infrastructure

Cities need to deploy **Supervisory Control and Data Acquisition (SCADA) networks** to monitor pipeline flow and fluid pressure in real time, enabling instant leak detection to curb non-revenue losses. This technical setup should be paired with smart consumption meters. Concurrently, developing green infrastructure—such as restoring urban wetlands, building permeable pavements, and driving afforestation under **Mission Amrit Sarovar**—will improve natural water retention.

Mission on Arunachal Kiwi Launched under Viksit North East



Why in News?

- The **Ministry of Development of North Eastern Region (MDoNER)** launched a dedicated mission titled "**Arunachal Kiwi: The Unique Selling Proposition of Arunachal Pradesh**".
- This initiative aims to establish Arunachal Pradesh as India's premium organic kiwi hub under the broader *Viksit North East* development blueprint.

Core Architecture and Financial Layout

- **Funding and Structure:** The mission operates with a financial outlay of approximately **₹167 crore**. It utilizes a convergence-led model anchored by the MDoNER and backed by various union ministries, technical institutions, and private sector investors.
- **The "One State–One USP" Blueprint:** This program forms a key part of a wider regional economic strategy across the Northeast. Examples of other specialized state commodities include:
 - **Meghalaya:** Lakadong Turmeric
 - **Nagaland:** Specialized Coffee
 - **Mizoram:** High-yield Ginger
 - **Assam:** Golden Muga Silk

Strategic Objectives and the Cluster Model

- **Overcoming Value Chain Gaps:** The mission is designed to fix long-standing agricultural issues, such as low prices for farmers, sudden distress sales, weak cold-chain storage logistics, lapsed National Programme for Organic Production (NPOP) certifications, minimal branding, and limited access to international buyers.
- **Integrated Post-Harvest Hubs:** The initiative rolls out a cluster-based approach by setting up **six integrated post-harvest management hubs**. These will be located across key

growing regions, including the **Ziro Valley, Dirang, Kalaktang, Shi Yomi, and the Dibang Valley.**

- **Four Pillars of Growth:** The framework rests on four operational pillars:
 1. **Convergence** of inter-ministerial funds and programs.
 2. **Value addition** through processed food units.
 3. **Branding** identity development.
 4. **Market integration** to connect fields directly to retailers.
- **Target Infrastructure:** Key performance goals include building **2,000 metric tonnes of cold-chain capacity**, upgrading local processing units, and boosting net farmer incomes.

Market Dynamics and Regional Standing

- **Seasonal Export Advantage:** Arunachal Pradesh's main kiwi harvest window runs from **November to January**. This perfectly aligns with New Zealand's off-season, opening a lucrative export window to supply fresh kiwis to South-East Asia, Europe, and the Middle East.
- **Production Leadership:** Arunachal Pradesh generates **over 50% of India's total kiwi output**. It also holds the distinction of being the first state in the country to secure an official organic kiwi certification.

Long-Term Significance

By reducing post-harvest spoilage and expanding processing capacity, the initiative aims to increase rural household incomes across the state. Furthermore, it strengthens India's organic agricultural footprint and positions **"Arunachal Organic Kiwi"** as a recognizable brand in premium international and domestic retail markets.

BSF's All-Women Expedition Scales Mount Everest



Why in News?

The **Border Security Force (BSF)** achieved a historic milestone as its first all-women mountaineering expedition successfully scaled **Mount Everest**. This landmark climb marks a significant chapter in India's adventure sports and security history.

About Mission Vande Mataram

- **Commemorative Milestone:** The expedition was officially named **"Mission Vande Mataram."** It was organized to mark two major celebrations: the BSF's Diamond Jubilee and the **150th anniversary** of the national song 'Vande Mataram'.
- **Environmental Initiative:** Alongside their climbing goals, the team advanced the **"Clean Himalaya – Clean Glaciers"** campaign. The expedition members actively collected garbage and discarded mountaineering equipment from various high-altitude Everest camps to bring down for proper ecological disposal.

Profile of the Border Security Force (BSF)

- **Establishment:** The BSF was raised on **1 December 1965** in the wake of the 1965 India-Pakistan war.
- **Core Mandate:** Known as India's **"First Line of Defence,"** the force is primarily tasked with guarding the nation's highly sensitive international borders with **Pakistan and Bangladesh.**
- **Administrative Structure:** It stands as one of the seven **Central Armed Police Forces (CAPFs)** of India and operates under the authority of the **Ministry of Home Affairs (MHA).**

Profile of Mount Everest

- **Geographic Matrix:** Mount Everest is the world's highest peak, standing at an officially recognized height of **8,849 meters (29,032 feet)**. It is situated in the Mahalangur range of the Himalayas directly on the **Nepal–China international border.**
- **Linguistic Nomenclature:**
 - **In Nepal:** It is widely referred to as **Sagarmatha** (meaning "Goddess of the Sky").

- **In Tibet:** It is natively called **Chomolungma** (meaning "Goddess Mother of the World").
- **Historical Ascent:** The peak was first conquered on **29 May 1953** by **Sir Edmund Hillary** of New Zealand and **Tenzing Norgay Sherpa** of Nepal.

Windfall Revenues at the Hutti Gold Mine

Largest gold mines in the world

Rank	Mine	Country
1	Nevada Gold Mines	USA
2	Muruntau	Uzbekistan
3	Olimpiada	Russia
4	Kazzinc Consolidated	Kazakhstan
5	Grasberg	Indonesia
6	Almalyk Complex	Uzbekistan
7	Blagodatnoye	Russia
8	Detour Lake	Canada
9	Kibali	DR Congo
10	Ahafo	Ghana

Why in News?

- The **Hutti Gold Mine** in Karnataka, India's only fully functional, state-owned gold mine, has reported a significant windfall in its revenues.
- This profit surge is primarily driven by soaring gold prices in the international market, which have reached record highs due to global economic and geopolitical factors.

Profile of Hutti Gold Mines Limited (HGML)

- **Location:** Situated in the **Raichur district of Karnataka**.
- **Operational Status:** It operates under the Government of Karnataka and stands as the sole public sector unit producing gold through continuous underground mining in India.
- **Production Volume:** Hutti currently produces roughly **1.5 to 2 tonnes** of gold annually.
- **Trading Mechanisms:** The company sells 'Gold Dore Bars' (unrefined gold containing impurities) to refiners. The pricing is based on the weekly average rates of the **India Bullion and Jewellers Association (IBJA)**, which differs from standard retail trading costs.

Historical Significance:

- Mining in the Hutti region traces its roots back to the pre-Ashokan era.
- The first wave of modern, deep-level exploration was spearheaded by *John Taylor & Sons* under the aegis of the Nizam of Hyderabad's Hyderabad (Deccan) Company.
- Following the reorganization of states in 1956, the entity was integrated under the Government of Mysore (now Karnataka), carrying the country's public mining legacy forward after the closure of the famous **Kolar Gold Fields (KGF)** in 2000.

Status of Gold Mining in India

- **Consumption vs. Production:** India is the second-largest consumer of gold globally, averaging approximately **800 tonnes** annually due to strong cultural affinity and investment demand. However, domestic production meets **less than 1%** of this massive demand.
- **Economic Impact of Imports:** The large gap between domestic supply and international demand results in a colossal import bill, which reached approximately **USD 72 billion** in FY26. This heavy import reliance places a substantial burden on India's Current Account Deficit (CAD) and foreign exchange reserves.

Geographical Distribution of Reserves:

- **Karnataka:** Holds the lion's share of India's gold reserves, primarily across Hutti, Uti, and the defunct KGF.
- **Andhra Pradesh:** Features deposits in Ramagiri (Anantapur) and the newly operational **Jonnagiri Gold Fields** (Kurnool). Jonnagiri holds the distinction of being India's first large-scale private gold mine since Independence.
- **Other States:** Minor deposits are distributed across parts of Rajasthan, Bihar, Jharkhand, and Kerala.

Global Context

- **Top Producer:** **China** stood as the largest gold-producing nation in the world in 2024.
- **Largest Mining Hub:** The **Nevada Gold Mines complex** in the United States ranks as the single largest gold mining complex globally.

Crux of The Hindu & Indian Express

Geography

Jabalpur Cruise Tragedy (2026)



Why in News

- A tragic boat capsizing incident occurred in Jabalpur on April 30, 2026, in the Bargi Dam reservoir on the Narmada River, leading to multiple deaths and raising concerns over safety lapses.

Key Facts of the Incident

- A cruise boat operated by the Madhya Pradesh Tourism Department overturned due to **sudden storm and strong winds**.
- Total passengers: **41 (39 tourists + 2 crew members)**
- Casualties:
 - **9 deaths confirmed**
 - Several people initially missing (including children)
- **28 people rescued**, many by local workers before official rescue teams arrived.
- The vessel was found **20–25 feet underwater**, complicating rescue operations.

Rescue and Response

- Multi-agency rescue operation:
 - NDRF, SDRF, police, home guards
 - Indian Army diving teams
- Challenges:
 - Darkness at the time of incident
 - Bad weather conditions
 - Depth and positioning of vessel
- Heavy machinery used to pull the vessel ashore.
- Local workers played a crucial role by:

- Immediately entering water
- Throwing ropes to survivors

Allegations of Negligence

Survivors highlighted serious lapses:

- **No timely distribution of life jackets**
- Crew allegedly failed to guide or assist passengers
- Boat continued moving toward deeper waters despite worsening weather
- Possible **violation of safety protocols**

These factors point to **human error + administrative failure**.

Issues Highlighted

1. Safety Regulation Failures

- Non-enforcement of life jacket rules
- Lack of emergency preparedness

2. Disaster Management Gaps

- Delay in official rescue response
- Dependence on local informal rescue

3. Tourism Governance Issues

- Weak monitoring of operators
- Poor accountability mechanisms

4. Weather Risk Management

- Possible ignoring of weather warnings
- Lack of real-time navigation decisions

About Narmada River



- One of the **major west-flowing rivers** of peninsular India
- Flows through:
 - Madhya Pradesh
 - Maharashtra
 - Gujarat
- Empties into **Arabian Sea (Gulf of Khambhat)**

Geographical Importance

- Origin:
 - **Amarkantak Plateau**
- Flows between:
 - Vindhya Range (north)
 - Satpura Range (south)

- Forms a **rift valley river**
 - Important geomorphological feature

Key Facts

- 5th longest river in India
- Acts as a **natural divider between North and South India**
- Tropic of Cancer passes through its basin

Major Tributaries

- Tawa River (longest)
- Barna, Banjar, Hallon rivers

Major Dams

- Sardar Sarovar Dam
- Indira Sagar Dam
- Omkareshwar Dam
- Bargi Dam
- Maheshwar Dam

Cultural Importance

- Important pilgrimage sites:
 - Omkareshwar
 - Maheshwar

Biogas Association Calls for Blending Organic Manure with Fertilizers (2026)



Why in News

- The **Indian Biogas Association (IBA)** has recommended a **mandatory 10% blending of fermented organic manure (FOM) with chemical fertilizers by 2030**.
- The proposal aims to:
 - Improve **soil health**
 - Reduce dependency on **chemical fertilizers**
 - Save nearly **\$2 billion annually in fertilizer imports**
- The recommendation was presented through a white paper titled:
 - **“FOM feeds soil; soil feeds sustainability”**

- The white paper was released by:
 - **Secretary, Ministry of New and Renewable Energy (MNRE)**

About the Proposal

Core Recommendation

- The IBA has proposed:
 - **10% mandatory blending of FOM with chemical fertilizers by 2030**
- It also calls for integrating FOM into:
 - **Nutrient-Based Subsidy (NBS) framework**
 - **Soil Health Card Scheme**
 - **Paramparagat Krishi Vikas Yojana (PKVY)**

Objective

- To restore **declining soil health in India**
- To promote **sustainable and regenerative agriculture**
- To reduce dependence on **chemical fertilizers**
- To create a **circular economy linking energy and agriculture**

Key Features of the Proposal

Blending Mandate

- A **10% blending requirement** of FOM with chemical fertilizers is proposed by **2030**.
- It is expected to:
 - Improve **soil fertility**
 - Enhance **crop productivity**
 - Reduce **fertilizer import dependence**

Soil Health Improvement

- India's **soil organic carbon level is around 0.4%**, which is critically low.
- Low soil organic carbon leads to:
 - Poor **soil fertility**
 - Reduced **water retention**
 - Lower **agricultural productivity**

Integration with Government Schemes

- The proposal recommends inclusion of FOM in:
 - **Nutrient-Based Subsidy (NBS) system**
 - **Soil Health Card Scheme**
 - **PKVY (organic farming programme)**

Policy Innovation

- The inclusion of **organic carbon as a nutrient parameter** under subsidies is proposed.

- This would ensure:
 - **Balanced fertilization**
 - Fair subsidy distribution for **organic inputs**
 - Reduced overuse of **chemical fertilizers**

Circular Economy Model

- The proposal promotes a system linking:
 - **Biogas production**
 - **Compressed Biogas (CBG)**
 - **Fermented organic manure (FOM)**
- It aims to ensure:
 - **100% utilisation of biogas by-products**
 - Development of a **sustainable agri-energy ecosystem**

About Fermented Organic Manure (FOM)

- Fermented Organic Manure (FOM) is an **organic fertilizer produced through controlled fermentation of organic waste materials**.
- It is a **byproduct of biogas and compressed biogas (CBG) plants**.

Raw Materials Used

- Animal manure
- Crop residues
- Kitchen waste
- Organic biodegradable materials

Preparation Process

- Organic materials are mixed with water.
- The mixture undergoes **controlled fermentation**.
- Fermentation breaks down organic matter and releases:
 - nutrients,
 - beneficial microbes,
 - and organic compounds useful for soil.

Economic Benefits

- Potential savings of:
 - **\$2 billion annually** in fertilizer imports
- Reduced dependency on:
 - **Imported chemical fertilizers**

Agricultural Benefits

- Improved:
 - **Soil fertility**
 - **Crop productivity**
 - **Water retention capacity**

Environmental Benefits

- Reduction in:
 - **Chemical fertilizer overuse**
- Promotion of:
 - **Regenerative agriculture**
 - **Sustainable farming practices**

Systemic Benefits

- Strengthening of:
 - **Fertilizer distribution systems**
 - **Public sector participation in organic inputs**
- Creation of:
 - **Region-specific nutrient solutions**

Significance

Soil Health

- Addresses India's challenge of **declining soil organic carbon**
- Promotes long-term **soil regeneration**

Sustainability

- Supports transition towards:
 - **Climate-resilient agriculture**
 - **Sustainable input usage**

Policy Importance

- Encourages integration of:
 - **Energy sector (biogas)**
 - **Agriculture sector**
- Promotes **policy convergence for green economy**

National Mission for Sustainable Agriculture (NMSA)



National Mission For Sustainable Agriculture

“Building Climate-Resilient Farming in India”

Why is this in news?

The Government of India highlighted the achievements of the **National Mission for Sustainable Agriculture (NMSA)**, a major scheme that helps farmers deal with problems like:

- drought,
- floods,

- poor soil,
- water shortage, and
- climate change.

The mission focuses on making Indian agriculture more **sustainable, productive, and climate-resilient**.

Simple Meaning of NMSA

- The **National Mission for Sustainable Agriculture (NMSA)** was launched in **2014-15** under the **National Action Plan on Climate Change (NAPCC)**.

Its main goal is:

“To help farmers continue farming successfully even during climate change and extreme weather conditions.”

It especially supports:

- rainfed farming areas,
- better water use,
- healthy soil,
- climate-resilient crops, and
- modern farming methods.

