IAS ORIGIN
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IAS ORIGIN
YOUR PATHWAY TO UPSC SUCCESS

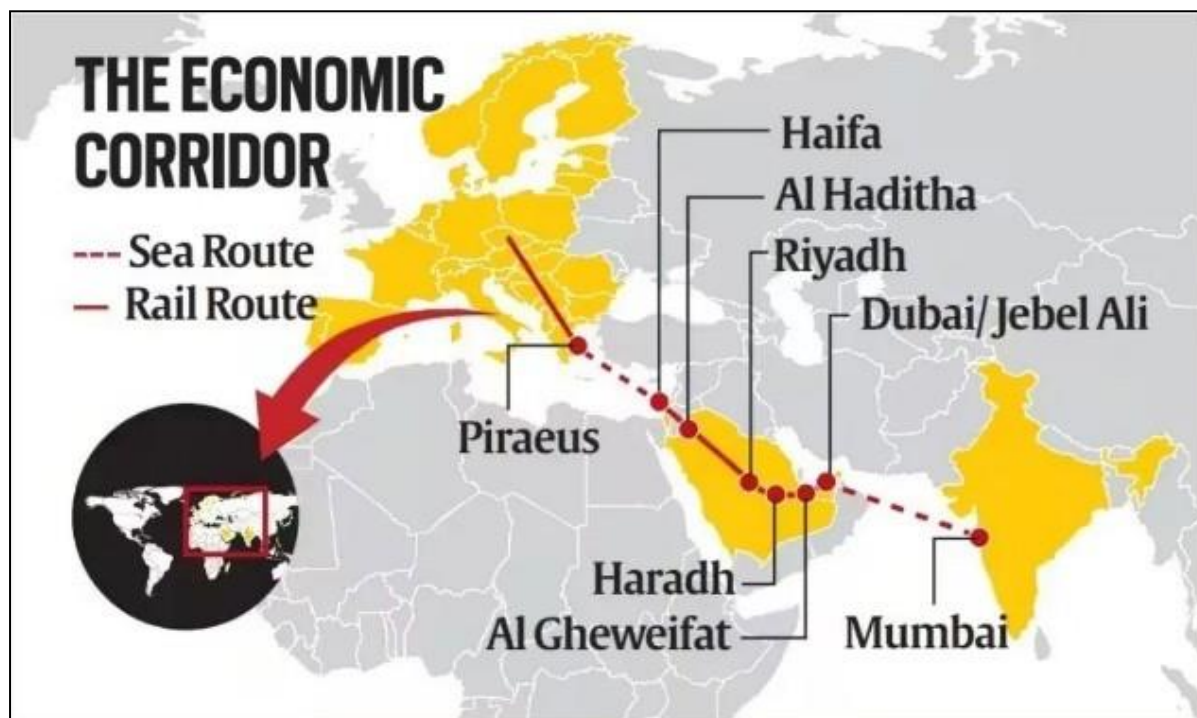## WEEKLY CURRENT AFFAIRS
11TH AUG TO 15TH AUG

Table of Contents

01 INDIA–MIDDLE EAST–EUROPE ECONOMIC CORRIDOR & GAZA WAR

India hosted envoys from partner nations to discuss progress on the India-Middle East-Europe Economic Corridor (IMEC). Talks focused on trade, energy, and digital connectivity despite delays caused by the Gaza conflict.

INDIA–MIDDLE EAST–EUROPE ECONOMIC CORRIDOR (IMEC)

BACKGROUND & ANNOUNCEMENT

- **Announced:** 9–10 September 2023, during the **G20 Summit in New Delhi**.
- **Initiative Partners:** India, USA, European Union, Saudi Arabia, UAE, France, Germany, and Italy.
- **Context:**
  - Growing need for **secure, sustainable, and diversified supply chains** post-COVID-19 and Russia–Ukraine war.
  - Rising concerns about **China's Belt and Road Initiative (BRI)** and its "debt trap" diplomacy.
  - Strategic push for **clean energy corridors** (green hydrogen exports).

IMEC is part of the broader **Partnership for Global Infrastructure and Investment (PGII)** announced by G7 in 2021.

PROPOSED STRUCTURE OF IMEC

IMEC has **two major corridors**:

- **East Corridor**
  - Connects **India → Arabian Gulf** (via UAE & Saudi Arabia).
  - Shipping from Indian ports (Mundra, Mumbai, Kochi) to UAE's **Jebel Ali, Fujairah**.
  - Rail linkages across **Saudi Arabia** to Jordan & Israel.
- **Northern Corridor**
  - Connects **Middle East → Europe**.
  - Rail + Shipping via **Jordan & Israel → Mediterranean ports (Haifa, Piraeus in Greece, Genoa in Italy, Marseille in France, etc.) → rest of Europe**.

COMPONENTS OF THE CORRIDOR

IMEC is **multi-modal** and integrates **four layers of connectivity**:

- **Rail Connectivity**

  - High-speed freight rail planned across UAE, Saudi Arabia, Jordan, Israel.

  - Expected to reduce transportation time by **40% compared to Suez Canal route**.

- **Shipping Routes**

  - Direct shipping links between **Indian ports and UAE ports**.

  - Alternative to congested **Suez Canal (12% of global trade passes here).**

- **Energy Infrastructure**

  - Pipelines for **green hydrogen** transport.

  - Renewable energy corridors (solar, wind from Middle East deserts → India & Europe).

- **Digital Infrastructure**

  - **Submarine + overland fiber-optic cables.**

  - AI-driven logistics & paperless customs systems.

WHY IMEC IS IMPORTANT?

(A) ECONOMIC IMPORTANCE

- India–EU trade: **$135 billion in 2022–23** (EU = India's **3rd largest trading partner**).

- India–Middle East trade:

- o India–UAE CEPA (Comprehensive Economic Partnership Agreement) signed in 2022.

  o India–Saudi Arabia trade = **$52 billion (2022–23)**.

- IMEC expected to **cut transport cost & time** significantly.

  o Example: Shipping **Mumbai → Europe via Suez Canal** = 17–21 days.

  o With IMEC (Mumbai → UAE → Rail → Haifa → Europe): **12–14 days**.

(B) STRATEGIC & GEOPOLITICAL IMPORTANCE

- Counters China's **BRI & CPEC (China–Pakistan Economic Corridor)**.

- Strengthens India's role as a **maritime + continental bridge**.

- Reduces Europe's dependence on **China-controlled supply chains**.

- Boosts **Middle East economic diversification** (Vision 2030 of Saudi Arabia & UAE).

INDIA'S STRATEGIC STAKES

- **Energy Security** – Assured access to **green hydrogen & oil/gas**.

- **Export Boost** – Seamless market access to EU (India's largest export destination after US).

- **Leadership in Global South** – India emerging as a **rule-based connectivity leader**.

- **Maritime Advantage** – India sits at the **center of IMEC's east corridor** (ports in Gujarat, Maharashtra, Kerala).

- **Counter to BRI** – Offers an **India + West-backed alternative** to China's routes.

BENEFITS FOR OTHER PARTNERS

- **Middle East**:

  o Diversifies economies beyond oil (aligns with Saudi Arabia's Vision 2030).

  o Becomes a **transit + logistics hub** between Asia and Europe.

- **Europe**:

  o Shorter, secure supply chain independent of Suez Canal chokepoint.

  o New access to Middle East's renewable energy projects.

- **US & EU**:

  o Strengthens alliances with India and Gulf.

      o   Provides a counter to China's **geoeconomic dominance**.

OPPORTUNITIES FOR INDIA:

- **Expanded Market Access** – IMEC enables faster, cheaper access to the EU, reducing reliance on the Suez Canal and boosting export competitiveness.

- **Energy Transition Leadership** – Green hydrogen pipelines allow India to become a clean energy supplier to Europe and Gulf partners.

- **Digital Infrastructure Hub** – The Blue Raman subsea cable positions India as the central node for Asia-Europe data connectivity.

- **Supply Chain Diversification** – Alternate routes reduce risks from Red Sea or Hormuz disruptions, attracting global manufacturing investments.

- **Strategic Geopolitical Leverage** – As IMEC's eastern anchor, India gains influence in setting trade norms and countering China's BRI.

CHALLENGES TO IMEC

- **Geopolitical Instability**

  - Ongoing **Israel–Palestine conflict (2023–24 Gaza war)**.

  - Strained **Iran–Saudi relations** (though improving).

  - **Houthi attacks in Red Sea (2024)** disrupt shipping.

- **Infrastructure & Finance**

  - High cost of building **rail & pipelines across deserts**.

  - Lack of clarity on funding (estimates: **$20–30 billion** initial phase).

- **Coordination Problems**

  - Multiple sovereign states → differing political interests.

  - Need for harmonization of customs, security, taxation.

- **China's Competition**

  - China already has **BRI projects in Middle East (UAE, Saudi, Iran)**.

  - CPEC offers **shorter China–Europe route** via Gwadar & Pakistan.

COMPARISON WITH BELT AND ROAD INITIATIVE (BRI)

Feature	IMEC	BRI
Lead Nations	India, US, EU, Gulf states	China

Vision	Transparent, rules-based, sustainable	Infrastructure-heavy, often debt-driven
Scope	India–Middle East–Europe	Asia, Africa, Europe (150+ countries)
Energy Focus	Green hydrogen, renewables	Oil, gas, traditional infrastructure
Objective	Diversify trade, counter BRI, secure supply chains	Expand Chinese strategic influence

WAY FORWARD

- **Institutional Setup**: Need for a **joint IMEC Authority** for planning & coordination.

- **Funding Clarity**: Use of **multilateral development banks (World Bank, AIIB, ADB)** and private investments.

- **Political Stabilization**: India, US, EU may have to play **mediator roles in West Asia**.

- **Integration with INSTC**: Connect IMEC with **International North-South Transport Corridor (India–Iran–Russia–Europe)** for broader reach.

- **Sustainability Focus**: Prioritize green hydrogen, clean logistics, digital connectivity.

CONCLUSION

The India–Middle East–Europe Economic Corridor (IMEC) represents a **paradigm shift in global trade routes**.

For India, it provides **economic opportunities, strategic depth, and leadership in connectivity**. For Europe, it reduces supply chain dependence on China. For Middle East, it aids diversification from oil to logistics and energy hubs.

02 DEFENCE PRODUCTION IN INDIA FY 2024–25

India's annual defence production touched a record ₹1.51 lakh crore in FY 2024-25, marking an 18% growth over the previous year and a 90% jump since FY 2019-20, reflecting a stronger domestic defence industrial base.

WHAT IT IS?

The process of manufacturing weapons, military systems, and defence equipment for India's armed forces and export markets.

Includes production by Defence Public Sector Undertakings (DPSUs), Ordnance factories, other PSUs, and private sector companies.

RECORD PRODUCTION OUTPUT

- **Total defence production** surged to ₹1,50,590 crore in FY 2024-25—a **historic high**. This reflects an **18% increase** from ₹1.27 lakh crore in FY 2023-24 and a remarkable **90% growth** compared to ₹79,071 crore in FY 2019-20.

- **Sectoral contribution**:
  - **DPSUs and other public sector units** supplied **~77%** of the output.
  - **Private sector** made up **~23%,** up from 21% in the previous year.

- **Growth by segment**:
  - Public sector (DPSUs/PSUs): **16% YOY increase**
  - Private sector: **28% YOY jump**.

DEFENCE EXPORTS REACH NEW HEIGHTS

- **Exports soared to ₹23,622 crore**, marking a **12% rise** over FY 2023-24's ₹21,083 crore.

- **Contributors**:
  - **DPSUs**: ₹8,389 crore (up 42.85%)
  - **Private sector**: ₹15,233 crore (marginal increase).

- **Global footprint**: Exports included ammunition, arms, sub-systems, systems, parts—delivered to **around 80 countries**. While growth was commendable, it fell short of the ₹30,000 crore target for the year.

- **Future ambition**: India aims to hit **₹50,000 crore in defence exports by 2029**.

Trends in Defence Production in India FY 2024-25

Record Output

₹1,50,590 crore

FY 2024-25   FY 2024-5

Growth Pattern

18% rise   **90**% rise since FY 191-20

DPSUs/PSUs 77%   **23%**   Private sector 23%

Export Growth

Sectoral sector

₹23,622 crore

up **12%** from previous year
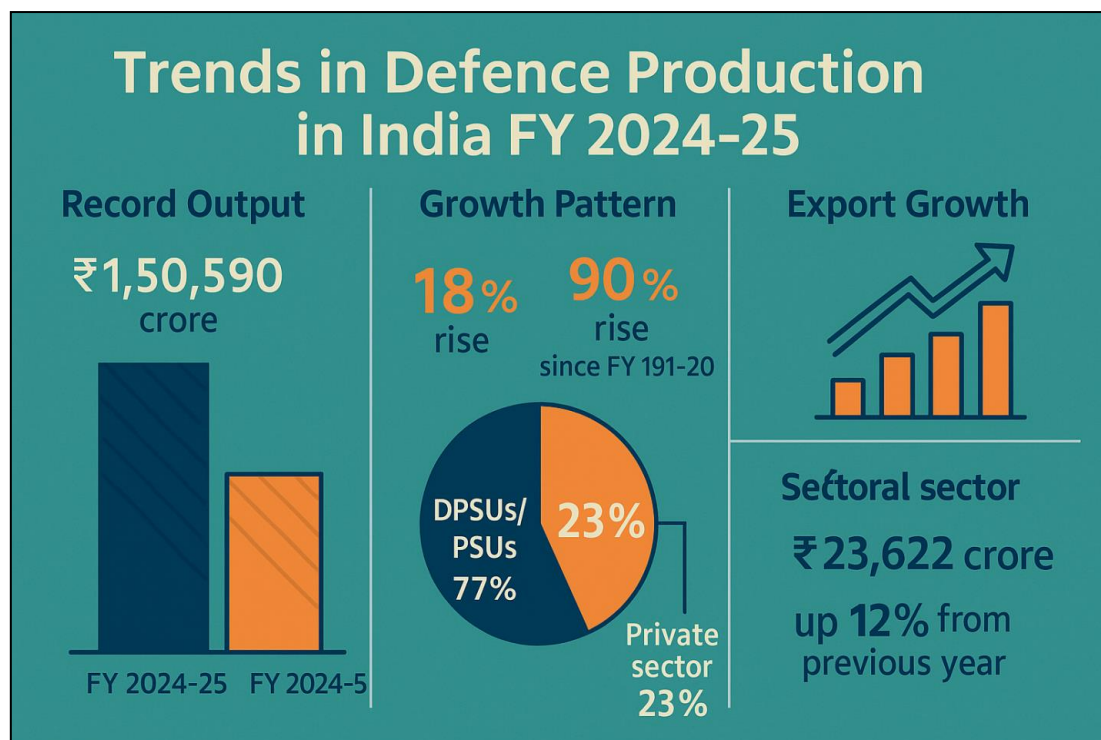
INSTITUTIONAL & POLICY DRIVERS

- **Key enablers**:

  - **Aatmanirbhar Bharat / Make in India** initiatives accelerated indigenisation.

  - **Ease of Doing Business reforms**, such as removing parts/components from licensing and extending license validity, fueled growth.

  - A **digital export authorization portal** streamlined approvals total **1,762 export authorizations** in FY 2024-25 (up 16.92%), and exporter base rose 17.4%.

- **Wider industrial ecosystem** (per FY 2023-24 data):

  - **16 DPSUs**, plus over **430 licensed companies**, and around **16,000 MSMEs** were part of the supply chain.

  - **Projects & Contracts**:

    - HAL awarded LCH Prachand contract (156 helicopters; ₹62,700 crore).

    - 307 ATAGS plus 327 gun-towing vehicles contracts (~₹70 billion) were approved under IDDM.

  - **Innovation & indigenisation**:

    - **iDEX** supported 619 startups/MSMEs via 430 contracts; ₹4.49 billion allocated for iDEX/ADITI in FY 25-26.

- **SRIJAN** platform: over **38,000 items** identified for indigenization; 14,000 indigenized; **5 PILs** with 5,500 items, 3,000+ indigenized.
  - **Defence Industrial Corridors** (UP & Tamil Nadu): MoUs signed worth ₹86.58 billion; potential investment ₹534.39 billion.
  - **FDI liberalization**: Up to **74% via automatic route**; license validity extended to 15–18 years; de-licensing of parts and components.
  - **Procurement share**: 75% of defence modernization budget (₹1.115 trillion) earmarked for domestic industry.

OUTLOOK & SIGNIFICANCE

- India has transformed from an arms importer to a **self-reliant defence manufacturing hub**.

- With consistent production and export growth, the foundation is set for gaining **global market share**.

- The integrated ecosystem of **public sector, private players, MSMEs, startups, and innovation platforms** solidifies India's long-term defence manufacturing roadmap.

03 INDIA'S FIRST STATE-OF-THE-ART ANIMAL STEM CELL BIOBANK AND LABORATORY

Union Minister inaugurated India's first State-of-the-Art Animal Stem Cell Biobank and Laboratory at the National Institute of Animal Biotechnology (NIAB), Hyderabad.

WHAT IT IS?

A cutting-edge facility dedicated to preserving, researching, and utilizing animal stem cells for regenerative medicine, disease modelling, and reproductive biotechnology in livestock.

- **Location:** Hyderabad, Telangana
- Situated at the National Institute of Animal Biotechnology (NIAB)

FACILITY SPECIFICATIONS & INFRASTRUCTURE

- **Area & Cost**: Spanning **9,300 sq ft**, with a construction cost of approximately **₹1.85 crore**.
- **Key Infrastructure includes**:
    - **Stem cell culture unit** for propagation and maintenance.
    - **3D bioprinter** for tissue engineering applications.
    - **Bacterial culture laboratory** for sterility and contamination control.
    - **Cry storage facility** for long-term preservation of stem cells and derivatives.
    - **Autoclave rooms**, advanced air handling systems, and **uninterrupted power backup** ensuring operational resilience.
- **Expansion plans** include augmenting biobanking capacity for a wider range of animal stem cells and derivatives.

RESEARCH DOMAINS & APPLICATIONS

The facility will bolster research and innovation in several critical areas:
- **Regenerative medicine** for livestock—for tissue repair, wound healing, degenerative diseases.
- **Disease modeling**, especially for conditions like **brucellosis**, **mastitis**, etc.
- **Tissue engineering and reproductive biotechnology**, enabling advanced interventions in livestock productivity and health.

FIVE VETERINARY INNOVATIONS – 'ONE HEALTH' APPROACH

Alongside the biobank, Dr Singh unveiled five cutting-edge diagnostic tools aligned with the **One Health** framework—linking animal, human, and environmental health:

- **BruDIVA** – Field-deployable, DIVA-capable kit for **Brucellosis** detection.

- **Udder Care** – On-site test for detecting subclinical/clinical **mastitis** in dairy cattle.

- **Rapid Antibiotic Sensitivity Device** – Portable tool giving results in ~2 hours.

- **Toxo Antibody Rapid Test** – For detecting **Toxoplasma gondii** infections.

- **RapiChex JE NS1** – Rapid strip for large-scale surveillance of **Japanese Encephalitis** in animals and humans.

These technologies promise better disease surveillance, informed antibiotic usage, and integrated health management.

STRATEGIC SIGNIFICANCE

FOR VETERINARY CARE & LIVESTOCK SECTOR:

- Enhances **livestock health and productivity**, boosting farmer incomes through improved diagnostics and regenerative solutions.

- Supports an **Evergreen Revolution** in animal husbandry—an extension of agricultural productivity gains.

BIOTECHNOLOGY LEADERSHIP:

- Positions India as a **front-runner in animal biotechnology**, especially in regenerative and cellular tech.

- Supports **One Health** paradigms, enabling holistic disease management across species.

FIVE VETERINARY TECHNOLOGIES LAUNCHED

Rapid Brucellosis Detection Kit
Field-deployable, DIVA-capable

Mastitis Detection Technology
On-site, cost-effective diagnosis for dairy cattle

Antimicrobial Sensitivity Testing Device
Portable tool giving results in 2 hours

Toxoplasmosis Detection Kit
Accurate testing for *Toxoplasma gondii*

Japanese Encephalitis Detection Kit
Rapid strip for animal and human surveillance

SCIENCE, ECONOMY & POLICY:

- Reflects India's forward-looking biotech strategy under the **BioE^3 policy**, fostering economy, employment, environmental responsibility.

- Synergizes with government vision—transitioning economy from traditional manufacturing to **biotechnology-driven regenerative processes**.

EDUCATION & TALENT DEVELOPMENT:

- With new hostel and residential infrastructure (₹19.98 crore sanctioned by DBT), NIAB is enhancing its academic and innovation climate for scholars and faculty.

- Facility enables hands-on training, capacity building in cutting-edge biotech— from biobanking to tissue engineering.

04 | KAKORI CONSPIRACY CASE

Prime Minister of India paid tribute to the revolutionaries of the Kakori incident on its 100th anniversary, honoring their courage and sacrifice in India's freedom struggle.

KAKORI CONSPIRACY CASE (1925)

BACKGROUND

- After the **Non-Cooperation Movement (1920-22)** was suspended by Mahatma Gandhi following the **Chauri Chaura incident**, many young nationalists felt disillusioned with the moderate and non-violent path.

- Revolutionary groups like the **Hindustan Republican Association (HRA)**, founded in 1924 by **Ram Prasad Bismil, Sachindra Nath Sanyal, Jogesh Chandra Chatterjee**, and others, believed in armed struggle against British rule.

- They needed funds for arms, literature, and revolutionary activities. This led to the **Kakori train robbery**.

THE INCIDENT

- **Date: 9 August 1925**

- **Place:** Near **Kakori town** (close to Lucknow, Uttar Pradesh).

- **Plan:** Members of HRA stopped the **8-Down Saharanpur–Lucknow passenger train** and looted the **government treasury** being transported.

- **Leaders involved:**
  - **Ram Prasad Bismil**
  - **Ashfaqulla Khan**
  - **Chandrashekhar Azad**
  - **Rajendra Lahiri**
  - **Roshan Singh**
  - **Manmathnath Gupta** (who later wrote memoirs about it).

The Statesman

19TH DECEMBER 1927

RAM PRASAD BISMIL, ROSHAN SINGH, AND ASHFAQULLA KHAN EXECUTED IN KAKORI CONSPIRACY BY BRITISH RAJ

On this day in 1927, revolutionary freedom fighters Ram Prasad Bismil, Ashfaqulla Khan and Thakur Roshan Singh were hanged to death by the British government for their involvement in the Kakori train robbery case.