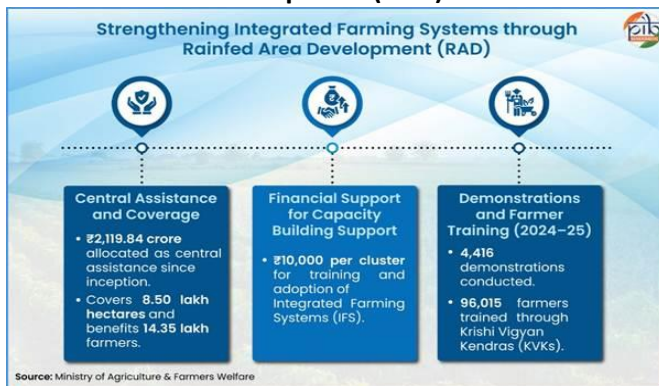
Why is NMSA Important?

- Around **60% of India’s farmland depends on rainfall**.
- Rainfed farming contributes nearly **40% of total food production**.
- Climate change is increasing:
 - droughts,
 - heat waves,
 - floods,
 - irregular rainfall.

So, India needs farming systems that can survive changing weather conditions.

Major Components of NMSA

1. Rainfed Area Development (RAD)



What is it?

- This scheme helps farmers in rain-dependent areas adopt **Integrated Farming Systems (IFS)**.

● **Integrated Farming System (IFS) means:**
Instead of depending on only one crop, farmers combine:

- crops,
- vegetables,
- livestock,
- fisheries,
- horticulture, etc.

This reduces risk and increases income.

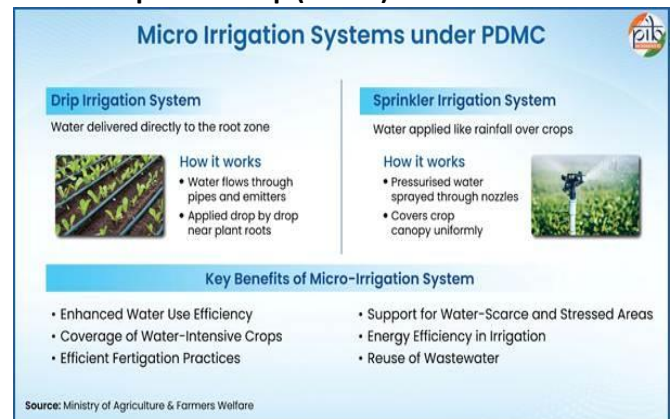
Benefits

- Better income stability
- Less dependence on one crop
- Protection during bad weather
- More employment opportunities

Key Achievements

- ₹2,119.84 crore released since 2014-15
- 8.5 lakh hectares covered
- 14.35 lakh farmers benefited
- In 2025-26:
 - ₹343.86 crore allocated
 - 96,013 farmers trained

2. Per Drop More Crop (PDMC)



Main Aim:

- To save water in farming through **micro-irrigation**.

Types of Micro-Irrigation

(a) Drip Irrigation

- Water is supplied directly to plant roots drop by drop.

(b) Sprinkler Irrigation

- Water is sprayed like rainfall through pipes and nozzles.

Why is it important?

- Saves water
- Reduces wastage
- Increases crop productivity
- Useful in water-scarce areas

Achievements

- Started in 2015-16
- Around **109 lakh hectares** covered
- ₹26,325 crore central assistance released

Future Target

Government plans to cover:

- **100 lakh hectares more** between **2025-26 and 2029-30**

3. Soil Health Management (SHM)

Aim:

- To improve soil fertility and encourage balanced use of fertilizers.

Focus Areas

- Soil testing
- Organic farming
- Reducing excessive fertilizer use
- Preventing soil erosion

Healthy soil leads to:

- better crop production,
- lower farming costs,
- long-term sustainability.

Soil Health Card (SHC) Scheme

What is it?

Farmers receive a **Soil Health Card** after soil testing.

The card tells:

- which nutrients are lacking,
- how much fertilizer is needed,
- which crops are suitable.

Benefits

- Balanced fertilizer use
- Reduced overuse of urea
- Better productivity
- Improved soil quality

Achievements

- Started in 2015
- 25.79 crore Soil Health Cards generated
- In 2025-26:
 - 97.53 lakh soil samples collected
 - 92.87 lakh samples tested

NITI Aayog Findings

- 68.5% farmers saw major improvement in soil health
- Excessive urea use reduced

Soil Fertility Maps

- The government is also preparing **village-level soil fertility maps**.

Purpose

These maps help farmers know:

- nutrient condition of their land,
- proper fertilizer requirements.

Progress

- 6,954 model villages identified
- Mapping completed in 2,023 villages

Role of ICAR and NICRA

ICAR

- The Indian Council of Agricultural Research conducts agricultural research in India.

NICRA

- The **National Innovations on Climate Resilient Agriculture (NICRA)** programme was launched in 2011.

Main Work

- Develop climate-resilient farming technologies
- Train farmers
- Prepare for extreme weather events

Achievements

- Vulnerability studies conducted in 651 districts
- 310 districts found highly vulnerable
- Climate Resilient Villages created in:
 - 448 villages
 - across 151 districts

Climate-Resilient Crop Varieties

Between 2014 and 2025:

- **2,996 climate-resilient crop varieties** were released.

These crops can better tolerate:

- drought,
- heat,
- floods,
- changing climate conditions.

Connection with Sustainable Development Goals (SDGs)

NMSA supports these UN Sustainable Development Goals:

SDG	Contribution
SDG 2 – Zero Hunger	Improves food production
SDG 6 – Clean Water	Saves water through micro-irrigation
SDG 13 – Climate Action	Helps farmers adapt to climate change

Important Terms for Exams

Climate-Resilient Agriculture

- Farming methods that can survive climate-related problems like droughts and floods.

Rainfed Agriculture

- Farming that depends mainly on rainfall instead of irrigation.

Micro-Irrigation

Water-saving irrigation methods like drip and sprinkler systems.

Integrated Farming System (IFS)

- Combining crops with livestock, fisheries, horticulture, etc., for higher income and lower risk.

Supreme Court Raises Alarm Over Illegal Sand Mining in Chambal Sanctuary



Why in News?

- The Supreme Court of India expressed deep concern over rampant illegal sand mining inside the **National Chambal Sanctuary**.
- The apex court directed the governments of Uttar Pradesh, Madhya Pradesh, and Rajasthan to take immediate, strict enforcement action, warning that unchecked mining is destroying the Chambal river ecosystem and threatening critical aquatic species like the gharial.

Understanding Sand Mining and Its Key Drivers

Sand mining is the extraction of sand and gravel from riverbeds, coastlines, and dunes, primarily to feed the construction sector. When extraction outpaces natural river replenishment, it causes severe environmental and geological imbalances.

Major Drivers of Illegal Mining:

- **Economic Pressures:** India's rapid urbanization and infrastructure expansion have created a massive demand-supply gap for construction sand. Illegal mining remains highly profitable as operators completely bypass environmental clearances, state royalties, and regulatory compliance.

- **Governance Failures:** Operations are frequently sustained by a deeply entrenched nexus between sand mafias, local politicians, and corrupt officials. This results in weak local enforcement, further worsened by a lack of manpower, surveillance technology, and monitoring capacity among field regulators.
- **Policy and Technical Gaps:** Outdated or poorly prepared District Survey Reports fail to establish sustainable extraction boundaries. Furthermore, slow institutional adoption of alternatives like Manufactured Sand (M-Sand) keeps the demand focused on fragile riverbeds.

Major Impacts of Illegal Sand Mining

- **Ecological Degradation:** Causes heavy riverbank erosion, strips away critical aquatic habitats, and triggers severe biodiversity loss.
- **Hydrological Disruption:** Alters natural river channels, deepens riverbeds, lowers nearby groundwater tables, and increases localized flash flood risks.
- **Threat to Infrastructure:** Excessive scouring undercuts and undermines the structural integrity of bridges, river embankments, and nearby public infrastructure.

Regulatory Framework in India

- **Mines and Minerals (Development and Regulation) Act, 1957:** Classifies sand as a **minor mineral**. This designation places the primary responsibility for statutory regulation, leasing, and enforcement on individual State Governments.
- **Environment Impact Assessment (EIA) Notification, 2006:** Mandates prior environmental clearance for all sand mining projects across the country.
- **Sustainable Sand Mining Management Guidelines, 2016:** Focuses on scientific mining practices, placing specific emphasis on creating robust District Survey Reports (DSRs).
- **Enforcement and Monitoring Guidelines for Sand Mining, 2020:** Mandates the use of modern technology—including drones, satellite tracking, and barcoding on mineral

transit vehicles—to step up field enforcement.

Landmark Judicial Pronouncements

The Indian judiciary has repeatedly stepped in to check the ecological damage caused by unscientific mining, relying on core environmental principles:

- **Deepak Kumar v. State of Haryana (2012):** The Supreme Court ruled that all sand mining activities, including small-scale operations on plots **below 5 hectares**, must obtain a formal environmental clearance.
- **State of Uttar Pradesh v. Gaurav Kumar (2025):** The Supreme Court established a strict "**No District Survey Report, No Sand-Mining**" rule. The Court declared that a finalized, valid DSR is an absolute prerequisite for environmental clearances, making draft survey reports legally invalid for auctions or permits.

Core Legal Doctrines Applied:

- **Public Trust Doctrine:** Evolved from *M.C. Mehta v. Kamal Nath (1996)*, this doctrine dictates that natural resources like rivers and sandbeds belong to the public. The State acts merely as a legal trustee bound to protect these resources from excessive private exploitation.
- **Precautionary Principle:** Formally recognized in *Vellore Citizens Welfare Forum v. Union of India (1996)*, it holds that a lack of complete scientific certainty must never be used to delay executive action meant to prevent serious or irreversible environmental degradation.

Measures to Curb Illegal Sand Mining

1. Technological Integration and Digital Surveillance

- **Satellite and Drone Mapping:** Deploy periodic aerial drone surveys and high-resolution satellite imagery to automatically map changing riverbed profiles and catch unauthorized excavation sites in real time.
- **QR-Coded e-Transit Passes:** Implement a tamper-proof, QR-coded transit pass system for mining trucks. This must be linked directly to vehicle GPS tracking networks to log transit from the source lease to the final destination.

- **Integrated IT Dashboards:** Maintain district-level mining surveillance portals that automatically cross-reference commercial mineral output against state royalties paid to flag transaction inconsistencies instantly.

2. Administrative and Governance Reforms

- **Scientific DSR Overhauls:** Upgrade District Survey Reports using GIS mapping and annual replenishment studies. These data repositories must be opened to the public to encourage social audits by civil society.
- **Independent Enforcement Teams:** Form dedicated Anti-Illegal Mining Task Forces that operate independently of local mining departments. This structure helps break local mafiacorrupt official networks by reporting directly to state-level nodal officers.
- **Targeting Financial Backers:** Shift the focus of criminal investigations away from low-level truck drivers. Authorities should follow the financial trail to penalize the actual owners and contractors, utilizing the *Prevention of Money Laundering Act (PMLA)* where applicable.

3. Policy and Economic Adjustments

- **Mandating M-Sand Alternatives:** Actively incentivize the production of Manufactured Sand (M-Sand). State governments can mandate its use in public construction projects and extend capital subsidies for establishing rock-crushing units to ease the strain on riverbeds.
- **Community-Led River Committees:** Empower local riverside villages by forming monitoring committees. Giving local communities a direct stake in sustainable resource management turns them into the primary guardians of the river asset.

Eco-Profile of the National Chambal Sanctuary

The sanctuary is a vital tri-state protected area running along the Chambal River, jointly managed by **Rajasthan, Madhya Pradesh, and Uttar Pradesh**. Established in **1978–79**, it spans nearly 5,400 sq. km and protects a unique landscape of deep river channels, low ravines, and sandy islands.

Key Endangered Species under Threat:

- **Ghrial (*Gavialis gangeticus*):** A specialized, fish-eating crocodilian characterized by its long, thin snout.

- **IUCN Status:** Critically Endangered.
- **Legal Protection:** Listed under **Schedule I** of the Wildlife (Protection) Act, 1972 (highest protection tier).
- **Habitat Needs:** Deep, fast-flowing freshwater channels paired with undisturbed sandy banks for basking and nesting. The Chambal River holds the most important surviving population of gharials in India.
- **Gangetic River Dolphin (*Platanista gangetica*):** A freshwater dolphin locally known as the "Susu."
 - **IUCN Status:** Endangered.
 - **Legal Protection:** Protected under **Schedule I** of the Wildlife (Protection) Act, 1972.
 - **Significance:** It is **India's National Aquatic Animal**, favoring deep river confluences and meandering channels with consistent water flow.

Conclusion

Illegal sand mining within the National Chambal Sanctuary poses an immediate threat to a fragile river ecosystem and endangers rare species like the Gharial and the Gangetic River Dolphin. Reversing this damage requires strict inter-state legal enforcement, the modernization of surveillance tools, and a rapid transition toward sustainable construction alternatives like M-Sand to safeguard India's natural heritage.

New Evergreen Tree Species Discovered in Kerala's Western Ghats



Why in News?

Researchers from the **Jawaharlal Nehru Tropical Botanic Garden and Research Institute** discovered a new evergreen tree species named **Humboldtia nairiana**. The discovery was made in the riparian forests of the **Shendurney Wildlife Sanctuary**, located in Kerala's southern Western Ghats.

Technical Profile of *Humboldtia nairiana*

- **Classification:** It is a medium-sized evergreen tree belonging to the genus *Humboldtia* and the family **Fabaceae**.
- **Physical Dimension:** The tree grows to a height of approximately **5 to 8 meters** and exhibits distinct vegetative and reproductive structures.
- **Morphological Features:** The species is characterized by:
 - A warty, pale-brown outer bark and a creamy-white inner blaze.
 - Angled, glabrous (smooth/hairless) branchlets.
 - Shorter, sparsely hairy stipules (leaf-like appendages) and smaller appendages.
 - Larger flowers supported by longer pedicels (flower stalks).
 - Elliptic-oblong fruits ending in a notably short beak.
- **Endemism:** *Humboldtia nairiana* is strictly endemic to the state of Kerala. Currently, its distribution is documented exclusively within the Agasthyamala Biosphere Reserve at an elevation of about **300 meters**.
- **Conservation Status:** The surviving wild population is critically fragile. Its known natural habitat spans an area of **less than 2 sq. km** and contains **fewer than 10 mature trees**.

Profile of the Agasthyamala Biosphere Reserve

- **Geographical Span:** Located in the southern section of the Western Ghats, this biosphere reserve is spread across the states of **Kerala and Tamil Nadu**.
- **Global Recognition:** The reserve was formally included in the **UNESCO World Network of Biosphere Reserves** in 2016.
- **Nomenclature:** It is named after **Agasthyarkoodam (Agastya Mala)**, a

prominent mountain peak traditionally linked with the sage Agastya.

Composing Protected Areas:

The biosphere reserve forms a contiguous ecological grid that incorporates several major protected zones:

- **Shendurney Wildlife Sanctuary** (the site of the current discovery)
- Peppara Wildlife Sanctuary
- Neyyar Wildlife Sanctuary
- Kalakkad Mundanthurai Tiger Reserve

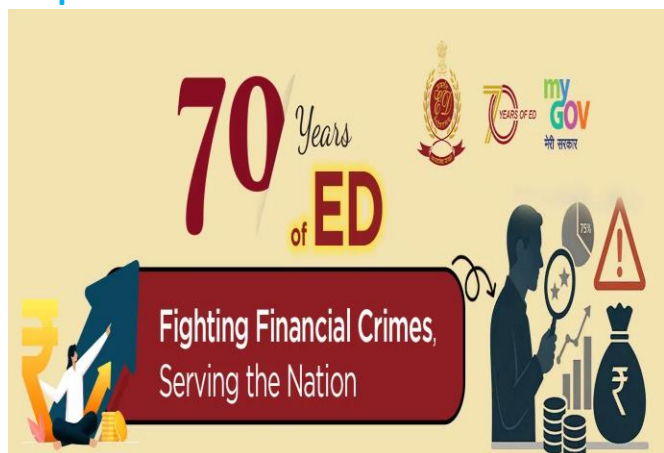
Ecological Wealth:

The reserve is globally recognized for its dense tropical forests, high rates of species endemism, and a vast repository of rare, threatened, and economically vital medicinal plants.