The revolutionaries looted around **₹8,000** (a huge amount in those days). Importantly, the money belonged to the **British Government Treasury**, not passengers.

BRITISH RESPONSE

- The British took the incident very seriously as it directly challenged their authority.

- **40 revolutionaries were arrested**, including many who were not directly involved in the robbery but were associated with HRA.

- A long-drawn trial, known as the **Kakori Conspiracy Case**, followed.

TRIAL AND SENTENCES

- **Judge:** Special Sessions Court, Lucknow.

- **Charges:** Conspiracy against the King, robbery, possession of arms, and waging war against the government.
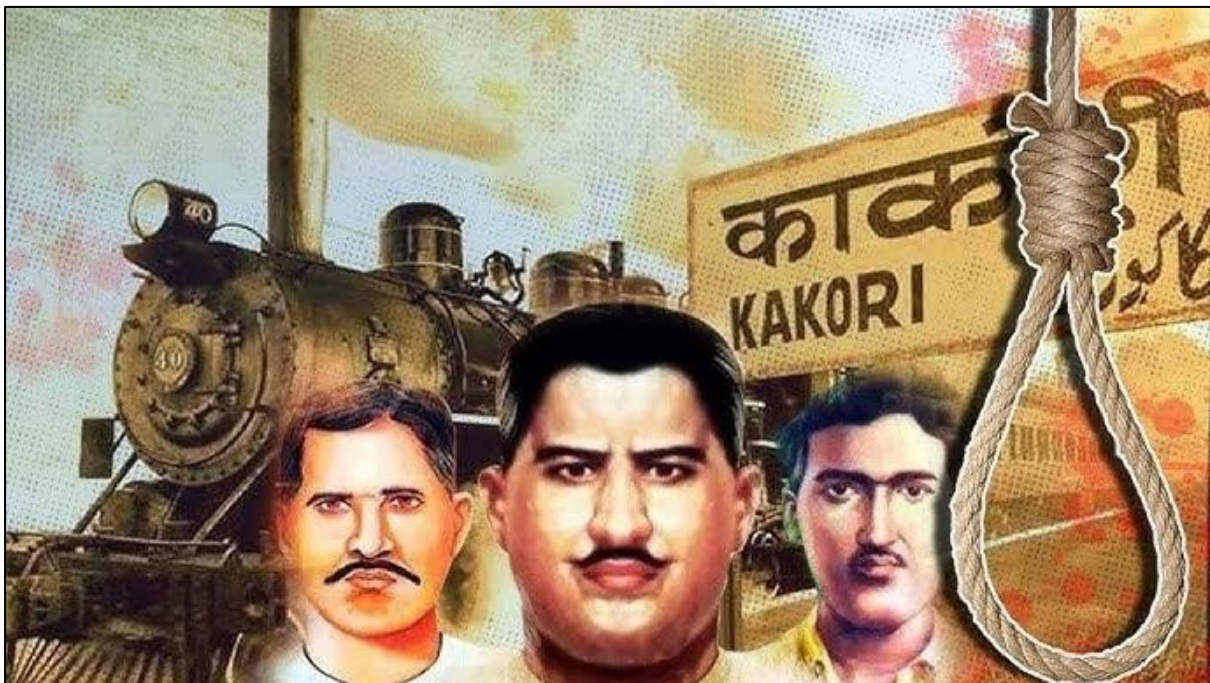
VERDICTS:

- **Death Sentence:**
    - **Ram Prasad Bismil**
    - **Ashfaqulla Khan**
    - **Rajendra Nath Lahiri**
    - **Roshan Singh**
      (Executed in December 1927).

- **Life Imprisonment (Kala Pani, Cellular Jail, Andamans):**
    - Sachindra Nath Bakshi

- o Govind Charan Kar

- o Mukundi Lal

- o Murari Sharma

- o And many others.

- **Chandrashekhar Azad** managed to escape arrest and continued revolutionary activities until his martyrdom in **1931 (Alfred Park, Allahabad)**.

SIGNIFICANCE

- **Assertion of Revolutionary Nationalism** – The Kakori case was one of the most daring acts of the freedom struggle, inspiring a whole generation of youth.

- **Unity of Revolutionaries** – It showed collaboration between Hindus and Muslims (Bismil and Ashfaqulla as iconic examples).

- **Shift in British Policy** – The colonial state tightened laws, surveillance, and suppression of revolutionary organizations.

- **Martyrdom as Inspiration** – The executions deeply moved Indian society. The sacrifice of Bismil and Ashfaqulla Khan became legendary and gave rise to a culture of revolutionary nationalism.

- **Link to Later Movements** – Inspired groups like the **Hindustan Socialist Republican Association (HSRA)** under Bhagat Singh, who admired the Kakori martyrs.

LEGACY

- The Kakori Conspiracy Case is remembered as a **symbol of youthful sacrifice and revolutionary zeal**.

- It highlighted that the struggle for independence was not just confined to petitions or non-violence but also had strands of **armed resistance**.

- Today, memorials in Kakori and across India commemorate the martyrs.

05 | KHELO INDIA ASMITA

The Khelo India ASMITA Football League 2025-26 was inaugurated in Jalgaon, Maharashtra, marking a major step towards affirmative action in sports to boost women's participation.

WHAT IT IS?

A dedicated affirmative action sports initiative under the Khelo India programme to increase women's participation in sports, focusing on grassroots talent development, especially among underrepresented communities.

- **Launched In:** 2025–26, with the inaugural football league in Jalgaon, Maharashtra.
- **Ministry:** Ministry of Youth Affairs and Sports
- Supported by the Sports Authority of India (SAI), All India Football Federation (AIFF), and Western India Football Association (WIFA).

AIM:

- Provide a dedicated platform for young girls to showcase and develop sporting skills.
- Address historical gender imbalances in sports participation.
- Foster social inclusion by engaging talent from tribal, rural, and minority backgrounds.
- Contribute to nation-building through women's empowerment in sports.

KEY FEATURES:

- **Target Group** – Girls aged 13 and under, including first-time players and hidden talent.

- **Affirmative Action** – Special focus on marginalized communities to ensure inclusivity.

- **Platform for Exposure** – Competitive leagues to enhance visibility and scouting opportunities.

- **Integration with Khelo Bharat Niti** – Aligns with India's long-term sports development and empowerment agenda.

- **Institutional Support** – Backed by national and state sports bodies for structured development.

- **Breaking Stereotypes** – Encourages girls to challenge societal norms and become role models.

06 | 16TH LION POPULATION ESTIMATION REPORT

The 16th Lion Population Estimation report (2025) revealed that India's Asiatic lion population has risen from 674 in 2020 to 891 in 2025.

16TH LION POPULATION ESTIMATION REPORT (2025) – KEY HIGHLIGHTS

POPULATION GROWTH & TREND

- **Rise in numbers**: Asiatic lion population in Gujarat surged from **674 in 2020** to **891 in 2025**, marking a significant **32.2% increase**.

- **Decadal growth**: From 523 in 2015 to 891 in 2025—about a **70% increase**.

DISTRIBUTION & HABITAT EXPANSION

- **Core vs. outside**:
  - **Inside protected areas**: 384 lions.
  - **Outside areas**: 507 lions (~57%), a remarkable shift showing lion presence in non-forest spaces.

- **Geographical spread**:
  - Lions now inhabit **11 districts** across the Saurashtra landscape.
  - Population scan covered **35,000 sq km**, up from 22,000 sq km in 2015.

DISTRICT-WISE HIGHLIGHTS

- **Amreli**: Leading with **339 lions**, comprising 82 adult males, 117 adult females, and 79 cubs.

- **Mitiyala Sanctuary**: Recorded a **100% growth**—the highest jump among all zones.

- **Bhavnagar Mainland**: Saw an impressive **84% increase**, including a record **20-member pride** spotted.

- **Declines noted**: Girnar Wildlife Sanctuary (-4%) and Bhavnagar Coast (-12%) recorded marginal dips.

DEMOGRAPHICS & REPRODUCTIVE INDICATORS

- **Adult female increase**: Up from 260 to 330—a **26.9% rise**—enhancing the species' reproductive potential.

- **Age-wise distribution** (as per Times of India data):

  - Adult males: 196

  - Adult females: 330

  - Sub-adults: 140

  - Cubs: 225

CHALLENGES & BEHAVIORAL SHIFTS

- **Overlap with human habitats**: Majority of lions are now in buffer zones and revenues lands, outside protected sanctuaries, raising human-lion conflict.

- **Human-wildlife conflicts**: Reports indicate **10% annual rise in livestock depredation**, with associated losses increasing by 15% in villages bordering lion habitats.

- **Reporting lion deaths**: In 2020–2024, **669 lions died**, including **57 unnatural fatalities**—underscoring emerging threats.

CENSUS EXECUTION

- Conducted from **May 10 to 13, 2025**, across **58 talukas in 11 districts**, covering an expansive **35,000 sq km terrain**.

- Utilized **camera traps, GPS, and double-counting prevention methods** to ensure accuracy.

POLICY IMPLICATIONS & SIGNIFICANCE

- **Conservation success**: The 32% population rise reflects effective measures under **Project Lion** and focused habitat management in Gujarat by MoEFCC and the state forest department.

- **Strategic shifts**: The growing lion presence in human-dominated landscapes necessitates strengthened measures for **human-lion conflict mitigation**, expanded **habitat connectivity**, and possibly creating a **second viable population** to reduce extinction risk.

- **Global significance**: Asiatic lions form a globally unique population (Panthera leo persica), fully protected under IUCN, CITES Appendix I, and Indian Wildlife Protection Act. Their rebound is a standout success story amid declining populations in Africa and West Asia.

COMPARISON BETWEEN ASIAN LIONS AND AFRICAN LIONS:

Asian lions (Panthera leo persica) and African lions (Panthera leo leo / Panthera leo melanochaita):

Feature	Asian Lion (Panthera leo persica)	African Lion (Panthera leo leo / melanochaita)
Distribution	Restricted to **Gir National Park & surrounding areas (Gujarat, India)**	Widely found across **Sub-Saharan Africa**
Population	~670 (2020 census)	~20,000–25,000 (declining)
Size (Males)	160–190 kg	190–225 kg
Size (Females)	110–120 kg	125–140 kg
Build	Slender, less muscular	More robust, heavily built
Mane	Shorter, sparser; ears visible	Fuller, thicker, often covering ears
Fur Coat	Pale brown to buff; less dense	Golden to light brown; denser
Skin Fold	Distinct **longitudinal skin fold** along belly	Absent
Social Structure	Smaller prides (2–5 lions)	Larger prides (10–20 lions)
Roar	Softer and shorter	Louder and deeper
Conservation Status (IUCN)	**Endangered**	**Vulnerable**
Main Threats	Habitat loss, human–wildlife conflict, genetic bottleneck	Habitat loss, poaching, human conflict, diseases