Internal Security

Enforcement Directorate Completes 70 Years of Financial Investigation Operations



Why in News

- The **Directorate of Enforcement (ED)** completed **70 years of its establishment on 1st May 2026**. The agency, created in **1956**, has evolved into India's premier institution for investigating **financial crimes, money laundering, and foreign exchange violations**.
- The milestone highlights the growing importance of **economic security, anti-money laundering frameworks, and enforcement of financial laws** in India's governance system.

About Directorate of Enforcement (ED)

Overview

- Established on **1st May 1956**
- Functions under the **Department of Revenue, Ministry of Finance**
- Acts as India's **premier financial investigation agency**
- Responsible for enforcement of **economic and financial laws**

Nature of the Organisation

- **Executive body**
- **Non-constitutional**
- **Non-statutory**
- Operates with **pan-India jurisdiction**

Core Legal Mandate of ED

1. Prevention of Money Laundering Act (PMLA), 2002

- Investigates **proceeds of crime**
- Has powers to:
 - Attach property acquired through illegal means
 - Confiscate illicit assets
 - Prosecute money laundering cases

2. Foreign Exchange Management Act (FEMA), 1999

- Deals with violations of **foreign exchange laws**
- Investigates:
 - Hawala transactions
 - Illegal forex dealings
 - Cross-border financial irregularities

3. Fugitive Economic Offenders Act (FEOA), 2018

- Targets economic offenders who flee India
- Allows:
 - Seizure of assets in India and abroad
 - Action against high-value financial defaulters

Organisational Structure of ED

- Headed by **Director of Enforcement**
- Headquarters: **New Delhi**
- Field structure includes:
 - **10 Zonal Offices** (e.g., Chennai, Kolkata, Chandigarh)
 - **11 Sub-Zonal Offices** (e.g., Jaipur, Jalandhar, Srinagar)
- Officers drawn from:
 - **Indian Revenue Service (IRS)**
 - **Indian Police Service (IPS)**
 - Internal ED cadre

Functions of ED

- Investigation of **financial crimes**
- Enforcement of **anti-money laundering laws**
- Tracking and seizure of **illegally acquired assets**
- Coordination with domestic and international agencies on financial crimes

ED vs CBI

Focus Area

- **ED:** Financial crimes such as money laundering and foreign exchange violations
- **CBI:** Corruption, general economic offences, and special crime investigations

Administrative Control

- **ED:** Ministry of Finance
- **CBI:** Ministry of Personnel, Public Grievances and Pensions

Primary Laws

- **ED:** PMLA, FEMA, FEOA
- **CBI:** Delhi Special Police Establishment Act, 1946

Asset Attachment Powers

- **ED:** Can attach properties during investigation
- **CBI:** Requires court approval for attachment

INS Mahendragiri & Project 17A (Nilgiri-Class Frigates)



Why is this in the News?

The Indian Navy has inducted **INS Mahendragiri**, the sixth warship in the **Nilgiri-class (Project 17A)**.

This is important because it shows India's progress in:

- **Indigenous warship building**
- **Naval modernization**
- **Self-reliance in defence (Aatmanirbhar Bharat)**

It also strengthens India's ability to operate as a **blue-water navy** in the Indian Ocean Region.

About INS Mahendragiri

1. Type of Ship

- A **multi-role stealth frigate**
- Designed for:
 - **Anti-surface warfare**
 - **Anti-air warfare**
 - **Anti-submarine warfare**

This means it can fight threats from:

- Ships
- Aircraft
- Submarines

2. Design and Technology

- Designed by **Warship Design Bureau (India)**
- Uses **CODOG propulsion system**:
 - Combined Diesel or Gas engines
 - Helps in **speed + fuel efficiency balance**
- Equipped with **advanced sensors and modern combat systems**

3. Indigenous Content

- Around **75% indigenous components**
- Shows strong progress in India's domestic defence manufacturing

4. Stealth Features

The ship is designed to be difficult to detect using radar and infrared systems:

- **Low Radar Cross Section (RCS)** → harder to detect on radar
- **Radar-absorbing materials**
- **Flush-mounted weapons** (smooth surface design)
- Special exhaust systems to reduce **infrared heat signature**

This improves survivability in combat situations.

5. Weapons and Systems

INS Mahendragiri is equipped with advanced Indian and joint systems:

- **BrahMos missiles** → supersonic strike capability
- **MFSTAR radar** → advanced tracking and targeting system
- **MRSAM air defence system** → protects against aerial threats

This makes the ship capable of both:

- **Offensive operations**

- **Defensive protection**

6. Strategic Importance

- Strengthens India's naval power in the **Indian Ocean Region (IOR)**
- Enhances protection of:
 - Sea trade routes
 - Maritime borders
- Supports India's role as a **regional maritime power**

About Project 17A (Nilgiri-Class Frigates)

1. Overview

- **Project 17A** is a follow-up to **Shivalik-class (Project 17)** frigates
- It includes **7 stealth guided-missile frigates**

These ships are designed for:

- Modern naval warfare
- Long-range operations
- Multi-threat environments

2. Construction of Ships

The 7 frigates are built by two Indian shipyards:

- **Mazagon Dock Shipbuilders Ltd (MDL), Mumbai**
 - Nilgiri
 - Udaygiri
 - Taragiri
 - Mahendragiri
- **Garden Reach Shipbuilders & Engineers (GRSE), Kolkata**
 - Himgiri
 - Dunagiri
 - Vindhyagiri

3. Capability and Role

Project 17A frigates are designed for:

- **Blue-water operations** (far from coastal waters)
- Protecting **sea lanes of communication (SLOCs)**
- Long-range deployment and patrol

4. Strategic Significance

Project 17A represents:

- Shift towards **modern, stealth-based naval warfare**
- Reduced dependence on foreign warship imports
- Strengthening India's ability to:
 - Project power globally
 - Secure maritime trade routes

Key Concept: What is a Blue-Water Navy?

A **blue-water navy** is one that can:

- Operate in deep oceans far from home shores
- Sustain long-distance missions
- Influence global maritime security

India's Project 17A strengthens this capability.

1 Year of Operation Sindoor



Why in News?

The Indian armed forces recently marked the 1-year anniversary of **Operation Sindoor**, showcasing a structural shift toward a high-tech, resilient defense posture featuring hardened subterranean infrastructure and an integrated, multi-layered air defense shield.

What is Operation Sindoor?

- **About:** A multi-dimensional military and strategic offensive launched by India on the night of 7-8 May 2025.
- **Trigger:** Launched in response to the Pahalgam terror attack (22 April 2025) in Jammu & Kashmir, where 26 tourists were killed by the Pakistan-backed group, The Resistance Front (TRF).

1. Military Execution (The Kinetic Response)

- **Targeted Strikes:** Indian Air Force (IAF) Rafale jets deployed SCALP missiles and HAMMER bombs to destroy 9 major terror launchpads across Pakistan and Pakistan-occupied Jammu & Kashmir (PoJK).
- **Terrorist Casualties:** Over 100 terrorists killed, including top-tier handlers from Lashkar-e-Taiba (LeT) and Jaish-e-Mohammed (JeM).
- **Counter-Escalation:** India retaliated against Pakistani drone and artillery strikes by neutralizing military infrastructure, including radar installations in Lahore and airbases in Sargodha and Nur Khan.

- **Ceasefire:** Achieved on 10 May 2025, following a reach-out from Pakistan's DGMO.

2. Non-Military Measures

- **Indus Waters Treaty (IWT):** India held the 1960 treaty in abeyance, using its upstream control as a strategic lever.
- **Economic Isolation:** Suspended all bilateral trade, closed the Attari-Wagah border, banned imports of Pakistani textiles/cement, and halted key exports (e.g., onions).
- **Diplomatic Offensive:** Dispatched "All-Party Delegations" globally with forensic evidence of the Pahalgam attack to isolate Pakistan internationally.

3. Key Strategic Outcomes

- **"Nuclear Bluff" Called:** Proved India's capability to operate within the "grey zone" by striking deep into mainland Punjab without triggering nuclear escalation.
- **Tri-Service Integration:** Fast-tracked the Joint Operations Control Centre (JOCC) and the transition toward Theatre Commands.
- **Atmanirbharta (Self-Reliance):** High reliance on Made-in-India weapons (e.g., Akash missile system, indigenous anti-drone platforms).

Strategic Significance of the Operation

- **Proactive Security Posture:** Transitioned from strategic restraint to a formalized doctrine of punitive retaliation at the source of terror.
- **Zero Tolerance for Nuclear Blackmail:** Established that sovereign nuclear threats will not deter India's inherent right to self-defense.
- **Abolition of Distinction:** Treats non-state terror actors and their state sponsors as a single entity, holding the host nation directly accountable.
- **The Doval Doctrine:** Operationalized a "defensive offense" strategy integrating hard power, intelligence, and psychological warfare.

Steps Taken Post-Operation to Strengthen Defence Capabilities

- **Subterranean Warfare Infrastructure:** Constructing large-scale underground command and control centers at Command

and Corps levels equipped with **C4I2SR** systems for real-time tri-service situational awareness.

- **Technological Construction:** Deploying 3D-printed bunkers for rapid resilience along with hardened storage for fuel, ammunition, and medical facilities along Western borders.
- **Evolution of Air Defense:** Implementing a comprehensive shield under **Mission Sudarshan Chakra**, integrating *Akashteer* (Army), *IACCS* (Air Force), and *TRIGUN* (Navy).
- **Offensive Air Defense:** Enhancing long-range denial capabilities via S-400 Triumf and the indigenous **Project Kusha** (Long-range Surface-to-Air Missile system).
- *Note: During the operation, the IAF recorded its largest surface-to-air kill by neutralizing a Pakistani airborne platform from 300 km away.*
- **Counter-UAS Framework:** Prioritizing anti-drone procurement to counter low-cost drone swarms, blending new sensors with legacy weapons like L/70 anti-aircraft guns.
- **Dual-Use Infrastructure:** Expanding Emergency Landing Fields (ELFs) on national highways (e.g., Purvanchal Expressway) and converting border airfields for civil-military use.

National Counter-Terrorism Strategy: PRAHAAR

Launched by the Ministry of Home Affairs (MHA), this framework shifts India to a proactive, whole-of-government counter-terrorism doctrine:

Component	Strategy & Mechanism
P — Prevention	Intelligence-led approach via real-time sharing through the Multi Agency Centre (MAC) and Joint Task Force on Intelligence (JTFI).
R — Responses	Local police act as first responders, supported by State Counter-Terror Forces and the National Security Guard (NSG).
A — Aggregating Capacities	Weaponry modernization and standardization of training by the Bureau of Police Research & Development (BPR&D).
H — Human Rights & Law	Balancing security with the Protection of Human Rights Act (1993) via multi-level judicial redressal.
A — Attenuating Conditions	Multi-stakeholder de-radicalization frameworks involving community leaders and NGOs.
A — Aligning Int. Efforts	Utilizing MLATs and Extradition Treaties for evidence sharing; diplomatic pushes at the UN to deny terror safe havens.
R — Recovery & Resilience	"Whole-of-society" approach to ensure swift societal and psychological recovery post-incident.

Way Forward: Steps to Further Strengthen Capabilities

- **Structural Reforms:** Expedite the transition to **Integrated Theater Commands** and revive the proposal for a centralized **National Counter-Terrorism Centre (NCTC)** to eliminate friction between state and central agencies.
- **Technological Frontiers:** Deploy a comprehensive "**drone-dome**" using high-energy lasers/microwave weapons, and launch dedicated military satellites for continuous real-time surveillance across the LoC and LAC.
- **Smart Border Management:** Accelerate the **Comprehensive Integrated Border Management System (CIBMS)** using infrared sensors and radar. Integrate the Navy's Information Management and Analysis Centre (IMAC) with local fishing vessels using transponders to block maritime infiltration.
- **Combating New-Age Battlefields:** Upgrade the Defence Cyber Agency into a full-fledged command to safeguard Critical Information Infrastructure (CII). Establish specialized units to counter information warfare, dark web monitoring, crypto-enabled terror financing, and the **Narco-Terror Nexus**.

Maiden Flight-Trial of Indigenous TARA Weapon System



Maiden flight-trial of Tactical Advanced Range Augmentation (TARA) weapon was successfully conducted off the coast of Odisha on May 07, 2026.

TARA, the modular range extension kit, is India's first indigenous glide weapon system to convert unguided warheads into precision guided weapons.



Why in News?

The Defence Research and Development Organisation (DRDO) and the Indian Air Force (IAF) achieved a major milestone in indigenous military technology by successfully completing the first flight-trial of the **Tactical Advanced Range Augmentation (TARA)** weapon system off the coast of Odisha.

What is the TARA Weapon System?

- **Core Concept:** TARA is a modular range-extension kit and stands as India's premier indigenous glide weapon framework. It is specifically engineered to upgrade conventional, unguided gravity bombs into high-precision smart weapons.
- **Strategic Objective:** The kit significantly enhances the operational range, destructive power, and target accuracy of low-cost standard munitions. This enables fighter jets to neutralize ground-based targets from longer, safer stand-off distances.
- **Developmental Agency:** The system was designed and created by the **Research Centre Imarat (RCI)** in Hyderabad, working in partnership with various other DRDO laboratories.

Operational Significance and Cost-Effectiveness

1. Multi-Platform Versatility

The modular TARA kit can be mounted on multiple types of fighter aircraft currently operational in the IAF's fleet. This broad compatibility offers commanders greater flexibility during mission planning.

2. Sustainable Precision Warfare

TARA is the country's first glide weapon system built around high-end, low-cost sub-systems. This design approach makes executing highly accurate aerial strikes economically sustainable over long-term operations, compared to deploying expensive cruise missiles.

3. Strengthening Atmanirbhar Bharat

The design and development process heavily involved local Development-cum-Production Partners (DcPP) alongside Indian private defense industries. Production activities have already started, which helps build a stronger domestic manufacturing network and cuts reliance on imported precision-guided munitions (PGMs).

Appointment of India's 3rd Chief of Defence Staff



Why in News?

The Government of India has selected **Lieutenant General NS Raja Subramani** to serve as the country's **3rd Chief of Defence Staff (CDS)**. He takes over the role following General Anil Chauhan.

Understanding the Chief of Defence Staff (CDS) Post

- **Core Function:** The CDS is the highest-ranking military officer within the Indian Armed Forces. The role serves as a vital institutional bridge connecting the uniform branches with senior civilian political leaders.
- **Historical Timeline:** The office was officially established in December 2019. General Bipin Rawat took charge as the country's first CDS in January 2020.
- **Policy Roots:** The post was created following decades of policy reviews, most notably from the Kargil Review Committee (1999) and the Shekatkar Committee (2016). These panels highlighted the need to patch structural coordination gaps observed during the Kargil conflict.
- **Rank Protocol:** The CDS holds a four-star rank, matching the status of the three individual service chiefs, but operates structurally as the "first among equals."
- **Legal Standing:** This is an administrative position created via a Union Cabinet ruling rather than a constitutional body. It sits at the 12th position in the Indian Order of Precedence.
- **Selection Process:** The choice is finalized by the Appointments Committee of the Cabinet

(ACC), which runs under the leadership of the Prime Minister.