07 | JAL JEEVAN MISSION (JJM) – TAP WATER COVERAGE

Rural tap water coverage under the Jal Jeevan Mission (JJM) has reached 81%, up from 17% in 2019, benefitting over 15.68 crore households.
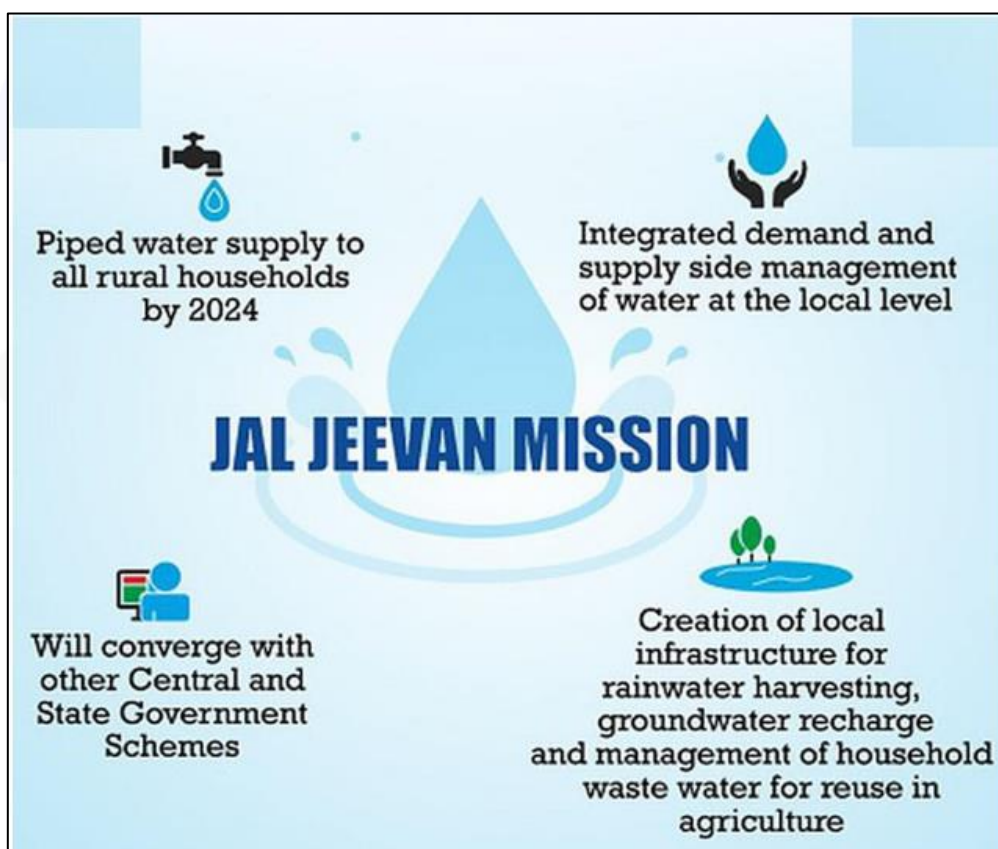
JAL JEEVAN MISSION (JJM)

BACKGROUND

- Launched in **August 2019** by the Government of India.

- Objective: **Har Ghar Jal** – provide **Functional Household Tap Connection (FHTC)** to every rural household by **2024**.

- Implemented by **Ministry of Jal Shakti**.

PROGRESS

- In **2019**, only **17%** of rural households (approx. 3.2 crore) had tap water supply.

- As of 2025, coverage has increased to **81%**, reaching **over 15.68 crore households**.

- Some states/UTs like **Goa, Telangana, Gujarat, Haryana, and Puducherry** have already achieved **100% coverage**.

Piped water supply to all rural households by 2024

Integrated demand and supply side management of water at the local level

JAL JEEVAN MISSION

Will converge with other Central and State Government Schemes

Creation of local infrastructure for rainwater harvesting, groundwater recharge and management of household waste water for reuse in agriculture

SIGNIFICANCE OF ACHIEVEMENT

- **Public Health**: Access to safe drinking water reduces **waterborne diseases** (diarrhea, cholera, fluorosis, arsenicosis).

- **Women Empowerment**: Reduced burden of fetching water frees up time for education and economic activities.

- **Social Equity**: Promotes inclusion, especially in marginalized and remote rural communities.

- **SDG Alignment**: Directly contributes to **UN Sustainable Development Goal 6 – Clean Water and Sanitation**.

CHALLENGES AHEAD

- **Water Quality** issues (fluoride, arsenic, iron, salinity in groundwater).

- **Sustainability** of sources amidst climate change, falling water tables.

- **Operation & Maintenance** of village water supply systems.

- Ensuring **last-mile delivery** in tribal and hilly regions.

WAY FORWARD

- Focus on **source sustainability** through rainwater harvesting, groundwater recharge.

- Greater **community participation** (Village Water and Sanitation Committees).

- Use of **IoT sensors & dashboards** for real-time monitoring.

- Integration with **Swachh Bharat Mission** and **National Rural Health Mission** for holistic rural development.

08 REVISED INCOME TAX BILL, 2025

Finance Minister has tabled the revised Income Tax Bill, 2025 in the Lok Sabha, incorporating most of the 566 recommendations made by the Parliamentary Select Committee.

WHAT IT IS?

A new legislation to **consolidate, streamline, and modernize** India's direct tax framework, replacing the six-decade-old Income Tax Act, 1961.

AIM:

- Simplify compliance by removing outdated provisions and improving drafting clarity.

- Enhance transparency in tax administration.

- Incorporate stakeholder inputs for fairer tax practices.

- Facilitate ease of doing business through clear, consistent, and modern legal language.

KEY FEATURES OF THE REVISED BILL:

- **Single 'Tax Year' Concept:** Replaces "Previous Year" and "Assessment Year" with a uniform term to simplify understanding and compliance.

- **Simplified Refund Provisions:** Refunds allowed even if ITR is filed after the due date, reducing taxpayer grievances.

- **Corporate & MSME Relief:** Rs 80M deduction for inter-corporate dividends restored and MSME definition aligned with MSME Act for uniformity.

- **Rationalized Property Taxation:** Notional rent on vacant property removed; clear deductions for municipal tax and interest on rented property.

- **Compliance & Governance Reform:** Unnecessary provisions removed, CBDT empowered for **digital-era rule-making** and NIL-TDS option for zero-liability taxpayers.

- **Charitable Trust & LLP Relief:** Relaxation in transfer pricing rules and removal of Alternate Minimum Tax on LLPs.

- **Enhanced Digital Alignment:** Structured section numbering, improved terminology, and cross-referencing for easier navigation and reduced ambiguity.

09 | OPERATION FALCON

The Assam government's Operation Falcon has successfully arrested 42 rhino poachers, dismantled six major poaching gangs, and foiled nine poaching attempts, ensuring zero rhino killings in the state so far in 2025.

OPERATION FALCON – ASSAM (2025)

- Assam is home to the **largest population of the Greater One-Horned Rhinoceros (Rhinoceros unicornis)**, especially in **Kaziranga National Park**.

- Rhino poaching for **horns (illegal wildlife trade, traditional medicine, and status symbol in East Asia)** has been a major challenge.

- Despite strong protection, poaching networks involving local and international actors continued for decades.

KEY FEATURES OF OPERATION FALCON

- **Launch:** Initiated by the **Assam Government in 2025** as a specialized anti-poaching drive.

- **Arrests: 42 rhino poachers arrested**, dismantling their operational networks.

- **Crackdown on Gangs: Six major poaching gangs neutralized**, weakening organized wildlife crime in the region.

- **Prevention: Nine poaching attempts foiled** with proactive surveillance.

- **Impact: Zero rhino killings reported in 2025 (till date)** — a major success in wildlife conservation.

- **Technology Use:** Likely use of drones, GPS, and intelligence-based patrolling to monitor forest areas.

- **Collaboration:** Coordination between **forest guards, police, intelligence agencies, and local communities**.

SIGNIFICANCE

- **Conservation Success:** Protects the population of ~2,900 one-horned rhinos in Assam.

- **Ecological Role:** Rhinos are **keystone species**, crucial for grassland ecosystems.

- **Global Recognition:** Strengthens India's image in global biodiversity conservation.

- **Socio-Economic Impact:** Boosts **eco-tourism and local livelihood** in Assam.

- **Law Enforcement Model:** Sets an example for anti-poaching strategies for tigers, elephants, pangolins, etc.

10 | LADAKH STATEHOOD & SIXTH SCHEDULE

A massive protest was held in Kargil, Ladakh, led by climate activist Sonam Wangchuk, demanding statehood for Ladakh and its inclusion under the Sixth Schedule of the Constitution.

BACKGROUND: LADAKH'S CURRENT STATUS

- **In August 2019**, with the abrogation of **Article 370** and **Article 35A**, the state of Jammu & Kashmir was bifurcated into:

    o **Union Territory (UT) of Jammu & Kashmir** (with legislature).

    o **Union Territory of Ladakh** (without legislature).

- Ladakh, comprising **Leh and Kargil districts**, was long demanding separation from J&K due to perceived neglect.

- However, after UT status, concerns have risen about **lack of political representation, job security, land protection, and cultural safeguards**.

WHY LADAKH IS DEMANDING STATEHOOD

- **Absence of legislature**: Unlike J&K UT, Ladakh has no elected legislative assembly. Governance is handled by the **Lieutenant Governor (LG)** and **Ladakh Autonomous Hill Development Councils (LAHDCs)**.

- **Representation gap**: Ladakh sends only **1 MP (Lok Sabha)** and has no Rajya Sabha seat → limited voice in national decision-making.

- **Local governance concerns**: LAHDCs' powers are limited; most decisions rest with the LG.

- **Development & employment fears**: Locals fear outsiders could dominate land, jobs, and businesses.

- **Strategic region**: Being a **border-sensitive area (China & Pakistan)**, residents feel stronger local participation is crucial.

DEMAND FOR SIXTH SCHEDULE PROTECTION

- **Sixth Schedule of the Constitution** (Articles 244 & 275) provides **autonomous governance** to tribal-dominated areas in Assam, Meghalaya, Mizoram, and Tripura through **Autonomous District Councils (ADCs)**.

- Ladakh's demand: Inclusion under **Sixth Schedule** to protect **land, resources, language, and culture** of its predominantly tribal population.

WHY THIS DEMAND HAS MERIT:

- Ladakh's population is **over 97% tribal** (Buddhists, Shia Muslims, Scheduled Tribes like Balti, Beda, Brokpa, Changpa, Mon, etc.).

- Ladakh shares similarities with Northeast tribal regions (geographical isolation, cultural uniqueness).

- **National Commission for Scheduled Tribes (NCST)** in 2019 recommended **Sixth Schedule inclusion for Ladakh**.

GOVERNMENT'S POSITION

- The Centre has **not agreed** to full Sixth Schedule status. Instead, it has:

    o Set up a **High-Powered Committee (HPC)** in 2023 to look into Ladakh's political and cultural safeguards.

    o Assured **protection for land, jobs, and culture** under **Article 371 or special laws**, without full Sixth Schedule inclusion.

- **Argument:** Sixth Schedule was originally designed for **Northeast tribal belts**, not for Ladakh.

ONGOING PROTESTS & DEMANDS (2020–2025)

- **Leh Apex Body (LAB)** and **Kargil Democratic Alliance (KDA)**, representing both Buddhist-majority Leh and Muslim-majority Kargil, have united in demanding:
    o **Statehood for Ladakh**.

    o **Sixth Schedule or equivalent safeguards**.

    o **Separate Lok Sabha seats** for Leh and Kargil.

    o **Job and land security laws**.

- Protests, hunger strikes, and boycotts have been reported in both Leh and Kargil since 2021.

CONSTITUTIONAL OPTIONS FOR LADAKH

- **Option 1: Statehood** – full assembly, elected government, better representation.