- **Eligibility Rules:** Active or retired three-star officers (Lieutenant General, Vice Admiral, Air Marshal) or four-star officers (General, Admiral, Air Chief Marshal) are eligible, provided they are under 62 years of age at the time of appointment.
- **Service Limits:** While the office does not carry a rigid fixed term of years, the maximum age limit for a serving CDS is capped at 65 years.

Key Roles and Responsibilities

1. Administrative Oversight

The CDS takes charge as the head and Secretary of the **Department of Military Affairs (DMA)** tucked inside the Ministry of Defence.

2. Strategic Consultation Roles

The officer handles two primary advisory assignments:

- Serves as the Principal Military Advisor to the Raksha Mantri (Defence Minister) on all combined tri-service matters.
- Functions as the Military Advisor to the **Nuclear Command Authority (NCA)**, which operates under the chairmanship of the Prime Minister.

3. Continuous Leadership of the COSC

The CDS operates as the Permanent Chairman of the Chiefs of Staff Committee (COSC). This replaces the older, rotating system to provide better continuity in long-term defense planning.

4. Financial and Sourcing Guidance

Sitting as a permanent member of the **Defence Acquisition Council (DAC)**, the CDS handles the execution of the Five-Year Defence Capital Acquisition Plan. The office prioritizes procurement requests based on estimated budgets to reduce unnecessary operational expenses.

5. Inter-Service Integration

The core mandate of the position is to build "jointness" across operations, supply logistics, transportation networks, and training systems among the Army, Navy, and Air Force to maximize joint combat performance.

Operation RAGEPILL: India's First Captagon Seizure



Why in News?

- The **Narcotics Control Bureau (NCB)** has ramped up its action against international drug rings through **Operation RAGEPILL**. This operation led to India's first-ever seizure of **Captagon**, a highly regulated psychotropic drug.
- During the crackdown, the agency caught the mastermind of an India-Myanmar drug ring in Delhi.
- The NCB also highlighted **Himachal Pradesh's anti-heroin strategy** as a model for moving from basic local policing toward targeting large transnational networks.

Profile of Captagon

- **What it is:** Captagon is a highly addictive central nervous system stimulant that triggers intense psychological dependence.
- **Chemical Background:** It was originally the brand name for **Fenethylline**, a synthetic stimulant created in the 1960s to treat ADHD, narcolepsy, and depression. Legal industrial production of this chemical stopped globally in 2009.
- **Modern Clandestine Mix:** The illegal Captagon sold on the black market today is a dangerous mixture of amphetamines, methamphetamine, caffeine, and various chemical fillers.
- **Street Names and Geopolitics:**
 - **The Jihadi Drug:** Also known as "Captain Courage," it earned this name because extremist groups like ISIS use it heavily in conflict zones. It triggers euphoria, blocks trauma,

keeps fighters awake for days, and numbs fear or fatigue.

- **Poor Man's Cocaine:** It is widely used across the Middle East and Gulf states as an affordable recreational substance.
- **Production Center:** **Syria** serves as the main global hub for illegal Captagon manufacturing, turning the drug trade into a multi-billion-dollar shadow economy that funds local conflicts.

- **Legal Classification:** Banned in most nations during the 1980s, it is strictly controlled under Schedule II of the **UN Convention on Psychotropic Substances, 1971**. In India, it is illegal and strictly penalized under the **NDPS Act, 1985**.

About the Narcotics Control Bureau (NCB)

- **Role:** The NCB is India's premier agency for drug law enforcement, intelligence collection, and counter-narcotics coordination under the **Ministry of Home Affairs**.
- **Establishment:** It was set up on **14 November 1985** under the provisions of the Narcotic Drugs and Psychotropic Substances Act, 1985, with its main headquarters in New Delhi.
- **Core Duties:** The bureau connects central and state law enforcement teams, builds regional anti-drug measures, tracks smuggling trends, and compiles national drug enforcement data.

Himachal Pradesh's Anti-Heroin Model

Locally called the "**Anti-Chitta**" model, this strategy combines aggressive financial crackdowns on drug suppliers with community-driven rehabilitation for users.

- **Grassroots Mapping:** Himachal Pradesh is the first Indian state to track drug usage and trafficking down to the village panchayat level. A statewide survey classifies sectors into Red, Yellow, and Green zones based on drug activity, letting police focus their resources precisely.
- **Asset Seizures:** The state uses the **PIT-NDPS Act, 1988**, to seize properties worth over Rs

51 crore from drug traffickers. To protect the integrity of law enforcement, the state also mandates drug testing for chitta during police recruitments.

- **Community Intelligence:** Over 1,000 Anti-Chitta Volunteers work confidentially to share ground-level tips, point out drug hotspots, and report dealers. Local panchayat committees also run awareness campaigns in schools.
- **Advanced Rehabilitation:** The model treats users as victims rather than criminals. Working alongside institutions like **NITI Aayog, AIIMS Delhi, and PGIMER Chandigarh**, the state is building modern recovery centers in districts like Sirmaur, Shimla, and Kangra to help youths rejoin society.

Successful Flight Trials of DRDO's Drone-Launched Missile (ULPGM-V3)



Why in News?

- The **Defence Research and Development Organisation (DRDO)** has successfully completed the final development flights of its **Unmanned Aerial Vehicle Launched Precision Guided Missile (ULPGM-V3)**. The tests took place at the National Open Area Range (NOAR) located in Kurnool, Andhra Pradesh.
- The missile demonstrated its capabilities in both Air-to-Ground and Air-to-Air operations. It was launched from an indigenous drone built by **NewSpace Research Technologies**, backed by various DRDO laboratories and **30 domestic MSMEs and startups**.

Technical Progress of the Weapon System

- **Generational Advancements:** A comparison with earlier models highlights the evolution of India's drone-launched strike systems:
 - **ULPGM-V1:** A foundational, unpowered free-fall precision munition.
 - **ULPGM-V2:** Introduced a solid-fuel propulsion motor for extended range, along with mid-course target update systems.
 - **ULPGM-V3:** Adds dual-mode capability to strike both ground armor and moving aerial threats. It features sophisticated guidance tracking and flexible warhead options.
- **Production Logistics:** For final production, DRDO has joined forces with two main agencies: the public sector undertaking **Bharat Dynamics Limited (BDL)** and the private firm **Adani Defence Systems and Technologies Limited**. The successful tests confirm a mature domestic supply chain ready for mass assembly.

Key Tactical Capabilities and Configurations

- **Double Combat Roles:**
 - **Air-to-Ground:** Functions as a fire-and-forget anti-tank missile designed to defeat heavily armored vehicles shielded by Rolled Homogeneous Armour (RHA) and Explosive Reactive Armour (ERA).
 - **Air-to-Air:** Capable of tracking down and destroying low-flying enemy drones, helicopters, and other airborne assets.
- **Dual-Channel Target Seeker:** Outfitted with a high-definition image infrared (IR) passive homing seeker. This sensor allows the missile to securely lock onto targets through thick smoke, bad weather, or varying night visibility.
- **Real-Time Data Transmission:** Features a two-way wireless data link. This setup lets ground operations personnel change the target priority or adjust the precise impact point after launch.

- **Terrain Adaptability:** Engineered to work seamlessly across flat plain regions as well as cold, high-altitude border environments.

Modular Warhead Architectures

The weapon system can be quickly customized with three distinct warhead configurations depending on the mission requirement:

- **Anti-Armor Warhead:** Formulated to punch through the heavy, layered armor sheets used on modern main battle tanks.
- **Penetration-cum-Blast Warhead:** Optimized for anti-bunker missions, allowing the shell to pierce concrete defenses before exploding inside a fortified structure.
- **Pre-Fragmentation Warhead:** Designed to disperse high-speed metal fragments across a large radius, maximizing damage against scattered soft targets or personnel.

US Approves Military Support Package for India's Apaches and M777 Howitzers



Why in News?

- The United States government has approved a major military sustainment package along with related equipment to support India's fleet of **AH-64E Apache helicopters** and **M777A2 Ultra-Light Howitzers**.
- This move further strengthens the strategic defense partnership between the two nations.

Breakdown of the Support Packages

- **AH-64E Apache Support (\$198.2 million):** The package focuses on engineering, technical, and logistics management. It includes technical publications, training for defense personnel, and long-term program support to keep India's multi-role combat helicopters mission-ready.

- **M777A2 Howitzer Support (\$230 million):** This deal delivers spare parts, repair-and-return services, field assistance, and depot-level maintenance facilities. The M777A2 is a highly mobile, lightweight artillery piece built for quick deployment in rugged, mountainous border zones.

Broader India-US Defense Procurement Landscape

India's recent and ongoing defense acquisitions from the US span several advanced platforms:

- **Aerial Assets:** Procurement of **MQ-9B SeaGuardian/SkyGuardian drones** for long-endurance surveillance, alongside **MH-60R Seahawk helicopters** for maritime operations.
- **Infantry Weapons:** Bulk orders of high-performance **Sig Sauer assault rifles**.
- **Jet Engine Technology:** Current deliveries of **GE-F404 engines** are underway to power the indigenous LCA Tejas Mark-1A fighter jets. Concurrently, advanced negotiations are happening to co-manufacture the more powerful **GE F-414 jet engines** directly within India.

Foundation Accords of the India-US Defense Partnership

The bilateral relationship is built on foundational pacts signed over the years:

- **LEMOA (2016):** The *Logistics Exchange Memorandum of Agreement* allows both militaries to access each other's bases for refueling and replenishment.
- **COMCASA (2018):** The *Communications Compatibility and Security Agreement* facilitates the transfer of encrypted communication security equipment.
- **BECA (2020):** The *Basic Exchange and Cooperation Agreement* enables the sharing of high-accuracy geospatial maps and satellite data.
- **SOSA (2024):** The *Security of Supply Arrangement* ensures priority delivery of industrial defense resources during supply chain shocks.
- **Major Defense Partnership Framework (2025):** Sets up a long-term roadmap for co-development, technology transfers, and joint military industrial production.

Russia Deploys Oreshnik Hypersonic Missile in Mass Strike on Ukraine



Why in News?

- Russia used its advanced **Oreshnik hypersonic ballistic missile** during a large drone and missile attack against Ukraine.
- This marks the third time the weapon has been used in the conflict.
- The attack involved about 600 drones and 90 cruise and ballistic missiles. It targeted command hubs, power facilities, and military infrastructure, causing heavy damage in Kyiv and surrounding areas.

Technical Profile of the Oreshnik Missile

- **Classification:** An experimental Russian hypersonic intermediate-range ballistic missile (IRBM) built to bridge the gap between short-range and intercontinental systems.
- **Name Meaning:** Its name translates to "hazel tree" or "hazelnut tree" in Russian.
- **Lineage:** Western analysts believe its design is closely linked to Russia's earlier, frozen RS-26 Rubezh missile program.

Capabilities and Performance

- **Hypersonic Speed:** The missile travels at **Mach 10 to Mach 11** (10-11 times the speed of sound). This high speed leaves almost no warning time, making it very hard for standard air defense systems to intercept.
- **MIRV Technology:** The missile uses Multiple Independently Targetable Re-entry Vehicle (MIRV) technology:
 - It can carry **6 separate warheads**.
 - Each warhead can hold **6 individual submunitions**.

- This allows a single missile to deliver **36 precise strikes** over a broad area, confusing air defense tracking.
- **Payload & Targets:** It can carry either conventional explosives or nuclear warheads. It is built to destroy deeply buried bunkers, fortified headquarters, and airfields at high speeds. Russia claims a coordinated strike with multiple conventional Oreshnik missiles causes damage similar to a tactical nuclear strike.

Operational Deployment Timeline

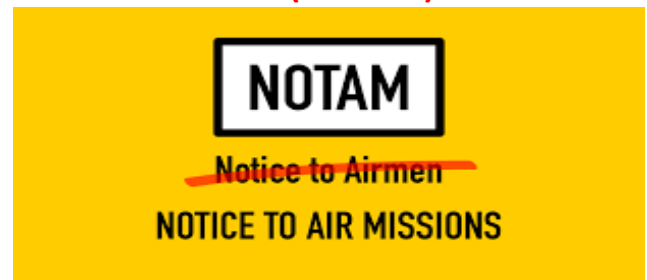
- **November 2024 (Dnipro):** First-ever combat use, targeting an industrial defense facility.
- **Early 2026 (Lviv Region):** Used against western Ukrainian logistics and transit hubs.
- **May 2026 (Bila Tserkva, Kyiv Region):** Launched during a massive joint aerial attack to strike local command networks.



Crux of The Hindu & Indian Express

Internal Security

Notice to Airmen (NOTAM)



Why in News

- India has recently issued a NOTAM declaring a large area of the Bay of Bengal as a **danger zone** for a long-range missile test.
 - The NOTAM was active from **April 25 to May 6, 2026**.
 - It covered a **flight corridor of around 3,550 km**, indicating a major strategic test.
 - Defence sources suggest that the test is likely related to the **Agni-IV missile**, which has a range of about **3,500–4,000 km**.

- Agni-IV missile is a **two-stage, solid-fuelled intermediate-range ballistic missile (IRBM)** capable of carrying a **1,000 kg warhead**. It forms an important part of India's **nuclear deterrence capability**.
- The timing of this NOTAM is significant because it overlaps with the first anniversary of **Operation Sindoor**, conducted in May 2025. Although no official link has been confirmed, analysts view it as a signal of **strategic readiness and capability demonstration**.

This development also reflects India's broader push toward **modernisation of its missile systems**, including:

- Agni series (strategic missiles)
- K-4 submarine-launched missiles
- Hypersonic systems like LRAShM
- Extended-range BrahMos (target ~800 km)

What is NOTAM?

- Full Form: Notice to Airmen (also called *Notice to Air Mission*)
- It is an **official notification issued by aviation authorities**.

Definition

- A NOTAM contains information regarding any **establishment, condition, change, or hazard** related to aeronautical facilities, services, or procedures, which is **essential for safe flight operations**.

In Simple Words

- It acts as a **real-time alert system** for pilots, informing them about anything that may affect the safety of a flight.

Key Features of NOTAM

1. Ensures Aviation Safety

NOTAM informs pilots about:

- Hazards in airspace
- Changes in airport conditions
- Operational risks

2. Issued by Competent Authorities

- In India:
 - Directorate General of Civil Aviation (DGCA)
 - Airports Authority of India (AAI)

3. Time-Sensitive Communication

- Information is:
 - Urgent
 - Operationally critical

- Disseminated using **fast communication systems**

4. Encoded and Standardised Format

- Written in **brief coded language**
- Ensures:
 - Precision
 - Quick interpretation by trained personnel

NOTAM in Missile Tests

- NOTAM is issued to:
 - **Restrict civilian aircraft from entering a specific airspace**
 - Ensure **safe conduct of military operations**

In the Present Case

- The NOTAM created an **exclusion zone** over the Bay of Bengal.
- Civilian aircraft were **not allowed to enter this region**.
- This ensured:
 - Safe missile testing
 - No interference with military operations
 - Prevention of mid-air accidents

Such NOTAMs have also been issued earlier during:

- Military tensions
- Conflict situations (e.g., India–Pakistan scenarios)

Types of Information in NOTAM

1. Airspace Hazards

- Air shows
- Parachute operations
- Glider activities

2. VIP Movement

- Flights of heads of state
- Special security operations

3. Airport Operations

- Closure of runways or taxiways

4. Technical Failures

- Navigation aid malfunction
- Lighting issues

5. Military Activities

- Missile tests
- Air exercises
- Drone operations

6. Temporary Obstacles

- Construction cranes
- Tall structures near airports

Importance of NOTAM

1. Flight Safety

It prevents accidents by:

- Informing pilots in advance
- Avoiding hazardous zones

2. Civil-Military Coordination

- Ensures smooth coordination between:
 - Civil aviation
 - Defence operations

3. Strategic Significance

- Plays a role in:
 - Missile testing
 - Defence preparedness
 - National security

4. Legal Requirement

- Pilots are required to check NOTAM before flights
- Ignoring NOTAM can lead to:
 - Severe risks
 - Regulatory violations

Challenges

1. Complex Format

- Encoded language may be difficult for beginners

2. Information Overload

- Large number of NOTAMs daily
- Risk of missing critical alerts

3. Need for Modernisation

- Requires:
 - Digital tools
 - Better filtering systems

Way Forward

- Simplification of NOTAM language
- Integration with **AI-based systems**
- Real-time updates in cockpit systems
- Better pilot training

BRO's Project Deepak – 66th Raising Day (2026)



Why in News

- Border Roads Organisation's **Project Deepak** celebrated its **66th Raising Day** on May 4, 2026 in Shimla, highlighting its long-standing role in infrastructure development and national security in the Western Himalayas.

About Project Deepak

- Established in **1961**, it is one of the **oldest projects** under BRO.
- Area of responsibility:
 - Shimla district
 - Kinnaur district
 - Kullu district
 - Lahaul and Spiti district
- Manages **over 1,100 km of road network**, including:
 - High-altitude roads
 - Border connectivity routes

Key Contributions

1. Strategic Infrastructure Development

- Construction and maintenance of critical roads such as:
 - Hindustan-Tibet Road
 - Manali-Leh Highway
- Importance:
 - Ensures **connectivity to remote border areas**
 - Facilitates **troop movement and logistics**
 - Boosts **regional economic development**

2. Role in National Security

- Maintains **vital lines of communication** in border regions.
- Supports armed forces in:
 - Rapid deployment
 - Supply chain continuity
- Enhances **operational readiness in high-altitude areas**

3. Disaster Management & Humanitarian Assistance

Project Deepak has actively participated in rescue operations:

- **May 2023:**
 - Around **300 stranded motorists rescued** at Baralacha La Pass
- **July 2023:**
 - Over **250 civilians evacuated** from Chandratul Lake

- Shows strong capability in:
 - High-altitude rescue
 - Emergency response during natural disasters

Importance of BRO in India

About BRO

- Established in **1960**
- Works under the **Ministry of Defence**
- Develops and maintains **road infrastructure in border areas**

Strategic Significance

- Strengthens **border infrastructure**
- Supports **defence preparedness**
- Plays a role in **India-China border management**
- Helps in **socio-economic integration of remote regions**

Challenges Faced

- Extreme weather conditions (snowfall, landslides)
- Difficult terrain and altitude
- Short working seasons
- Logistical constraints in remote areas

Way Forward

- Use of **advanced technology** in road construction
- Strengthening **early warning systems** for disasters
- Better coordination between:
 - Defence forces
 - Civil administration
- Sustainable infrastructure development in fragile ecosystems

Hezbollah Using Fiber-Optic Drones Against Israel

HEZBOLLAH ARMED WITH RUSSIA^{AI} DRONES? ISRAELI ARMY 'SHOCKED'



Why in News?

- Hezbollah is reportedly using **fiber-optic drones** in attacks against Israel.

- These drones are difficult to stop because they cannot be easily jammed through electronic warfare systems.
- The technology was earlier widely used during the Russia-Ukraine War.

What are Fiber-Optic Drones?

- Fiber-optic drones are drones controlled through very thin fiber-optic cables instead of normal radio signals.
- The cables are:
 - Extremely thin
 - Nearly invisible
 - Similar in width to dental floss

Why are These Drones Difficult to Stop?

Immune to Electronic Jamming

- Traditional drones depend on radio signals.
- Those signals can often be blocked or jammed electronically.
- Fiber-optic drones do not rely on radio communication.
- As a result, electronic jamming systems become ineffective.

Hard to Detect

According to drone experts:

- The drones fly:
 - Very low
 - Very fast
- They are also:
 - Small in size
 - Difficult to track
 - Difficult to intercept

Difficult Interception

- Israel would need to:
 - Physically intercept the drone
 - Or cut the nearly invisible fiber-optic cable
- Both tasks are extremely challenging during active combat.

Expert Observations

Robert Tollast's View

- Drone expert Robert Tollast stated that:
 - If operated properly, these drones can be "absolutely deadly."
- He also noted that:
 - Russia and Ukraine have used many types of drones on a massive scale.

Israeli Concerns

- Former Israeli air defence commander Ran Kochav admitted that Israel is struggling to counter such drones.
- He stated that:
 - The drones are very hard to detect and track.
 - Israel focused more on missile and rocket defence systems and paid less attention to drone threats.

Origin of the Technology

- Fiber-optic drones became prominent during the Russia-Ukraine War.
- The technology was developed to bypass electronic jamming systems used in warfare.

Large-Scale Use in Ukraine

- The drones were used extensively by both Russia and Ukraine.
- Fiber-optic cables reportedly stretched up to:
 - 50 kilometres
- In some frontline areas, the cables covered entire fields like spiderwebs.

Hezbollah's Use of the Drones

- Hezbollah has released videos of attacks using these drones through:
 - Social media platforms
 - Al-Manar TV

Reported Attacks

- One attack reportedly:
 - Killed an Israeli soldier
 - Injured six others
- Another attack reportedly killed an Israeli civilian.

Attack on Rescue Helicopter

- In one incident:
 - A second drone targeted a military helicopter arriving to evacuate injured soldiers.
 - The drone narrowly missed the helicopter.

Israeli Drone Operations

- Israel also operates a large drone fleet for:
 - Surveillance
 - Air strikes
 - Monitoring Hezbollah movements
- Hezbollah officially announced the use of fiber-optic drones on March 2 during a phase of fighting.

Incident in Kiryat Shmona

- A resident named Zevik Glidai found a crashed drone in his backyard near the Lebanese border.

Important Details

- The drone contained:
 - Nearly 2 kg of explosives
- The explosives failed to detonate.
- White fiber-optic cables were found around the drone.

Concerns Raised

- Glidai stated that people are worried because:
 - The drones are difficult to detect
 - There is currently no reliable way to shoot them down

Significance of the Development

Changing Nature of Warfare

- The conflict shows how modern wars increasingly depend on:
 - Drone technology
 - Artificial intelligence
 - Electronic warfare systems

Rise of Low-Cost Precision Weapons

- Small drones can cause serious military damage at relatively low cost.

Lessons from Ukraine War

- Technologies developed during one conflict are now spreading to other regions.

Challenge for Air Defence Systems

- Traditional missile defence systems may not be fully effective against:
 - Small
 - Fast
 - Low-flying drones

Conclusion

- The use of fiber-optic drones by Hezbollah highlights the growing importance of drone warfare in modern conflicts.
- These drones are difficult to jam, track and intercept, creating major security challenges for Israel.
- The development also reflects how technologies from the Russia-Ukraine war are influencing conflicts in other parts of the world.

Indian Ocean Dialogue (IOD-10) 2026



Why in News

- India hosted the **10th edition of the Indian Ocean Dialogue (IOD-10)** in **New Delhi** on **07–08 May 2026**.
- The theme of the dialogue was:
 - “**Indian Ocean Region in a Transforming World**”
- The event was organised by:
 - **Ministry of External Affairs (MEA)**
 - In collaboration with:
 - **Indian Council of World Affairs (ICWA)**
 - **Indian Ocean Rim Association (IORA) Secretariat**
- The dialogue brought together:
 - Senior officials
 - Policymakers
 - Scholars
 - Strategic experts
- Participants were drawn from:
 - **IORA Member States**
 - **Dialogue Partners**

About Indian Ocean Dialogue (IOD)

Nature of IOD

- The **Indian Ocean Dialogue** is a **premier Track 1.5 forum**.
- It combines:
 - **Track 1 diplomacy (government officials)**
 - **Track 2 diplomacy (experts, scholars, think tanks, civil society)**

Establishment

- The idea of IOD was adopted at the:
 - **13th Council of Ministers Meeting, held in Perth, Australia (2013)**.
- The first edition was hosted by:

- **India in Kerala (2014)**.

Objective (Aim)

- The main objective of the **IOD** is to promote:
 - Open and free-flowing dialogue among stakeholders
 - Cooperation in the **Indian Ocean Region (IOR)**
 - Collective responses to shared regional challenges
- It aims to strengthen:
 - **Maritime security**
 - **Sustainable development**
 - **Regional economic cooperation**

Key Features of IOD

Multilateral Platform

- The dialogue is organised by:
 - **Ministry of External Affairs (MEA)**
- In partnership with:
 - **Indian Council of World Affairs (ICWA)**
 - **IORA Secretariat**

Wide Participation

- The forum includes participants from:
 - **23 IORA Member States**
 - **12 Dialogue Partners**
- Dialogue partners include major global actors such as:
 - **United States**
 - **China**
 - **European Union**

Focus Areas

The discussions under IOD focus on:

- **Maritime security and safety**
- **Blue economy development**
- **Fisheries management**
- **Trade and investment facilitation**
- **Disaster risk management**
- **Sustainable development in the Indian Ocean Region**

Consensus-Based Approach

- The dialogue operates on:
 - **Consensus-building**
 - **Voluntary cooperation**
- It aligns with the principles of **IORA** for peaceful regional engagement.

India's Role and Strategic Importance

IORA Chairship

- India has assumed the **Chairship of the Indian Ocean Rim Association (IORA)** for the period:
 - **2025–2027**
- This enhances India’s role in shaping:
 - **Regional maritime governance**
 - **Economic cooperation**
 - **Security architecture in the Indian Ocean**

Vision MAHASAGAR

- India’s engagement is guided by:
 - **MAHASAGAR (Mutual and Holistic Advancement for Security and Growth Across Regions)**
- The vision focuses on:
 - **Regional security cooperation**
 - **Economic growth**
 - **Maritime connectivity**
 - **Collective prosperity in the Indian Ocean Region**

Neighbourhood First Policy

- India also aligns the dialogue with its:
 - **Neighbourhood First Policy**
- It aims to:
 - Strengthen ties with neighbouring and maritime partner countries
 - Promote stability in the region

Significance of Indian Ocean Dialogue

Strategic Significance

- The dialogue reinforces India’s role as:
 - A key **maritime power in the Indian Ocean Region**
- It strengthens:
 - **Regional security cooperation**
 - **Strategic trust among Indian Ocean countries**

Economic Significance

- The dialogue promotes:
 - **Blue economy development**
 - **Trade and investment cooperation**
 - **Sustainable maritime resource utilisation**

Diplomatic Significance

- The IOD acts as a platform for:
 - **Multilateral engagement**
 - **Policy coordination**
 - **Consensus-building on regional issues**

Geopolitical Significance

- The dialogue helps address:
 - Emerging **geopolitical challenges**
 - Changing **global maritime dynamics**
- It strengthens India’s position in:
 - **Indo-Pacific and Indian Ocean diplomacy**

MHA Constitutes High-Level Committee on Demographic Changes



Why in News?

- The Union Ministry of Home Affairs (MHA) has officially constituted a **“High-Level Committee to study demographic changes arising from illegal immigration and other abnormal reasons.”**
- The panel is tasked with delivering actionable policy solutions to address what the government characterizes as a critical challenge to national sovereignty, border security, and local socio-cultural structures.

Composition and Timeline of the Committee

- **Chairmanship:** The panel is headed by **Justice Prakash Prabhakar Navlekar**, a retired Supreme Court Judge and former Lokayukta of Madhya Pradesh. The committee also includes the Census Commissioner among its members.
- **Tenure and Deadlines:** The committee has been directed to submit its final report within one year (by **May 2027**), with a provision for a six-month extension if required.

Main Terms of Reference (ToR):

- **Scientific Assessment:** Conduct a comprehensive, data-driven assessment of demographic changes across India caused by

illegal immigration, abnormal settlement patterns, and orchestrated migration.

- **Granular Community Analysis:** Analyze structural population fluctuations at the level of specific religious and social communities, particularly in regions where data deviates significantly from broader nationwide trends.
- **Inter-State Coordination:** Propose a comprehensive policy framework designed to enhance operational coordination between Central and State governments on managing demographic imbalances.
- **Permanent Deportation Framework:** Recommend a streamlined, institutional, and permanent mechanism for the legally sound, fair, and time-bound identification, detention, and deportation of undocumented immigrants.
- **Border Management and Monitoring:** Formulate robust institutional mechanisms to strengthen border management, optimize identity verification systems, and deploy tools for the continuous monitoring of abnormal migration trends.

Need to Study Demographic Changes

- **Safeguarding Internal Security and Sovereignty:** Unchecked infiltration across porous eastern borders represents a silent demographic alteration. States sharing porous international borders with Bangladesh—such as West Bengal, Assam, Meghalaya, Tripura, and Jharkhand (via transit)—have historically witnessed sustained, undocumented migration.
- **Catalyst for Ethnic Conflict:** Recent history highlights a direct correlation between sudden demographic shifts and internal friction. For instance, the ethnic violence in Manipur is deeply intertwined with demographic anxieties. The influx of Chin-Kuki refugees fleeing the post-2021 military coup in Myanmar altered the demographic realities of the hill districts, intensifying local anxieties regarding land rights and political representation.
- **Protecting Indigenous and Tribal Identities:** In resource-rich tribal belts, such as the Santhal Pargana region in Jharkhand or the

Sixth Schedule areas in the Northeast, unnatural decadal population growth threatens to minoritize indigenous communities. Despite protective frameworks like the *Santhal Pargana Tenancy Act of 1876*, loopholes are often exploited to usurp tribal lands, making an empirical demographic audit crucial.

- **Addressing Resource Asymmetries:** According to Sample Registration System (SRS) data, India's national Total Fertility Rate (TFR) has declined to 2.0 (below the replacement level of 2.1). However, historical data indicates that certain border districts have exhibited decadal growth rates ranging from **29% to over 40%**—statistical anomalies that cannot be explained by natural birth rates alone and place severe strain on public infrastructure.
- **Preserving Electoral Integrity:** The illegal procurement of identity documents (such as Voter IDs and other foundational proofs) by undocumented migrants artificially skews the electoral demography. Measures like the Special Intensive Revision (SIR) of Electoral Rolls are required to detect irregular entries and uphold the sanctity of democratic processes.
- **Establishing a Baseline for the 2027 Census:** With the last census conducted in 2011, India currently lacks granular, contemporary data on localized demographic deviations. This specialized study will provide vital baseline data ahead of the scheduled **2027 Census** exercise.

Constitutional and Legal Framework

- **Article 355:** Imposes an affirmative duty on the Union to protect every State against external aggression and internal disturbance.
- **The Foreigners Act, 1946:** Places the burden of proof heavily on the individual to prove they are an Indian citizen (rather than on the State) and empowers the government to identify, detain, and deport foreigners. This framework is being modernized under the *Immigration and Foreigners Act, 2025*.
- **The Citizenship Act, 1955:** Provides the statutory framework for the acquisition and

termination of Indian citizenship. Section 6A was specifically inserted to operationalize the citizenship parameters defined in the Assam Accord.

Landmark Supreme Court Judgments:

- **Sarbananda Sonowal vs. Union of India (2005):** The Court explicitly noted that the continuous, unchecked influx of illegal migrants into Assam amounted to "external aggression" and internal disturbance, invoking Article 355 to mandate the application of the stricter Foreigners Act.
- **Assam Sanmilita Mahasangha & Ors vs. Union of India (2014):** The Supreme Court directed the Union and State governments to undertake a time-bound, monitored update of the National Register of Citizens (NRC) in Assam.