- **Option 2: Sixth Schedule** – autonomous councils with powers over land, forests, culture, language, jobs.

- **Option 3: Article 371-type provisions** – special protections (like in Nagaland, Mizoram, Himachal Pradesh).

- **Option 4: Strengthening LAHDCs** – granting more powers under existing UT structure.

STRATEGIC IMPORTANCE OF LADAKH

- **Geopolitical**: Borders Pakistan-occupied Gilgit-Baltistan (west) and China's Xinjiang/Tibet (north & east).

- **Military**: Site of Galwan clash (2020) and ongoing LAC tensions.

- **Ecological**: Fragile Himalayan ecosystem; safeguards needed against unchecked infrastructure.

- **Cultural**: Tibetan Buddhist and Shia Muslim traditions require preservation.

11 ENVELOPE DIMER EPITOPE (EDE)

A new study published in Science Translational Medicine has identified Envelope Dimer Epitope (EDE)-like antibodies as a major driver of cross-serotype immunity against dengue.

BACKGROUND: DENGUE VIRUS & ENVELOPE PROTEIN

- Dengue virus (DENV) is a flavivirus with **four distinct serotypes (DENV-1 to DENV-4)**.

- The **Envelope (E) protein** on the virus surface mediates:

  o Virus binding to host cells.

  o Fusion of viral and host membranes.

- E proteins form **dimers** (pairs) that cover the virus surface.

WHAT IS ENVELOPE DIMER EPITOPE (EDE)?

- **EDE is a specific site (epitope) formed at the interface of two envelope proteins in a dimer.**

- It is **highly conserved across all four dengue virus serotypes**, unlike many other epitopes that vary.

- Antibodies targeting EDE can **bind strongly to multiple dengue serotypes**, giving **broad and potent neutralization** ability.

SIGNIFICANCE OF EDE IN IMMUNITY

- Traditional dengue immunity is **serotype-specific**: immunity against one serotype does not fully protect against others.

- Cross-reactive but non-neutralizing antibodies may lead to **Antibody-Dependent Enhancement (ADE)**, worsening infection.

- **EDE-targeting antibodies**, however:
    - Neutralize all serotypes.
    - Reduce ADE risk.
    - Provide a potential basis for **universal dengue vaccines**.

APPLICATIONS IN VACCINE DEVELOPMENT

- Current dengue vaccines (like **Dengvaxia**) face challenges due to ADE.

- EDE discovery enables design of:
    - **Broad-spectrum dengue vaccines** that elicit EDE-specific antibodies.
    - **Therapeutic monoclonal antibodies** targeting EDE for treatment.

- Research also suggests **cross-reactivity with Zika virus**, opening pathways for **pan-flavivirus vaccines**.
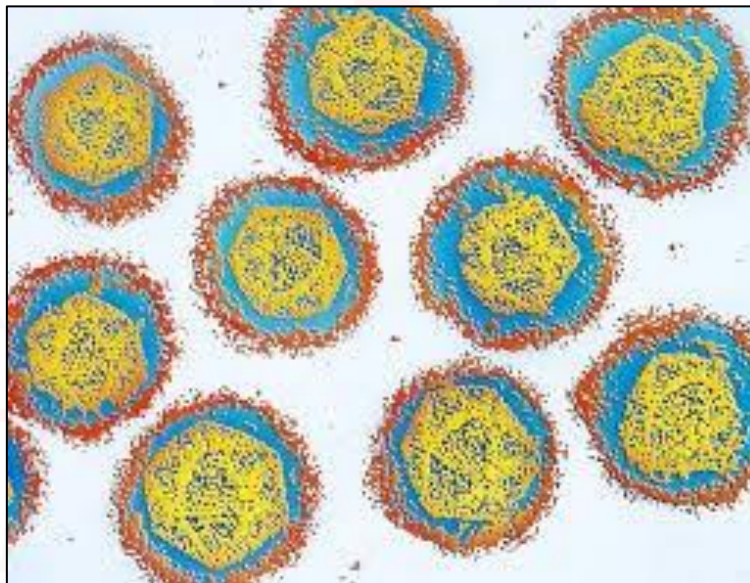
| 12 | WORLD ELEPHANT DAY 2025 |

World Elephant Day 2025 will be celebrated on August 12 in Coimbatore, Tamil Nadu, focusing on human–elephant conflict mitigation, hosted by the MoEF&CC in collaboration with the Tamil Nadu Forest Department.

WORLD ELEPHANT DAY 2025: KEY INSIGHTS

DATE & ORIGIN

- Celebrated annually on **August 12**, first observed in **2012**, World Elephant Day is a global initiative dedicated to the **preservation and protection of elephants** across species.

2025 THEME

- This year's theme is **"Matriarchs & Memories"**, signaling the importance of elephant matriarchs the wise leaders of herds and the knowledge they carry and impart across generations.

SIGNIFICANCE

- Elephants are **keystone species** crucial to ecosystem health—dispersing seeds, modifying habitats, and maintaining biodiversity.

- They face grave threats: **poaching**, **habitat loss**, **climate change**, and escalating **human–elephant conflict**.

WHY "MATRIARCHS & MEMORIES"?

- Matriarchs embody survival knowledge—routes to scarce water, safe trails, and nuanced social wisdom. Their loss can fragment social cohesion and weaken herd resilience.

GLOBAL & INDIAN INITIATIVES

- The **World Elephant Society** aims to raise **$300,000**, allocating funds toward awareness campaigns (20%) and grassroots conservation projects (80%) via grants to community-led initiatives.

- In **Karnataka**, events at Sakrebailu Elephant Camp emphasized coexistence and celebrated matriarchs. A limited-edition postal envelope was released, symbolizing local pride and conservation.

- At **Nandankanan Zoo, Bhubaneswar**, residents engaged in educational programs, and rescued elephants were honored, reinforcing rehabilitation efforts.

PUBLIC ENGAGEMENT & MEDIA

- Educational activities, fundraising, social media awareness (#WorldElephantDay), and community participation are widely promoted for broader outreach.

- Cultural efforts include film recommendations (e.g., *The Elephant Whisperers*), and creative commemorations like Kerala's stamp in Madhya Pradesh celebrating elephants' leadership roles and cultural symbolism.

COMPARISON BETWEEN AFRICAN AND ASIAN ELEPHANTS

Feature	African Elephant	Asian Elephant
Scientific Name	Loxodonta africana (Savannah), Loxodonta cyclotis (Forest)	Elephas maximus
Geographic Range	Sub-Saharan Africa (37 countries)	South & Southeast Asia (13 countries: India, Nepal, Sri Lanka, Thailand, etc.)
Size	Largest land animal: up to 4 m height, 6,000–7,500 kg	Smaller: up to 3.5 m height, 4,000–6,000 kg
Ears	Very large, fan-shaped (help in heat regulation)	Smaller, rounded
Head Shape	Single dome (more rounded)	Double-domed (twin bulges on head)

Back Shape	Concave/dipped back	Convex or level back
Tusks	Both males & females may have tusks	Only some males have tusks (tuskers); females mostly tusk-less
Trunk	Two finger-like projections at tip	One finger-like projection at tip
Skin	More wrinkled	Smoother
Diet	More diverse diet (grasses, fruits, bark, leaves)	Prefer grasses but also eat fruits, roots, and crops
Social Structure	Large herds (20–100), led by matriarch	Smaller herds (5–20), also matriarchal
Conservation Status (IUCN)	African Savannah Elephant – Endangered; African Forest Elephant – Critically Endangered	Asian Elephant – Endangered
Population	~415,000 (2023 est.)	~50,000–55,000 (2023 est.); India hosts 60% of global population
Domestication	Never domesticated	Domesticated for centuries (timber, temples, cultural uses)

| 13 | DARDANELLES STRAIT |

The Dardanelles Strait in northwestern Turkey has been temporarily closed to maritime traffic due to wildfires near Çanakkale, prompting evacuations and firefighting operations.
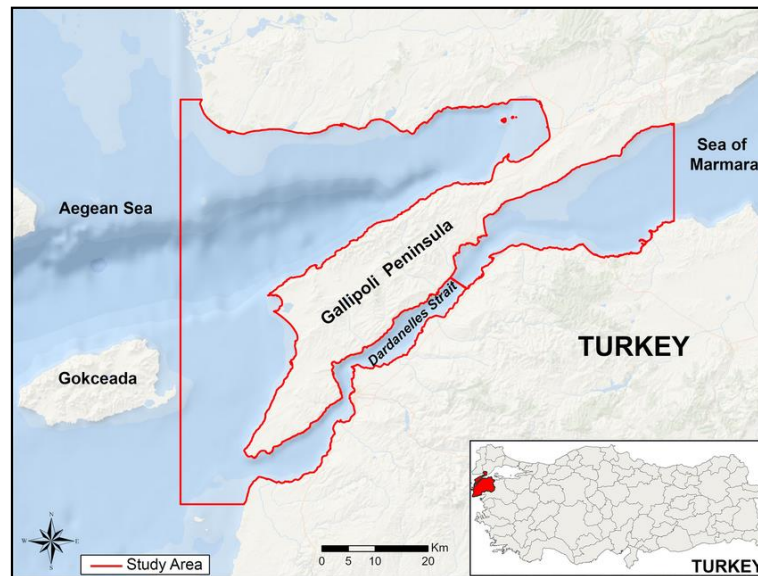
WHAT IT IS?

- A narrow, natural sea channel connecting the Aegean Sea to the Sea of Marmara.

- Historically known as the Hellespont, it has been a key passageway since ancient times for trade and military strategy.

LOCATION:

- Situated in northwestern Turkey, separating Europe's Gallipoli Peninsula (northwest) from Asia Minor (southeast).

- Lies entirely within Turkey's territorial waters.

FEATURES:

- **Length & Width**: 61 km long, width ranges from 1.2 km to 6.5 km.

- **Depth:** Average depth ~55 m, maximum ~90 m in central narrow sections.

- **Currents**: Surface current flows from the Sea of Marmara to the Aegean; an undercurrent carries saline water in the opposite direction.

- **Ports & Settlements**: Major ports include Gallipoli, Eceabat, and Çanakkale.

- **Historical Significance:** Key battleground in ancient wars, the Persian invasion (480 BCE), Alexander's expedition (334 BCE), and WWI's Gallipoli Campaign.

IMPLICATIONS:

- **Global Trade:** Closure disrupts shipping between Europe, Asia, and the Black Sea via the Bosporus.

- **Geopolitical Importance:** Acts as a maritime chokepoint crucial for Turkey's strategic influence and NATO security interests.

14 SATELLITE INTERNET

Starlink, Elon Musk's satellite internet service, is set to enter India, marking a major shift in digital connectivity and strategic communication capabilities.

WHAT IS SATELLITE INTERNET?

- Satellite Internet is a type of broadband connection that uses communication satellites in Earth's orbit to provide internet access.

- Unlike traditional cable, fiber, or DSL internet (which rely on ground-based infrastructure), satellite internet beams signals between the Earth station and satellites, making it accessible in remote and rural areas.

HOW IT WORKS?

- **User terminal (dish antenna + modem)** → sends request.

- **Ground station (gateway)** → uplinks signal to satellite.

- **Satellite (in orbit)** → receives and relays signal.

- **ISP's data center** → processes and connects to the global internet.

- **Satellite** → sends response back to the user's dish.