Critical Commission and Committee Reports:

- **Lt. Gen. S.K. Sinha Report (1998):** Noted that the silent demographic alteration of border districts was severing the Northeast from the rest of India and posing a grave threat to national security.
- **Upamanyu Hazarika Commission (2015):** Starkly warned that if ongoing demographic trends continued unchecked, the indigenous population of Assam would become a minority in their own state by the year 2047.
- **Madhukar Gupta Committee (2016):** Conceptualized the Comprehensive Integrated Border Management System (CIBMS), recommending a shift from physical patrolling to a technology-heavy grid using ground sensors, thermal imagers, and aerostats.

Overview of India's Demographic Scenario

- **TFR Below Replacement Level:** According to the NFHS-5 (2019-21), India's TFR has dropped to **2.0 children per woman**, which is below the replacement level of **2.1**. This means a generation is not producing enough children to replace itself, eventually leading to population stabilization and decline (expected around 2060-2070). The Sample Registration System Statistical Report 2023 further noted a rural TFR of 2.1 and an urban TFR of 1.5.

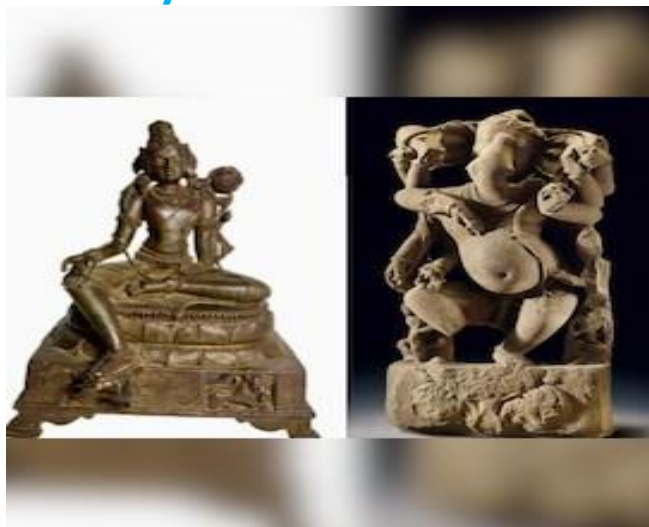
- **The North-South Divide:** Southern states like Kerala and Tamil Nadu have TFRs comparable to developed nations (**1.6 - 1.7**), leading to an aging population profile. Conversely, northern states like Bihar and Uttar Pradesh maintain higher TFRs (**above 2.4**), providing the bulk of India's young workforce.
- **Closing Window of Demographic Dividend:** India currently enjoys a "youth bulge" with a median age of **28.4 years**. However, the working-age population is projected to peak by **2041**, while the elderly population (60+) will rise sharply from 149 million (10.5%) today to **347 million (20.8%) by 2050**.

Way Forward

- **Expedite Granular Data Collection:** Prioritize the upcoming 2027 Census and localized, scientific demographic audits to bridge the critical data deficit, ensuring that policy interventions are based on empirical evidence rather than estimates.
- **Technological Fortification of Borders:** Accelerate the full-scale deployment of the CIBMS across vulnerable riverine and porous eastern stretches to shift from physical patrolling to an airtight, sensor-based monitoring grid.
- **Institutionalize Deportation and Electoral Integrity:** Operationalize a transparent, time-bound legal mechanism under the *Immigration and Foreigners Act, 2025*, while concurrently auditing state electoral rolls to neutralize the weaponization of fraudulent identity documents.
- **Harmonize Internal Labor Mobility:** As India's demographic dividend narrows and the North-South fertility divide widens, establish formal frameworks for safe, internal inter-state migration to fill labor shortages in aging southern states without triggering local socio-ethnic friction.

□□□

India Reclaims 657 Antiquities from the United States: Major Success in Cultural Heritage Recovery



Why in News?

- The **United States** has returned **657 antiquities** to India, valued at nearly **USD 14 million**.
- This marks a significant success in India's efforts to combat **transnational trafficking of cultural property** and recover **illegally exported heritage assets**.

Key Recovered Antiquities

Bronze Avalokiteshvara

- A rare bronze sculpture of **Avalokiteshvara**, the **Bodhisattva of Compassion** in **Mahayana Buddhism**.
- Origin: **Sirpur, Chhattisgarh**
- Features:
 - Inscribed with the name of the craftsman **Dronaditya**
 - Depicted seated on a **double-lotus pedestal**

Red Sandstone Buddha

- A standing figure made of **red sandstone**.
- Right hand raised in **abhaya mudra**.
- Symbolises **fearlessness and protection**.

Dancing Ganesha

- Sandstone sculpture of **Dancing Ganesha**.
- Reported to have been **looted from a temple in Madhya Pradesh**.

Significance of the Repatriation

- Strengthens India's efforts to recover **stolen cultural heritage**.
- Highlights global cooperation against **illicit antiquities trade networks**.
- Reinforces India's position in **cultural diplomacy and heritage protection**.

Process of Repatriating Antiquities

1. Pre-1947 (Colonial Period)

- Recovery depended on:
 - Cultural diplomacy
 - Bilateral negotiations
 - Goodwill between states
- No structured international legal framework existed.

2. 1947–1976 Period

- Recovery based on:
 - Bilateral diplomacy
 - Domestic laws like the **Antiquities (Export Control) Act, 1947**
- India had not yet ratified the **UNESCO 1970 Convention (ratified in 1977)**.
- Returns were difficult due to weak international enforcement mechanisms.

3. Post-1976 Framework

- Governed by the **Antiquities and Art Treasures Act, 1972 (effective 1976)**.
- Key rule:
 - Export of antiquities by private individuals is **prohibited**
 - Only the **Central Government or authorised agencies** can permit export
- Illegal export after 1976 becomes easier to **legally challenge and recover**.

What is an Antiquity?

Definition under Antiquities and Art Treasures Act, 1972

An **antiquity** includes objects of historical, cultural, or artistic value that meet specific age criteria.

Categories

1. General Artefacts (100+ Years Old)

- Includes objects that are at least **100 years old**.
- Covers:
 - Artistic works
 - Architectural remains
 - Historical objects

- Items of cultural significance

2. Manuscripts and Documents (75+ Years Old)


- Includes manuscripts, records, or documents of:
 - Scientific value
 - Historical value
 - Literary value
 - Aesthetic value
- Must be at least **75 years old** to qualify as antiquity.

Conclusion

The return of **657 antiquities from the United States** marks a major milestone in India's ongoing efforts to reclaim its **looted cultural heritage**. It also underscores the importance of **international cooperation, strong legal frameworks, and cultural diplomacy** in protecting and restoring India's **historical and artistic legacy**.

Komagata Maru Incident (1914): A Turning Point in Colonial Racism and Indian Revolutionary Politics

KOMAGATA MARU: PASSENGER JOURNEY & FATE (1914)
AN ANALYSIS OF THE EXPERIENCE OF 376 PASSENGERS SEEKING CANADIAN ENTRY

THE VOYAGE TO CANADA (MAY 1914)	THE REJECTION & AFTERMATH (1914)
 <p>376 SOUTH ASIAN PASSENGERS (predominantly Sikh)</p> <p>Voyage: Hong Kong to Vancouver; Japanese steamship chartered by Gurdit Singh</p> <p>Goal: Challenge Canada's restrictive Continuous Journey regulation</p>	 <p>Arrived Vancouver (May 23): Detained for two months with minimal supplies.</p> <p>Judicial Appeal Denied (July 6): Court supported Canadian government.</p> <p>Forced Departure (July 23): Commanded to leave; returned to India.</p> <p>Budge Budge Riot (Sept 29): Conflict with British police upon arrival near Calcutta; ~20 passengers killed, others imprisoned.</p>

Why in News?

- The **Komagata Maru incident (1914)** is being revisited as a pivotal episode in the **global history of the Indian freedom struggle**.
- It exposed **racial discrimination in Canada**, then a British Dominion, and significantly contributed to the **radicalisation of the Ghadar movement** and overseas Indian nationalism.

What was the Komagata Maru Incident? Overview

- The **Komagata Maru** (also called the **Guru Nanak Jahaz**) was a Japanese steamship.

- It became a symbol of **systemic racial exclusion and discriminatory immigration laws** in Canada.
- Chartered by **Gurdit Singh Sandhu**, it carried **376 passengers from Punjab (British India)**.

Objective of the Voyage

- The voyage aimed to challenge Canada's "**Continuous Journey Regulation (1908)**".
- This law required immigrants to arrive via a **continuous journey from their country of origin**.
- Since direct travel from India to Canada was not practically possible, the rule effectively acted as a **hidden ban on Indian immigration**.

Standoff in Vancouver

- The ship reached **Vancouver in May 1914**.
- Canadian authorities denied permission to disembark.
- Only **24 passengers** with prior Canadian residence were allowed entry.
- Legal efforts by the Indian community's **Shore Committee** failed as courts upheld the exclusion law.
- The ship was forced to leave Canadian waters in **July 1914 under naval escort**.

Budge Budge Tragedy (Return to India)

- The ship returned to India and reached **Budge Budge near Kolkata in September 1914**.
- Passengers refused forced relocation to Punjab via train.
- Attempted march towards Calcutta led to police firing.
- Outcome:
 - **20 passengers killed**
 - Many arrested and imprisoned
- **Gurdit Singh Sandhu** evaded arrest until 1920 and later served a prison sentence after surrender.

Historical Significance of the Komagata Maru Incident

Catalyst for Revolutionary Nationalism

- Strengthened the **Ghadar Movement** by increasing recruitment and radicalisation.
- Reinforced belief among overseas Indians that **British subjects had no guaranteed rights under colonial rule**.

Exposure of Colonial Hypocrisy

- Highlighted contradiction in British imperial policy:
 - Indians were recruited to fight in **World War I**
 - Yet they were denied entry into other British territories
- Undermined the legitimacy of **British claims of equality within the empire.**

Impact on International Relations

- Remains a key event in **Indo-Canadian historical relations.**
- In **2016**, the Canadian Prime Minister issued a **formal apology in the House of Commons** for the incident.

Ghadar Movement

About

- A **transnational revolutionary movement** formed by expatriate Indians, mainly Punjabis.
- Objective: **Overthrow British rule through armed rebellion.**
- The term “**Ghadar**” means *revolt*, inspired by the **1857 uprising.**

Formation

- Founded in **1913** as the **Pacific Coast Hindustan Association.**
- Based in **San Francisco, United States.**

Key Leaders

- **Lala Har Dayal** – Ideological architect
- **Sohan Singh Bhakna** – First President
- **Taraknath Das** – Founder of *Free Hindustan* journal
- **Kartar Singh Sarabha** – Young revolutionary and martyr

Ideology and Organisation

- Strongly **secular and inclusive**, uniting Hindus, Sikhs, and Muslims.
- Published the weekly newspaper “**Ghadar**”, with the slogan:
 - “**Angrezi Raj ka Dushman**” (Enemy of British Rule)

Ghadar Conspiracy and 1915 Uprising Plan

Opportunity from World War I

- Outbreak of **World War I (1914)** seen as an opportunity as British forces were preoccupied.

- Ghadar activists returned to India to incite rebellion in the army.

Planned Revolt

- Planned a coordinated uprising on **21 February 1915.**
- Targeted **Punjab and army cantonments** for mutiny.

Failure of the Movement

- British intelligence successfully infiltrated the movement.
- Informants, including **Kirpal Singh**, leaked the conspiracy.
- Resulted in:
 - Mass arrests
 - Executions of revolutionaries
 - Enactment of the **Defence of India Act, 1915**

Conclusion

The **Komagata Maru incident** stands as a powerful symbol of **colonial racial discrimination and the denial of rights to Indians abroad.** It played a crucial role in shaping **diaspora nationalism and revolutionary politics**, strengthening movements like the **Ghadar Party**, and deepening the resolve of India’s freedom struggle against British rule.

Sacred Exposition of Buddha Relics in Ladakh Highlights India’s Buddhist Heritage Diplomacy



Why in News

- The **Sacred Exposition of the Holy Relics of Tathagata Buddha** is being held in **Ladakh (1st–14th May 2026)**
- The event is a major **spiritual, cultural, and diplomatic initiative**

- It reinforces India's role as a custodian of **Buddhist heritage**
- Theme of the exposition is "**Peace in Times of Conflict**"
- It coincides with the **2569th Buddha Purnima**
- Aims to promote:
 - **Global peace messaging**
 - **Cultural tourism**
 - **People-to-people** **Buddhist connectivity**

Key Highlights of the Exposition

1. Sacred Relics (Sarira-Dhatu)

- The relics are known as **Sarira-Dhatu**
- They are believed to represent the **spiritual presence of Gautama Buddha**
- Symbolise the enlightened state of the **Tathagata (Buddha)** who attained liberation from **Samsara (cycle of birth and death)**

2. Archaeological Significance – Piprahwa Relics

- Relics originate from **Piprahwa site**
- Key excavations:
 - **William Claxton Peppe (1898)**
 - **K.M. Srivastava (1971–77)**
- Findings strengthened identification with ancient **Kapilavastu**

3. Important Reliquary Discoveries

- **Mauryan Brahmi-inscribed soapstone casket**
- **Crystal casket**
- Sacred remains including:
 - Bone fragments
 - Ashes
 - Precious offerings linked to original **stupa built after Buddha's Mahaparinirvana**

4. Cultural Diplomacy Role

- The Ministry of Culture uses such expositions to strengthen "**people-to-people**" ties
- Recent global tours of relics include:
 - **Thailand (2024)**
 - **Vietnam (2025)**
 - **Sri Lanka (2026)**

Tathagata Buddha – Meaning and Significance

- **Tathagata** is a title used by **Gautama Buddha** to refer to himself
- Commonly used in the **Pali Canon** instead of "I" or "me"

Meaning of Tathagata

- **Tatha-gata**: "One who has thus gone"

- Indicates departure from **Samsara (cycle of rebirth)**
- **Tatha-agata**: "One who has thus come"
 - Indicates arrival at **ultimate truth (Dharma)**

Indian Labour Movement: From Colonial Repression to Contemporary Labour Codes



Labour Movements in India (Pre-Independence Period)

Why in News

- The history of Indian labour movements reflects a long transition from **colonial-era criminalisation of worker organisation** to **constitutional and statutory protections in independent India**.
- However, the movement is currently facing renewed debates and challenges in the context of the **Industrial Relations Code, 2020**, particularly regarding **union rights, collective bargaining, and strike provisions**.

Evolution of Labour Movements in India

1. Early Period (1850–1900): Welfare Phase

- Emergence alongside early industrialisation in **textile and jute mills**
- No formal trade unions existed
- Movement led largely by **social reformers and philanthropists**

Key developments:

- **1875**: S.S. Bengalee led protest in Bombay over poor conditions of women and child workers
- **1890**: N.M. Lokhande formed **Bombay Mill-Hands Association**, considered the first labour association in India
- **1881**: **Factories Act** introduced to regulate child labour and working hours

2. Growth of Modern Unionism (1900–1947)

This phase marked the transformation from welfare groups to **organised trade unions with political linkages**.

Key milestones:

- **1918:** Formation of **Madras Labour Union** by B.P. Wadia, regarded as India's first modern trade union
- **1920:** Establishment of **All India Trade Union Congress (AITUC)** with Lala Lajpat Rai as first president
- Representation at the **International Labour Organization (ILO)** strengthened labour visibility

Legal Recognition and Colonial Repression

- **1921 Buckingham and Carnatic Mills case** exposed lack of legal protection for unions
- Trade union activity treated as **criminal conspiracy under common law**
- **1926: Trade Unions Act** provided legal recognition and protection from prosecution
- Despite this, repression continued through:
 - **Meerut Conspiracy Case (1929–33)**
 - **Trade Disputes Act, 1929**
 - **Public Safety Bill, 1928**

This created a contradiction between **legal recognition and practical suppression**.

Labour Movement and Freedom Struggle

- Labour movement became linked with the **nationalist movement**
- Leaders like **Lala Lajpat Rai and Jawaharlal Nehru** supported worker mobilisation
- Ideological splits emerged:
 - Communist vs Nationalist factions
- **1941:** Formation of **Indian Federation of Labour** by M.N. Roy after split from AITUC

3. Post-Independence Phase (1947–1991): Fragmentation Era

Labour movement became **politically affiliated and fragmented**.

Major trade union federations:

- **INTUC (1947):** Congress-backed
- **HMS (1948):** Socialist-backed (Ashok Mehta, T.S. Ramanujam, G.G. Mehta)
- **BMS (1955):** RSS-backed, now the largest trade union
- **CITU (1970):** CPI(M)-affiliated, formed after split from AITUC

4. Post-Liberalisation Era (1991–Present)

- Rise of **outsourcing, contract labour, and gig economy**
- Decline in traditional union strength in formal sectors

- As of 2026, India has **12 recognised central trade union organisations**

Recent Labour Reforms

- Government consolidated **29 labour laws into 4 Labour Codes:**
 - Code on Wages (2019)
 - Industrial Relations Code (2020)
 - Code on Social Security (2020)
 - OSH Code (2020)

Key Issues with Industrial Relations Code, 2020

- Intended to improve **ease of doing business**
- Concerns raised by trade unions over **weakened labour protections**

Key provisions:

- **51% threshold** required for union recognition
- **60-day notice period** mandatory for strikes
- Restrictions seen as limiting **collective bargaining power**

Gig and Platform Workers: Emerging Gap

- India may have **~23.5 million gig workers by 2030**
- However, the Code:
 - Does not formally recognise them as workers
 - Classifies them as **independent contractors**
 - Denies **collective bargaining rights**

Anti-Colonial Resistance Before 1857: Early Challenges to British Rule in India



Why in News

- While the **1857 Revolt** is often described as the **“First War of Independence”**, several powerful **anti-colonial uprisings preceded it**, reflecting early and sustained resistance against the expanding rule of the **British East India Company (EIC)**.

- These movements highlight that opposition to colonial rule was **widespread, diverse, and continuous** across regions, communities, and social groups long before 1857.

Civil Uprisings Against British Rule

Sanyasi–Fakir Rebellion (1763–1800)

- Triggered by **famine of 1770 and economic hardship**
- Restrictions on **pilgrimage and movement**
- Involved **Hindu and Muslim ascetics**
- Suppressed under **Warren Hastings**
- Inspired literary depiction in **Bankim Chandra’s Anandamath**

Poligar Wars (1795–1805)

- Cause: British interference in **tax collection and local autonomy**
- Region: Carnatic (South India)
- Leaders:
 - **Veerapandiya Kattabomman**
 - **Maruthu Brothers of Sivaganga**
- Used **guerrilla warfare**
- Issued **Tiruchirappalli Proclamation (1801)** calling for united resistance

Velu Thampi’s Revolt (1808–1809)

- Cause: Heavy financial burden under **Subsidiary Alliance system**
- Led by **Velu Thampi (Dewan of Travancore)**
- Issued **Kundara Proclamation (1809)** calling for uprising
- Mobilised widespread resistance before suppression

Paika Rebellion (1817)

- Cause: British revenue policies and loss of **rent-free land rights**
- Led by **Bakshi Jagabandhu**
- Features:
 - Armed attacks on Company establishments
 - Guerrilla resistance in Odisha
- Suppressed in **1818**

Tribal Uprisings

Chuar Uprising (1766–1816)

- Cause: High land revenue demands and famine
- Region: Midnapore
- Led by **Durjan Singh**
- Characterised by **guerrilla warfare**

Kol Mutiny (1831–1832)

- Cause: Transfer of tribal land to outsiders
- Region: Chotanagpur
- Leader: **Buddho Bhagat**
- Required major military intervention to suppress

Santhal Rebellion (Hul) (1855–1856)

- Cause: Exploitation by moneylenders and colonial revenue system
- Led by **Sidhu and Kanhu**
- Outcome:
 - Creation of **Santhal Pargana district**

Khond Uprisings (1837–1856)

- Cause: British attempt to suppress **human sacrifice (Meriah custom)**
- Led by **Chakra Bisoi**
- Focused on defending **traditional tribal practices**

Peasant and Socio-Religious Movements

Pagal Panthis (1825–1835)

- Cause: Zamindari exploitation in Bengal
- Founded by **Karam Shah**, later led by **Tipu Shah**
- Established **brief parallel governance system**

Faraizi Movement (1838–1857)

- Cause: Oppression of peasants under colonial land revenue system
- Founded by **Haji Shariatullah**
- Continued by **Dudu Mian**
- Mobilised Muslim peasants for **agrarian rights**

Wahabi Movement (1830s–1860s)

- Cause: Religious reform and anti-colonial resistance
- Founded by **Syed Ahmed of Rai Bareilly**
- Spread across North India as an **organised resistance movement**

Kuka Movement (1840s onwards)

- Cause: Loss of Sikh sovereignty and British interference
- Founded by **Bhagat Jawahar Mal**
- Practices:
 - Boycott of British goods and education
 - Promotion of indigenous lifestyle

Early Sepoy Mutinies

Vellore Mutiny (1806)

- Cause: Imposition of new military dress code affecting religious identity

- Sepoys killed British officers and briefly captured Vellore
- Suppressed with heavy casualties

Barrackpore Mutiny (1824)

- Cause: Refusal to cross sea for Burma campaign (**religious taboo of Kala Pani**)
- Result:
 - Regiment disbanded
 - Protest violently suppressed

Mutiny of 34th Native Infantry (1844)

- Cause: Withdrawal of **Bhatta (allowance)** for service in Sindh
- Multiple regiments resisted deployment
- Reflected growing dissatisfaction in the Bengal Army

Conclusion

The pre-1857 uprisings demonstrate that resistance to British colonial rule was **deep-rooted, widespread, and multi-dimensional**, spanning **civil, tribal, peasant, religious, and military spheres**. These movements laid the ideological and organisational foundation for the **larger national uprising of 1857**.

Prevention of Insults to National Honour Act Amendment



Why in News?

- The Union Cabinet has cleared a proposal to amend the **Prevention of Insults to National Honour Act, 1971**, making any intentional insult or obstruction to the singing of the National Song, **Vande Mataram**, a legally punishable offense.

Key Provisions of the Proposed Amendment

- **Expanding Legal Protection:** The amendment aims to bridge the legal gap between national symbols by extending the strict protective umbrella of the 1971 Act to the National Song.

- **Proposed Penalties:** The amendment will extend the exact statutory penalties found under the existing Section 3 of the Act to Vande Mataram. Consequently, intentionally preventing the singing of the National Song or causing a disturbance during its rendition will carry a punishment of imprisonment extending up to **3 years**, a fine, or both.

Current Legal Framework & Ministry Directives

1. Existing Statutory Setup

The Prevention of Insults to National Honour Act, 1971, strictly penalizes insults, desecration, or disrespect targeted toward specific national symbols. Prior to this proposed change, the Act exclusively protected:

- The National Anthem (*Jana Gana Mana*)
- The National Flag
- The Constitution of India

2. Ministry of Home Affairs (MHA) Directives

In February 2026, the Ministry of Home Affairs issued explicit administrative instructions regarding the protocol for the National Song:

- **Full Rendition Mandate:** All **6 stanzas** of Vande Mataram (lasting over **3 minutes**) must be sung or played at official state events.
- **Precedence Protocol:** The MHA directed that the National Song must be given precedence over the National Anthem (composed by Rabindranath Tagore) whenever both are featured at the same official gathering.

Supreme Court Clarification: The Supreme Court held that the MHA guidelines on Vande Mataram are purely advisory in nature and carry no penal consequences for non-compliance.

Historical Context of Vande Mataram

- **Origin:** The song, which conceptualizes India as a mother goddess, was written by Bankim Chandra Chattopadhyay and published in his highly influential Bengali novel *Anandamath* in the early 1880s.
- **The 1937 Congress Modification:** During the nationalist movement, leaders of the Indian National Congress (INC) decided to adopt and use only the first **2 stanzas** of the song at their political gatherings.
- **Post-Independence Status:** Following independence, the modern Republic of India

officially accorded it the status of the National Song, establishing it on equal historical and cultural footing with the National Anthem.

75th Anniversary of Somnath Temple Reopening



Why in News?

- The Prime Minister visited the **Somnath Temple** on 11 May 2026 to celebrate the **75th anniversary** of its historical reopening.
- During the event, the Prime Minister described the temple as a symbol of India's unconquerable spirit and highlighted the central "**Vikas Bhi, Virasat Bhi**" approach, which focuses on balancing modern development with heritage preservation.

Somnath Swabhiman Parv (2026)

The year 2026 is being observed as the **Somnath Swabhiman Parv**. This dual celebration commemorates two major milestones in the temple's history:

- **1,000 Years Since the 1026 Attack:** Marking a millennium since the historic invasion of the temple.
- **75th Anniversary of the 1951 Reopening:** Remembering the official reconstruction and reopening of the temple by India's first President, Dr. Rajendra Prasad.

Together, these milestones symbolize India's spiritual resilience, civilizational confidence, and triumph over historical destruction.

Profile of the Somnath Temple

1. Location and Geography

- **Geographic Position:** Somnath is situated at Prabhas Patan on the Saurashtra coast of Gujarat.
- **Sacred Confluence:** The temple stands at the holy meeting point (Triveni Sangam) of three

rivers—the **Kapila, Hiran, and Saraswati**—where they empty into the Arabian Sea.

2. Religious Importance

- **First Jyotirlinga:** Somnath is revered as the first among the **12 sacred Jyotirlingas** of Lord Shiva, as documented in the Shiva Purana and the Dwadasha Jyotirlinga Stotram.

3. Origins and Traditional Architecture

- **Traditional Materials:** According to ancient traditions, the temple was built in successive layers over time: gold by Somraj (the Moon God), silver by Ravana, wood by Lord Krishna, and eventually stone by King Bhimdev I of the Solanki dynasty.
- **Enduring Spirit:** The temple structure faced repeated invasions starting in 1026 CE, but it was rebuilt multiple times by local rulers and devotees, cementing its legacy as a symbol of endurance.

Architectural and Scientific Features

- **Architectural Style:** The current structure is built in the grand **Kailash Mahameru Prasad** architectural style.
- **Layout:** The temple complex features three main chambers: the *Garbhagriha* (sanctum sanctorum), the *Sabha Mandap* (assembly hall), and the *Nritya Mandap* (dance hall).
- **The Shikhar:** The entire structure is crowned by a **150-foot-high** Shikhar (spire) that overlooks the Arabian Sea.
- **The Baan Stambh (Arrow Pillar):** This unique pillar erected on the temple grounds features an inscription stating that a straight line drawn from that point leads directly to the South Pole without crossing any landmass. This reflects the advanced geographical understanding of ancient India.

Maharana Pratap Jayanti 2026



Why in News?

- The Prime Minister paid tributes to **Maharana Pratap** on his birth anniversary (Jayanti) on 9 May 2026, remembering the legendary ruler as an immortal symbol of bravery, patriotism, and self-respect.

Life and Dynasty

- **Birth:** Maharana Pratap was born on 9 May 1540 in the historic fort of Kumbhalgarh, Rajasthan.
- **Lineage:** He was the 13th King of the Mewar dynasty and the eldest son of Maharana Udai Singh II.
- **Legacy of Udai Singh II:** Maharana Udai Singh II ruled the Mewar kingdom from his capital at Chittor and is historically recognized as the founder of the city of Udaipur.

Significant Historical Events

1. The Battle of Haldighati

- **Date:** 18 June 1576
- **The Conflict:** This historic battle was fought between the forces of Maharana Pratap and the Mughal army led by Raja Man Singh of Amber, a prominent general of the Mughal Emperor Akbar.
- **Outcome:** Despite showing extraordinary bravery and fighting valiantly, Maharana Pratap's forces were ultimately defeated by the larger Mughal army.

2. Re-establishment of Rule and Later Years

- **Territorial Recovery:** Following a shift in regional dynamics after 1579, Maharana Pratap successfully turned the tide, reclaiming most of Western Mewar from Mughal control.
- **New Capital:** Upon recovering his territories, he established a fresh administrative capital at **Chavand**, located near Dungarpur.
- **Succession:** Maharana Pratap passed away on 19 January 1597. He was succeeded by his son, Amar Singh, who eventually signed a peace treaty and submitted to Mughal Emperor Jahangir in 1614.

Tributes Paid to Rabindranath Tagore on Pochishe Boishakh



Why in News?

- The Prime Minister paid profound respects to **Gurudev Rabindranath Tagore** on the occasion of **Pochishe Boishakh**, which was observed on 9 May 2026.
- In Bengali tradition, Pochishe Boishakh corresponds to the 25th day of the month of Boishakh and is celebrated annually to commemorate the birth anniversary of the legendary polymath.

Profile of Rabindranath Tagore

1. Early Life and Global Recognition

- **Birth:** He was born on 7 May 1861 in Kolkata into the illustrious Tagore family, who were central figures in the **Bengal Renaissance**—a period of great socio-cultural and artistic awakening.
- **The Nobel Prize:** In 1913, Tagore achieved global renown by becoming the **first Asian to receive the Nobel Prize in Literature**, an honor bestowed upon him for his collection of poems titled *Gitanjali*.

2. Anthems and Major Literary Creations

- **National Anthems:** He holds the unique distinction of having composed the national anthems for two distinct countries: "*Jana Gana Mana*" for India and "*Amar Sonar Bangla*" for Bangladesh.
- **Renowned Literary Works:** His extensive literary legacy includes masterpiece novels and stories such as *Gora*, *Ghare-Baire* (The Home and the World), *Chokher Bali*, and *Kabuliwala*.

Contributions to Society and National Ideals

1. Role in the Freedom Struggle

Tagore used his artistic voice to actively support the **Swadeshi Movement** during the 1905 Partition of

Bengal, writing powerful patriotic songs to bridge communities and foster self-reliance. Later, in 1919, he formally **renounced his British Knighthood** as a direct protest against the brutal Jallianwala Bagh Massacre.

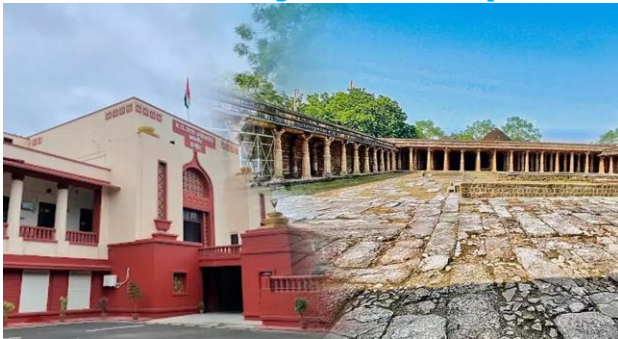
2. Philosophical Views on Nationalism

Tagore was a vocal critic of aggressive, competitive Western-style nationalism. Instead, he championed an inclusive, ethical, and humanistic framework built on mutual respect and universal human values.

3. Institutional Architecture

Believing in a holistic approach to learning, he founded **Visva-Bharati University** in Santiniketan. The institution was built to blend open-air nature education with cultural roots, breaking away from the rigid colonial schooling system of the era.