TYPES OF SATELLITES USED

Satellite Type	Orbit Altitude	Latency	Coverage	Examples
GEO (Geostationary Earth Orbit)	~36,000 km	High (600 ms)	Large (⅓ of Earth)	HughesNet, Viasat
MEO (Medium Earth Orbit)	8,000–20,000 km	Medium (100–200 ms)	Regional	O3b (SES)
LEO (Low Earth Orbit)	500–2,000 km	Low (20–40 ms)	Global, requires mega-constellations	Starlink, OneWeb, Amazon Kuiper
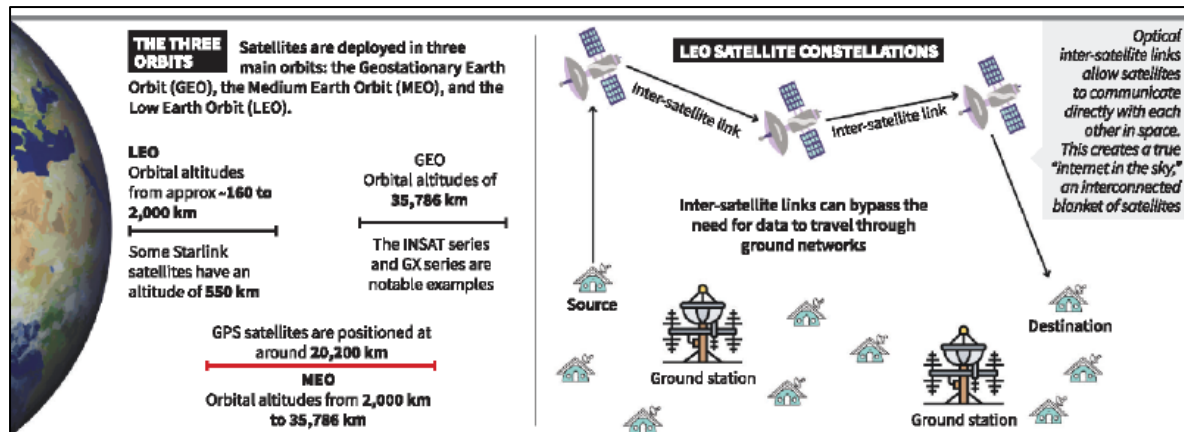
APPLICATIONS:

- **Civilian** – Extends broadband to villages, aids smart farming, and supports environmental monitoring.

- **Disaster Management** – Coordinates rescue and relief in hurricane, flood, and earthquake zones.

- **Defence** – Enables secure battlefield communication, drone operations, and intelligence sharing.

- **Transport** – Improves safety and navigation in aviation, shipping, and autonomous vehicles.

- **Healthcare** – Facilitates telemedicine and real-time health monitoring in remote areas.

- **Space Economy** – Strengthens global trade, tourism, and exploration capabilities.

ADVANTAGES

- **Global Reach** – Works in deserts, mountains, oceans, disaster zones.

- **Fast Deployment** – No need for fiber/cable laying.

- **Resilience** – Useful for defense, disaster relief, and remote scientific missions.

- **Digital Inclusion** – Helps bridge rural-urban digital divide.

LIMITATIONS/CHALLENGES

- **High Latency** (especially in GEO satellites).

- **Weather Sensitivity** – Rain, storms, and cloud cover degrade signals ("rain fade").

- **High Cost** – Equipment + subscription more expensive than terrestrial internet.

- **Space Debris Risk** – Growing satellite constellations increase collision risks.
- **Spectrum & Regulatory Issues** – Needs international cooperation and licenses.

MAJOR GLOBAL PLAYERS

- **Starlink (SpaceX, USA)** – LEO constellation, 5,000+ satellites (as of 2025).
- **OneWeb (Bharti Airtel + UK Govt)** – LEO system with ~650 satellites.
- **Amazon Kuiper** – LEO network under development.
- **HughesNet & Viasat** – GEO-based services.
- **China's GuoWang project** – LEO mega-constellation plan.

INDIA & SATELLITE INTERNET

- **OneWeb + ISRO** – Satellites launched from Sriharikota under GSLV Mk III.
- **Jio Satellite Communications (JioSpaceFiber)** – Plans to provide high-speed satellite broadband.
- **BharatNet + SatCom** – Government exploring satellite internet to connect remote villages.
- **IN-SPACE & DoT policy** – Private players allowed to offer satcom services.
- **Defense Applications** – Army, Navy, and disaster response operations.

15 18TH INTERNATIONAL OLYMPIAD ON ASTRONOMY AND ASTROPHYSICS

India is hosting the 18th International Olympiad on Astronomy and Astrophysics (IOAA) in 2025, welcoming over 300 young astronomers from 64 countries.

WHAT IS IOAA?

- The IOAA is a premier global competition for high-school students in the fields of **astronomy, astrophysics, and observational sciences**.

- It tests theoretical knowledge, data analysis skills, and practical observational abilities.

- **Host Country:** Mumbai, Maharashtra.

- **Organized by:** Homi Bhabha Centre for Science Education (HBCSE) and Tata Institute of Fundamental Research (TIFR), in collaboration with the Union Ministry of Education.

OBJECTIVES:

- Promote scientific thinking and problem-solving skills in astronomy and astrophysics.

- Foster international cooperation and cultural exchange among young scientists.

- Inspire careers in space sciences and research.

- Showcase India's advancements in space missions, observatories, and STEM initiatives.

FEATURES OF THE 18TH IOAA:

- **Largest Edition Yet** – Over 300 students from **64 nations**.

- **Blend of Theory & Practice** – Written exams, data analysis, and night-sky observations.

- **Highlighting India's Legacy** – From Aryabhatta's theories to modern missions like Chandrayaan-3 and Aditya-L1.

- **STEM Empowerment** – Showcasing initiatives like Atal Tinkering Labs and One Nation One Subscription.

- **Global Science Partnerships** – Collaboration in mega-projects like the Square Kilometre Array and LIGO-India.

16 SHRESTH – STATE HEALTH REGULATORY EXCELLENCE INDEX

The Union Health Ministry launched SHRESTH – State Health Regulatory Excellence Index, the first national framework to benchmark and strengthen state drug regulatory systems through transparent, data-driven evaluation.

WHAT IS SHRESTH?

SHRESTH stands for the **State Health Regulatory Excellence Index**, launched on **12 August 2025** by the **Union Health Ministry**. Developed by the **Central Drugs Standard Control Organization (CDSCO)**, SHRESTH is a **first-of-its-kind national framework** aimed at benchmarking and strengthening state-level drug regulatory systems across India.

Union Health Ministry Launches SHRESTH – State Health Regulatory Excellence Index, a first-of-its-kind national initiative to benchmark and strengthen state drug regulatory systems through a transparent, data-driven framework

The health of all citizens begins with the safety, quality, and efficacy of the medicines they consume and ensuring their quality is a commitment of the Government to every citizen in India: Union Health Secretary

"SHRESTH is a virtual gap assessment tool for states to assess their current position and help towards maturity certification"

SHRESTH Index will enable targeted improvements in human resources, infrastructure, and digitization across states, ensuring drug safety is guaranteed for every Indian, regardless of geography

PURPOSE & RATIONALE

- India's pharmaceutical sector, often dubbed the **"Pharmacy of the World"**, requires robust regulatory oversight to maintain drug safety and quality.

- Currently, **state/regional regulatory capacities vary widely**, impacting licensing, surveillance, and consumer trust.

- SHRESTH addresses this by serving as a **virtual gap assessment tool**, guiding states toward **maturity certification** aligned with global benchmarks.

FRAMEWORK & STRUCTURE

- **State Classification**
    - **Manufacturing States** assessed on **27 indicators**.
    - **Primarily Distribution States/UTs** assessed on **23 indicators**.
- **Key Thematic Areas**
    - **Human Resources**
    - **Infrastructure**
    - **Licensing Activities**

- - o **Surveillance Activities**

  - o **Responsiveness (including grievance redressal)**

- **Process & Transparency**

  - o States submit monthly data to **CDSCO by the 25th**, which is then scored and shared on the **1st of the following month**.

  - o Results are shared transparently with all states and UTs.

GLOBAL BENCHMARKING

- SHRESTH is aligned with the **World Health Organization's Global Benchmarking Tool (GBT)**, targeting **Maturity Level 3 (ML3)**—a level indicating stable, well-functioning regulatory systems.

- India achieved **WHO's ML3 status for vaccines in 2024**, and SHRESTH aspires to bring **drug regulation** to similar standards.

SUPPORTING INTERVENTIONS

- **Not of Standard Quality (NSQ) Dashboard**: Being expanded across all states for real-time monitoring.

- **Capacity Building**: Joint trainings, audits, and workshops to enhance state-level regulatory capabilities.

- **National Symposium on Drug Regulatory Systems**: Platform for knowledge sharing and best practices.

SIGNIFICANCE FOR PUBLIC HEALTH & GOVERNANCE

- **Ensures uniform enforcement** of the **Drugs & Cosmetics Act** across India.

- Enhances **consumer trust** by improving drug quality and safety.

- Reinforces India's stature as a **global pharmaceutical leader**.

- Embodies the essence of **cooperative federalism**, leveraging data-driven governance and peer learning.

17 AFRICAN TRYPANOSOMIASIS (SLEEPING SICKNESS)

Kenya has been certified by the World Health Organization (WHO) as free from human African trypanosomiasis (sleeping sickness), becoming the 10th African nation to eliminate the disease as a public health problem.

AFRICAN TRYPANOSOMIASIS (SLEEPING SICKNESS)

- A **parasitic disease** caused by protozoan parasites of the genus **Trypanosoma brucei**.

- Transmitted to humans through the **bite of an infected tsetse fly (Glossina species)**, found only in **sub-Saharan Africa**.

- Classified as a **Neglected Tropical Disease (NTD)** by WHO.

- Fatal if untreated, but curable with proper medication.

CAUSATIVE AGENTS

- **Trypanosoma brucei gambiense (T.b. gambiense):**

  - Found in West & Central Africa.

  - Causes **chronic form** (slower progression, months to years).

  - Responsible for ~95% of reported cases.

- **Trypanosoma brucei rhodesiense (T.b. rhodesiense):**

  - Found in East & Southern Africa.

  - Causes **acute form** (rapid progression, weeks to months).

  - Responsible for ~5% of reported cases.

TRANSMISSION

- Spread by **bite of infected tsetse fly** (blood-sucking insect).

- Flies are mostly found in **rural areas, riverbanks, woodlands, and savannah regions**.

- **Other modes of transmission** (rare):

  - Mother-to-child (congenital).

  - Blood transfusion/organ transplant.

  - Sexual transmission (very rare).