Madhya Pradesh High Court Verdict on Bhojshala Complex



Why in News?

- The **Madhya Pradesh High Court** has declared the disputed Bhojshala-Kamal Maula Mosque complex in Dhar district as a **temple dedicated to Goddess Vagdevi (Saraswati)**.
- The ruling quashed a 2003 Archaeological Survey of India (ASI) order that had allowed shared worship by both Hindus and Muslims at the site.
- The High Court held that the **Places of Worship (Special Provisions) Act, 1991, does not apply** to this complex. It clarified that **Section 4(3)** of the 1991 Act explicitly excludes ancient and historical monuments that are protected under the **Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 1958** from the freeze on religious character.

Historical Background of the Bhojshala Complex

- **The Parmar Dynasty Link:** The site is historically tied to **Raja Bhoj (1010-1055 CE)** of the Parmar dynasty, a celebrated patron of art and literature. He established the complex as a major **centre of Sanskrit learning**, featuring a temple for Goddess Saraswati.
- **Sarpabandha Inscriptions:** The site preserves two unique serpentine chart pillar inscriptions. These served as classical educational tools, mapping out the Sanskrit alphabet, grammar terminations, and various tenses.
- **Prakrit Odes and Drama:** The walls feature stone slabs engraved with ancient Prakrit language odes dedicated to the *Kurma-Avatar*a (Lord Vishnu's tortoise incarnation). Slabs lining the prayer niche contain a theatrical composition written by Royal Tutor Madana.
- **The Vagdevi Idol:** An intricately carved idol of Goddess Saraswati was excavated here in the early 20th century. It is currently housed in the **British Museum in London**.
- **Kamal Maula Mosque Claims:** The Muslim community maintained the site was the Kamal Maula Mosque, built around 1306-1307 AD during Islamic rule by Hazrat Maulana Kamaluddin Chishti.
- **Historical Documentation:** Literature like the *Imperial Gazetteer of India (1908)* recorded that the mosque was built using the architectural remains of an older Hindu temple, with carved slabs actively reused in the floor and prayer niche.

High Court Judgment Details

- **Rejection of Proclamation:** The bench rejected the reliance on a 1935 proclamation by the princely state of Dhar under the Government of India Act, 1935, noting the Act itself did not come into force until April 1937.
- **Writ Petition vs. Title Suit:** Unlike the Babri Masjid dispute which was a title suit over land ownership, this case was treated as a writ petition under **Article 226**, seeking enforcement of the fundamental **right to worship**.

- **Alternative Mosque Land Allocation:** To maintain complete justice, the court ordered the state government to consider applications to allot **alternative, suitable land** within Dhar district to build a mosque.
- **ASI Guardianship:** The **ASI has been granted full administrative control** to manage religious access, preserve the 11th-century monument, and oversee the Sanskrit learning center.

Clarification on Historical Figures: Raja Bhoj vs. Mihir Bhoja

Historical Attribute	Raja Bhoj (Malwa)	Mihir Bhoja (Kannauj)
Dynasty	Paramara Dynasty	Gurjara-Pratihara Dynasty
Timeline	1010–1055 CE (11th Century)	836–885 AD (9th Century)
Capital Base	Dhar (Dhara), Malwa region	Kannauj (Mahodaya), Northern India
Core Legacy	Built Bhojshala , wrote literary works.	Expanded the empire from Himalayas to Narmada.
Titles & Records	Patron of Sanskrit and architecture.	Assumed the title " Adivaraha "; recorded as "King Baura".

The Gurjara-Pratihara Dynasty

- **Origins:** The term *Gurjara* likely denoted a geographical region (**Gurjaradesha**—modern Rajasthan and Gujarat). Bardic traditions place them among the four *Agnikula* (fire-born) Rajput clans of Mount Abu. They called themselves Pratihara (doorkeeper), claiming descent from Lakshmana.
- **Founder: Nagabhata I (730-756 AD)** founded the line, famously defeating early Arab forces and halting their advance into mainland India.
- **The Tripartite Struggle:** The Pratiharas were central figures in the long-standing three-way conflict against the **Palas of Bengal** and the **Rashtrakutas of the Deccan** for control over the strategic prize of Kannauj and the upper Ganga valley.
- **Architectural Style:** Prolific builders using the *Mahu-Gujjara* style. Key sites include:
 - **Teli-ka-Mandir (Gwalior Fort):** Blends a North Indian Nagara base with a South Indian Dravidian Valabhi (barrel-vaulted) roof.
 - **Bateswar Temples (Morena):** A cluster of nearly 200 stone temples

dedicated to Shiva, Vishnu, and Shakti.

- **Osian Temples (Jodhpur):** Houses the Mahavira Jain Temple, the oldest surviving Jain structure in Western India.
- **Literary Achievements:** Under King Mahendrapala I, the court hosted the famous scholar **Rajashekhara**, who wrote classics like *Karpuramanjari* and *Kavyamimansa*.
- **Decline:** The empire weakened due to constant Rashtrakuta invasions and the rise of independent local powers (like the Paramaras of Malwa and Chandelas of Bundelkhand). The final blow came when **Mahmud of Ghazni captured Kannauj in 1018**, fracturing the dynasty into small regional factions.

EDITORIALS

Crux of The Hindu & Indian Express

History, Art & Culture

Statue of Veera Pasi Unveiled in Raebareli



Why in News?

A newly constructed statue of **Veera Pasi**, an unheralded hero of the **Revolt of 1857**, was officially unveiled in Raebareli, Uttar Pradesh. This event has brought renewed historical focus to his vital role in India's early freedom struggle.

Birth, Background, and Association

- **Early Life:** Veera Pasi was a Dalit freedom fighter born on **11 November 1835** into an impoverished household in Lodhwari village,

located within the Raebareli district of Uttar Pradesh.

- **Social Context:** He belonged to the Pasi community, which stands as the second-largest Dalit group in Uttar Pradesh (following the Jatavs) and represents a significant social and regional bloc.
- **Military Role:** He rose to become a highly trusted military commander and close companion of **Rana Beni Madhav Baksh Singh**, the local ruler of the Shankarpur Estate in the Raebareli region.

Role in the 1857 Revolt

- **The Rescue Mission:** Local historical accounts and folklore record that Veera Pasi demonstrated remarkable bravery by launching a daring operation that successfully rescued Rana Beni Madhav Baksh Singh from British captivity during the peak of the 1857 uprising.
- **The Bounty and Sacrifice:** Recognizing the threat he posed, colonial British authorities placed a massive bounty of **Rs 50,000** on his head for his capture. He ultimately laid down his life while defending and shielding Rana Beni Madhav Baksh Singh from pursuing British troops.

Historical and Social Significance

The formal commemoration of Veera Pasi aligns with a broader modern movement to document and celebrate the contributions of subaltern icons:

- **Reclaiming Marginalized History:** Highlighting figures like Veera Pasi, **Uda Devi** (who fought bravely during the Siege of Lucknow), and **Maharaja Bijli Pasi** reflects a deliberate effort to honor the roles that Dalit and marginalized communities played in resisting colonial rule.
- **Expanding the 1857 Narrative:** These initiatives help expand the traditional history of the Indian Rebellion, transforming it from a narrative focused primarily on major royals into a more inclusive, grassroots movement that involved diverse sections of society.

181st Birth Anniversary of Pandit Iyothee Thass



Why in News?

The Chief Minister of Tamil Nadu paid floral tributes to **Pandit Iyothee Thass** to mark his **181st birth anniversary** in May 2026. This commemoration brings renewed focus to his foundational role in the early social justice and anti-caste movements of Southern India.

Birth, Background, and Anti-Caste Ideology

- **Early Life:** Born on **20 May 1845** in the Thousand Lights neighborhood of Madras (now Chennai) within the British-ruled Madras Presidency.
- **Core Philosophy:** Operating as a pioneering social reformer, intellectual, and activist, he dedicated his life to fighting caste discrimination and untouchability while demanding basic dignity and equal rights for marginalized groups.
- **The "Original Tamils" Census Demand:** During the **1881 Census** operations, he explicitly demanded that the British administration register the oppressed, outcaste communities as **"Original Tamils"** (*Poorvatha Tamizhar*) rather than forcing them under the broader umbrella classification of Hinduism.

The Dalit Buddhist Movement and Institutional Work

- **The Buddhist Revival:** Long before Dr. B.R. Ambedkar's historic conversion, Iyothee Thass championed a revival of Buddhism among Dalits in Tamil society. He put forward the historical argument that the oppressed

classes were originally followers of Buddha who had been systematically marginalized over centuries.

- **Key Organizations Founded:**
 - **Advaidananda Sabha:** Established during his early years as a reformer, this group organized marginalized families, opposed external religious conversion pressures, and explored Advaitic philosophy to directly challenge caste hierarchies.
 - **Dravida Mahajana Sabha (1891):** Formed to consolidate political and social awareness among oppressed communities.
 - **Sakya Buddhist Society (1898):** Headquartered in Madras, this pivotal institution institutionalized the anti-caste Buddhist revival movement in South India.

Contributions to Journalism and Social Reform

- **Oru Paisa Tamizhan (1907):** He launched this historic weekly Tamil journal to serve as an independent platform for social reform, political analysis, and anti-caste discourse.
- **The Legacy of Tamizhan:** Later renamed simply as *Tamilan*, the publication brought together subaltern intellectuals, documented systemic injustices, and became a cornerstone for the emerging self-respect and rationalist philosophies in the region.

Historical Significance

Pandit Iyothee Thass is recognized as one of the earliest architectural voices of **social justice, self-respect, and Dalit assertion** in modern India. His ideas bridged the gap between cultural history and political rights, laying the groundwork for the Dravidian and anti-caste movements that reshaped the socio-political landscape of Tamil Nadu throughout the 20th century.

Prime Minister Pays Tribute to Veer Savarkar on His Birth Anniversary

Why in News?

The Prime Minister remembered **Veer Savarkar** on his birth anniversary, paying tribute to his courage, patriotism, and significant contributions to the Indian freedom movement and social reform.

Profile of Vinayak Damodar Savarkar

- **About:** Vinayak Damodar Savarkar was a prominent revolutionary nationalist, writer, political thinker, and social reformer.

- **Lifespan:** He was born on **28 May 1883** in Bhagur village, located in the Nashik district of Maharashtra, and passed away on **26 February 1966** in Mumbai.

Core Organizations Founded and Associated

- **Mitra Mela (1899):** Founded as a secret revolutionary society, which later evolved into the **Abhinav Bharat Society** in 1904.
- **Free India Society (1906):** Established by Savarkar in London to foster revolutionary nationalism and political awareness among Indian students studying abroad.
- **India House:** He was closely associated with *India House* in London (originally founded by Shyamji Krishna Varma), which served as a major hub for Indian revolutionary activities in Europe.

Key Historical and Literary Contributions


- **Revolutionary Activism:** He advocated for revolutionary methods, including organized guerrilla warfare, to overthrow colonial rule. He was also involved in providing support for the legal defense of revolutionary martyr Madan Lal Dhingra.
- **Literary Works:**
 - Authored *The Indian War of Independence, 1857*, a seminal text that reinterpreted the 1857 revolt as a unified nationalist struggle against British rule rather than a mere sepoy mutiny.
 - Wrote *Hindutva: Who is a Hindu?* (also known as *Essentials of Hindutva*), which formulated the foundational ideological framework of Hindutva.
- **Social Reform Initiatives:** Savarkar strongly opposed untouchability and worked toward dismantling rigid caste barriers. He actively promoted social unity through practical initiatives, including supporting inter-caste dining, advocating for universal temple entry, and driving broader caste reforms.

□□□

PERSONS IN NEWS

Personality / Institution	Why in News	Key Contributions / Significance
<p style="text-align: center;">Suvendu Adhikari</p> 	Sworn in as the first BJP Chief Minister of West Bengal on 9 May 2026.	Became the 9th Chief Minister of West Bengal after the BJP won 207 of 294 seats in the 2026 Assembly election, ending 15 years of TMC rule.
<p style="text-align: center;">Lieutenant General N. S. Raja Subramani</p> 	Appointed as India's 3rd Chief of Defence Staff on 9 May 2026.	Former Vice Chief of Army Staff and Military Adviser at the NSCS. Will succeed General Anil Chauhan and head the Department of Military Affairs.
<p style="text-align: center;">Vijay</p> 	Sworn in as the 9th Chief Minister of Tamil Nadu on 10 May 2026.	Founder of Tamilaga Vettri Kazhagam (TVK). Led the first non-Draavidian party to power in Tamil Nadu since 1967.
<p style="text-align: center;">Himanta Biswa Sarma</p> 	Took oath for a second consecutive term as Assam Chief Minister.	Continued leadership after the NDA secured a strong majority in the Assam Legislative Assembly.
<p style="text-align: center;">N. Rangasamy</p> 	Sworn in as Chief Minister of Puducherry for the fifth time on 13 May 2026.	Heads the NDA government in Puducherry and began a second consecutive term in office.
<p style="text-align: center;">Susan Elias</p> 	Appointed as the first female Principal of St. Stephen's College on 12 May 2026.	Will become the 14th principal of the 145-year-old institution, marking a historic milestone in its administration.

<p>V. D. Satheesan</p> 	<p>Announced as Kerala Chief Minister after the UDF won the 2026 Assembly elections.</p>	<p>Former Leader of Opposition and long-serving MLA who became the 13th Chief Minister of Kerala.</p>
<p>Tushar Kumar</p> 	<p>Elected Mayor on 13 May 2026.</p>	<p>Became the youngest Indian-origin mayor in United Kingdom history at the age of 23.</p>
<p>Narendra Modi</p> 	<p>Received the FAO Agricola Medal on 20 May 2026 in Rome.</p>	<p>Honoured for contributions to agricultural transformation, food security, sustainable agriculture, and rural development.</p>
<p>Major Abhilasha Barak</p> 	<p>Received the UN Military Gender Advocate of the Year Award for 2025.</p>	<p>Recognised for advancing gender equality and community engagement during her peacekeeping mission in Lebanon.</p>
<p>Neelam Meena</p> 	<p>Appointed Chief Electoral Officer of West Bengal on 25 May 2026.</p>	<p>Became the first woman to hold the post in the state's history.</p>

<p>Hari Babu Kambhampati</p> 	<p>Serving as the 27th Governor of Odisha.</p>	<p>Constitutional head of the state, appointed under Articles 153–156 of the Constitution.</p>
<p>Sikkim Police</p> 	<p>Awarded the President's Police Colour on 28 May 2026.</p>	<p>Became the 15th state police force and the third in Northeast India to receive India's highest police honour.</p>
<p>Bashir Badr</p> 	<p>Passed away on 28 May 2026 at the age of 91.</p>	<p>Renowned Urdu ghazal poet, academic, and former Head of the Urdu Department at Meerut College.</p>
<p>Shrey Parikh</p> 	<p>Won the 2026 Scripps National Spelling Bee.</p>	<p>Became champion after a record-breaking spell-off, correctly spelling 32 words and winning with the word "bromocriptine."</p>



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	1 Rank		3 Rank		4 Rank		5 Rank		7 Rank		8 Rank		9 Rank		10 Rank
SHAKTI DUBEY IGP		DONGRE ARCHIT PARAG Mentorship, Materials, IGP		SHAH MARGI CHIRAG Essay Course, Mains Test Series Advance Study Materials, IGP		AAKASH GARG GS Complete Course, Essay Course, Test Series, Advance Study Materials, IGP		AAYUSHI BANSAL Mentorship, Materials, IGP		RAJ KRISHNA JHA Mentorship, Materials, IGP		ADITYA VIKRAM AGARWAL IGP		MAYANK TRIPATHI IGP	

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