AFRICAN SLEEPING SICKNESS
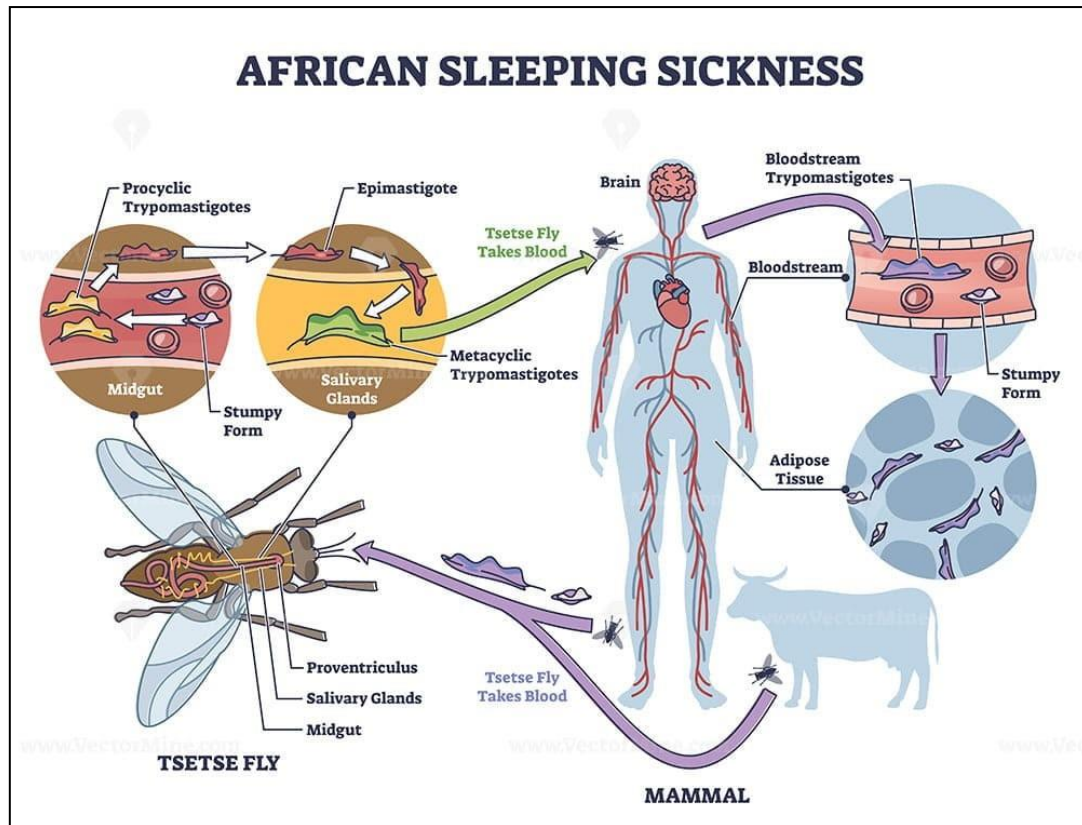
SYMPTOMS & STAGES

STAGE 1: HAEMOLYMPHATIC STAGE

- Parasite multiplies in blood & lymph.

- **Symptoms:** fever, headache, muscle/joint pain, itching, swollen lymph nodes.

- Resembles malaria or other fevers → makes diagnosis difficult.

STAGE 2: NEUROLOGICAL STAGE (SLEEPING SICKNESS)

- Parasite crosses **blood–brain barrier** → affects CNS.

- Symptoms:

    o Behavioral changes, confusion, poor coordination.

    o Disturbed sleep cycle (daytime sleep, night insomnia) → name "Sleeping Sickness."

    o If untreated → coma and death.

DIAGNOSIS

- **Microscopic examination** of blood, lymph, or cerebrospinal fluid.

- **Serological tests** for T.b. gambiense.

- Lumbar puncture (spinal fluid test) to determine disease stage.

TREATMENT

- Drugs depend on **species** & **disease stage**:

  - **Early Stage:** Pentamidine (for T.b. gambiense), Suramin (for T.b. rhodesiense).

  - **Late Stage (CNS involvement):** Eflornithine, Melarsoprol, Fexinidazole (oral drug recently approved by WHO).

PREVENTION & CONTROL

- **Vector control:** Insecticide spraying, traps for tsetse flies, clearing bushes.

- **Protective clothing & repellents** in endemic regions.

- **Mass screening & early treatment** → reduces transmission.

- WHO aims to **eliminate sleeping sickness as a public health problem by 2030**.

RECENT STATUS

- Cases have drastically reduced due to WHO-led elimination campaigns.

- **Over 300,000 cases annually in 1990s** → **less than 1,000 cases reported in 2023**.

- Declared **target for elimination by 2030** under **WHO's NTD Roadmap**.

SPREAD:

- Found in 24 countries (gambiense form) in West & Central Africa, and 13 countries (rhodesiense form) in East & Southern Africa.

- Rhodesiense form is acute and progresses rapidly (weeks–months).

- Gambiense form is chronic, often lasting years without major symptoms.

Treatment: Drugs exist such as pentamidine, suramin, fexinidazole, nifurtimox–eflornithine, eflornithine, and melarsoprol — provided free by WHO.

18 | NASHA MUKT BHARAT ABHIYAAN (NMBA)

The Nasha Mukt Bharat Abhiyaan (NMBA) has completed five years since its launch in 2020, with a special anniversary event scheduled in New Delhi.

INTRODUCTION

- **Launched by:** Ministry of Social Justice and Empowerment (MoSJE), Government of India in **August 2020**.

- **Objective:** To curb the growing problem of **drug abuse and addiction**, especially among youth, and create a **drug-free India**.

- **Approach:** Preventive, educative, and community-driven, focusing not only on treatment but also **awareness and behavioral change**.

Why Important? Drug abuse threatens social order, public health, and economic productivity, making it both a **social and security challenge**.

OBJECTIVES OF NMBA

- **Awareness Creation:** To make people aware of the **harmful impact of drugs** on physical health, mental well-being, and family life.

- **Preventive Education:** Target schools, colleges, and workplaces for **early intervention**.

- **Treatment & Rehabilitation:** Support **de-addiction centers** and provide medical + psychological support to addicts.

- **Community Participation:** Engage **local bodies, NGOs, youth clubs, religious leaders**, and civil society in the campaign.

- **Eradication of Stigma:** Treat drug addiction as a **disease, not a crime**, thus encouraging more people to seek help.

IMPLEMENTATION STRATEGY

- **Targeted Districts:**
  - The government identified **372 vulnerable districts** (based on Narcotics Control Bureau data and prevalence surveys).
  - Special focus on **border states** (Punjab, Manipur, Mizoram, J&K) where drug trafficking routes are active.

- **Institutional Framework:**
  - **Project Management Unit (PMU)** at National level (MoSJE).
  - **State-level Nodal Officers** coordinate with **District Collectors**.
  - Local bodies and NGOs implement on the ground.

- **Awareness Campaigns:**
  - Use of **print, electronic, and social media** for mass awareness.
  - **Rallies, street plays, workshops, counselling camps** in schools and villages.

- **Capacity Building:**
  - Training for teachers, parents, social workers, police, and panchayat members to **identify early signs of addiction**.

KEY COMPONENTS OF NMBA

- **Jan Andolan Approach (People's Movement):** Like Swachh Bharat, NMBA aims for **public ownership**.

- **Youth Involvement:** Engagement of **NSS, NYKS, NCC cadets, and students** as "Change Agents".

- **De-addiction Support:** Strengthening **Integrated Rehabilitation Centres for Addicts (IRCAs)** and helplines.

- **Digital Outreach:** Use of **MyGov portal, social media campaigns, mobile apps** for awareness and counselling.

- **Collaboration with Law Enforcement:** Coordination with **NCB, police, BSF, SSB, and Coast Guard** to cut supply chains.

ACHIEVEMENTS (TILL 2025)

- Awareness activities in **10,000+ educational institutions**.

- **2+ crore people sensitized** across the country.

- Active participation of **8000+ youth volunteers and NGOs**.

- Helpline **14446** established for counselling and assistance.

- Some states like Punjab and Manipur reported **decline in youth drug abuse cases**.

CHALLENGES

- **Easy Availability:** Drugs often trafficked through **Golden Crescent (Afghanistan, Pakistan, Iran)** and **Golden Triangle (Myanmar, Laos, Thailand)**.

- **Stigma:** Addicts still face **social boycott**, preventing treatment-seeking behavior.

- **Coordination Issues:** Lack of **seamless coordination** among central, state, and local agencies.

- **Rehabilitation Gaps:** Shortage of **counselors, psychiatrists, and rehab centers**.

- **Youth Vulnerability:** Peer pressure, unemployment, stress, and urban lifestyles increase **susceptibility to drugs**.

WAY FORWARD

- **Holistic Approach:** Balance between **supply reduction (law enforcement)** and **demand reduction (awareness, rehab)**.

- **School Curriculum:** Include chapters on **drug prevention and life skills** in NCERT and state textbooks.

- **Community Rehab Models:** Panchayats and self-help groups should run **community-based de-addiction centers**.

- **Technology Integration:** Use **AI, big data, and surveillance tools** to track supply chains and prevent smuggling.

- **International Cooperation:** Stronger collaboration with **SAARC, UNODC, ASEAN** to curb cross-border drug trade.

19	INDIA SEMICONDUCTOR MISSION (ISM)

The Union Cabinet has approved ₹4,600 crore for four **new semiconductor manufacturing** projects in Odisha, Punjab, and Andhra Pradesh, under the India Semiconductor Mission (ISM).

NEW SEMICONDUCTOR PLANTS

- **SiCSem Pvt. Ltd. (Odisha):** In collaboration with Clas-SiC Wafer Fab Ltd., UK.

- India's first commercial **Silicon Carbide (SiC)** compound semiconductor fab.

- **3D Glass Solutions Inc. (Odisha):** Vertically integrated advanced packaging & embedded glass substrate unit.

- **Technology:** 3D Heterogeneous Integration modules.

- **ASIP Technologies (Andhra Pradesh):** Joint venture with APACT Co. Ltd., South Korea.

- **Continental Device India Pvt. Ltd. (Punjab):** Brownfield expansion in Mohali.

INDIA SEMICONDUCTOR MISSION (ISM)

INTRODUCTION

- Launched in **December 2021** under the **Ministry of Electronics and Information Technology (MeitY)**.

- Part of the **₹76,000 crore Semiconductor and Display Fab Ecosystem Programme**.

- Aims to position India as a **global hub for semiconductor design, manufacturing, and innovation**.

OBJECTIVES

- **Self-Reliance (Atmanirbhar Bharat):** Reduce dependence on imports (India imports >90% of semiconductors).

- **Secure Supply Chains:** Ensure availability of chips for critical sectors like defence, telecom, automotive, consumer electronics.

- **Promote Manufacturing:** Support setting up of **semiconductor fabs, display fabs, compound semiconductors, silicon photonics, and OSAT/ATMP (assembly & testing units)**.

- **R&D and Talent Development:** Strengthen design capabilities, create skilled workforce, and promote innovation.

- **Global Competitiveness:** Attract investment from global semiconductor giants (Intel, TSMC, Micron, etc.).

INSTITUTIONAL STRUCTURE

- ISM is a **specialized and independent business division** within **Digital India Corporation (DIC)**.

- Functions as a **nodal agency** for semiconductor & display ecosystem.

- Headed by experts from the semiconductor industry and academia.

KEY COMPONENTS OF THE PROGRAMME

- **Semiconductor Fabs:**
  - Government to provide up to **50% financial support** for setting up fabs (manufacturing plants).
  - Focus on 28nm & below technology nodes.
  - **Target:** 2–3 greenfield fabs in India.

- **Display Fabs:**
  - Encourage TFT-LCD and AMOLED display manufacturing.
  - Support up to **50% of project cost**.

- **Compound Semiconductors & ATMP/OSAT:**
  - Incentives for facilities in compound semiconductors, silicon photonics, sensors, and packaging.

- **Design Linked Incentive (DLI) Scheme:**
  - Support **semiconductor design startups and MSMEs**.
  - Provides product design incentives (up to 50% of R&D cost) and deployment-linked incentives.

RECENT DEVELOPMENTS (2023–25)

- **Micron Technology** (USA) set up a **$2.75 billion semiconductor plant** in Gujarat (2023).

- **Tata Group** announced plans to set up **semiconductor fabs & OSAT units** in Gujarat and Karnataka.

- **Israel, Japan, US, Taiwan collaborations** being explored.
- ISM is building a **Semiconductor Talent Pool** with IITs & NITs.

SIGNIFICANCE FOR INDIA

- **Strategic:** Semiconductors are critical for **defence, AI, 5G, IoT, EVs, space technology**.
- **Economic:** Will reduce import bill (~$24 billion annually on semiconductors).
- **Employment:** Potential to create **1 lakh+ direct and 2.5 lakh+ indirect jobs**.
- **Global Positioning:** Strengthens India's role in global electronics supply chain.

CHALLENGES

- **Capital Intensive:** Setting up a fab cost **$5–10 billion**.
- **Technology Barriers:** Advanced nodes (<7nm) dominated by **Taiwan (TSMC), South Korea (Samsung), USA (Intel)**.
- **Skilled Workforce Shortage:** India needs more VLSI and semiconductor design engineers.
- **Geopolitical Risks:** US-China chip war, Taiwan tensions.
- **Ecosystem Gaps:** Need strong **raw material, chemical, and equipment supply chains**.

WAY FORWARD

- **Strategic Partnerships:** Collaborate with Taiwan, US, Japan, EU.
- **Public–Private Partnerships:** Incentivize Indian corporates (Tata, Vedanta, Reliance).
- **Talent Development:** Specialized semiconductor courses in IITs/NITs.
- **R&D Ecosystem:** Support indigenous chip design and IP creation.
- **Balanced Policy:** Ensure sustainability and environmental safety (fabs consume huge water)

| 20 | **RABIES** |

The Supreme Court has ordered the immediate capture and permanent confinement of stray dogs in Delhi amid rising rabies-related deaths, bringing renewed focus to this preventable yet fatal disease that kills thousands in India each year.

RABIES IN INDIA

INTRODUCTION

- Rabies is a **viral zoonotic disease** caused by the *Rabies Lyssavirus* (family: *Rhabdoviridae*).

- It is **almost 100% fatal once clinical symptoms appear**, but **100% preventable** with timely vaccination.

- India bears the **highest burden of rabies globally**, contributing to ~36% of world rabies deaths.

EPIDEMIOLOGY IN INDIA

- **Human Deaths:** ~18,000–20,000 annually (WHO, 2023 estimates).

- **Bite Incidents:** Nearly **1.5–1.8 crore animal bites per year**.

- **Reservoir:** 96% of rabies cases in India are due to **dog bites** (both stray & pet dogs).

- **High-risk states:** Uttar Pradesh, Bihar, West Bengal, Andhra Pradesh, Maharashtra, Tamil Nadu, Odisha.

- **Vulnerable group:** Mostly affects poor, rural communities, with **children under 15 years** accounting for ~40% of cases.

TRANSMISSION

- **Virus is transmitted via:**
    - Bite or scratch of infected animals (mainly dogs, occasionally cats, monkeys, jackals).
    - Saliva entering mucous membranes or open wounds.

SYMPTOMS

- **Incubation Period:** 1–3 months (can vary from a week to a year).
- **Clinical Types:**
    - *Furious Rabies* – aggression, hydrophobia (fear of water), aerophobia (fear of air), hallucinations.
    - *Paralytic Rabies* – gradual paralysis, coma, death.

CHALLENGES IN INDIA

- **Stray Dog Population:** Estimated 1.5–2 crore. Uncontrolled breeding, poor waste management.
- **Low Vaccination Coverage:** Both in dogs (only ~15% vaccinated) and humans (poor access in rural areas).
- **Awareness Gap:** Many people still use **traditional remedies** after dog bites instead of proper vaccination.
- **Poor Surveillance:** Rabies is a **notifiable disease since 2021**, but underreporting remains high.
- **Healthcare Gaps:** Limited availability of Anti-Rabies Vaccine (ARV) and Rabies Immunoglobulin (RIG) in rural hospitals.

GOVERNMENT INTERVENTIONS

- **National Rabies Control Programme (NRCP):**
  - Launched in **2013**.
  - **Focus:** Mass dog vaccination, pre- and post-exposure prophylaxis (PEP), awareness campaigns.

- **National Action Plan for Dog Mediated Rabies Elimination (NAPRE), 2030:**
  - **Target: Eliminate rabies by 2030** in line with WHO's global goal.
  - Multi-sectoral approach under **One Health Framework** (linking human, animal, and environmental health).

- **NADCP (National Animal Disease Control Programme):**
  - Dog population management + vaccination.

- **Awareness Campaigns:**
  - Observance of **World Rabies Day (28 September)**.
  - Integration of rabies awareness in school health programs.

PREVENTION & TREATMENT

- **For Humans:**
  - *Immediate wound washing* with soap and water for at least 15 minutes.
  - *Vaccination:* Post-Exposure Prophylaxis (PEP) with 4–5 doses of ARV.

- o *Rabies Immunoglobulin (RIG):* For severe bites (Category III).
- **For Dogs:**
  - o Mass dog vaccination (at least 70% coverage needed).
  - o Animal birth control (ABC) programmes.

INTERNATIONAL PERSPECTIVE

- WHO, OIE (World Organization for Animal Health), FAO, and GARC (Global Alliance for Rabies Control) launched the **"Zero by 30"** initiative: global elimination of dog-mediated human rabies by 2030.
- India is a key partner given its high burden.

WAY FORWARD

- **Strengthen vaccination drive** for both humans and animals.
- **Better waste management** to reduce stray dog dependence on garbage.
- **Community awareness** about wound washing and immediate ARV use.
- **Integration under One Health approach** (linking veterinary, human health, and urban governance).
- **Compulsory dog registration & vaccination** for pets.
- **Robust data collection & surveillance** through digital platforms.

21	MASS MORTALITY OF STARFISH

Context: Scientists have identified the bacterium Vibrio pectenicida as the cause of a decade-long wasting disease that killed billions of starfish along North America's Pacific coast.

MASS MORTALITY OF STARFISH

- Since 2013, starfish populations along the Pacific coast of North America have been devastated by a mysterious wasting disease leading to the death of over 5 billion sea stars.

- The disease caused disintegration of their bodies, leaving only organic mush, and triggered major ecological imbalances.

- For years, scientists suspected viruses like densovirus. Recently, researchers discovered that the disease was caused by bacterium Vibrio pectenicida, related to cholera-causing Vibrio cholerae.
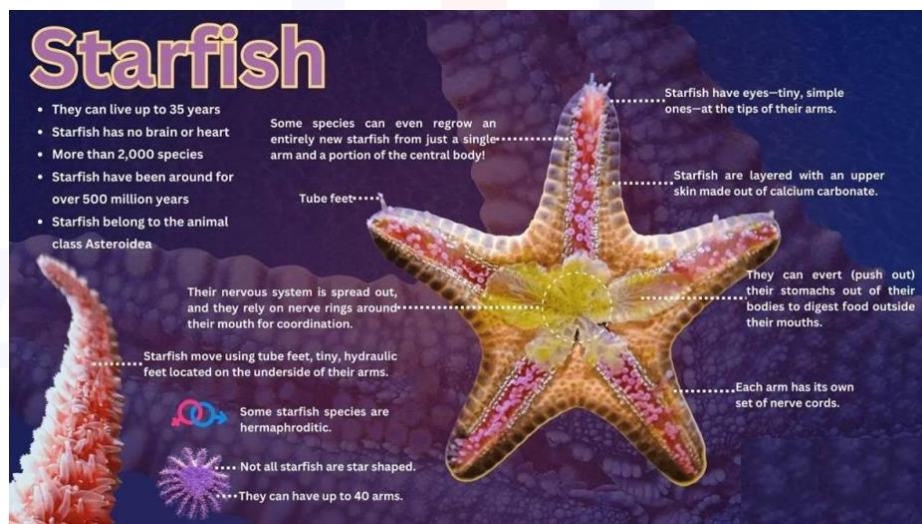
STARFISH (SEA STARS):

HABITAT & DISTRIBUTION:

- Found in all world oceans, from tropical coral reefs to cold deep-sea habitats.

- Most abundant in intertidal and subtidal zones.

FEEDING & ECOLOGICAL ROLE:

- **Carnivorous Predators:** Feed on bivalves (clams, mussels), snails, and other invertebrates.

- **Unique Feeding Method:** Evert their stomachs outside their body to digest prey externally.

- Help regulate populations of prey species like sea urchins, thereby maintaining kelp forest ecosystems.

- **Reproduction:** Starfish reproduce both sexually (external fertilization) and asexually (regeneration).

- **Regeneration:** Can regrow lost arms; in some cases, a single arm can regenerate an entire new body.

MANY SPECIES FACE THREATS FROM:

- Marine diseases (e.g., Vibrio pectenicida in wasting disease)

- Ocean warming and acidification.

- Habitat destruction and pollution.

- Sunflower Sea Star is listed as Critically Endangered by the IUCN (2020) after a 90% population decline.

OTHER KEY FACTS:

- Starfish do not have a brain. Instead, they possess a nerve ring around the central disc, from which radial nerve cords extend into each arm to coordinate movement and sensory responses.

- They also lack a heart and blood. Circulation of nutrients, gases, and immune cells is carried out through coelomic fluid, aided by the water vascular system.

- No specialized excretory organs; nitrogenous waste is removed by diffusion through body surfaces.

ECOLOGICAL SIGNIFICANCE:

- Keystone Species Role: Starfish regulate sea urchin populations; their loss destabilises the marine food web.
- Maintains Kelp Forest Health: Overgrazing by unchecked urchin populations leads to kelp decline, reducing biodiversity and climate resilience. Kelp forests act as major blue carbon sinks; their destruction indirectly increases atmospheric CO_2.

CONSERVATION IMPLICATIONS:

Identification enables targeted interventions:
- Probiotic treatments for wild starfish.
- Breeding Vibrio-resistant starfish in labs for reintroduction.
- Informs marine disease management protocols and biosecurity measures.

| 22 | INDIA'S RETAIL INFLATION HITS 8-YEAR LOW OF 1.55% |

India's retail inflation rate has dropped to 1.55% in July 2025, its lowest rate since June 2017 (lowest level in eight years), driven by a drop in food prices.

RETAIL INFLATION

Retail inflation reflects the cost of everyday goods and services bought for consumption purposes by households. It is measured by the Consumer Price Index (CPI).

Under **the inflation-targeting regime** (2016), the Reserve Bank of India is mandated to keep inflation within a **2%-6% band**, and must explain to the government if it breaches either end for three consecutive quarters.

RETAIL INFLATION IN INDIA

- India's **retail inflation rate** has dropped to 1.55% in July 2025, its lowest rate since June 2017.

- Inflation is well below the **Reserve Bank of India's tolerance band of 2%-6%** for the first time since January 2019.

- **Food prices** have been the main driver for the drastic fall in inflation for the last eight months.

- **Concerns:** A drop below 2% signals **weak demand** and can **hurt farm incomes and rural spending**. However, it is unlikely to trigger an immediate rate cut as policymakers may view the decline as temporary and driven by volatile food prices.

India inflation falls to lowest in eight years
Retail inflation in July is lowest since June 2017
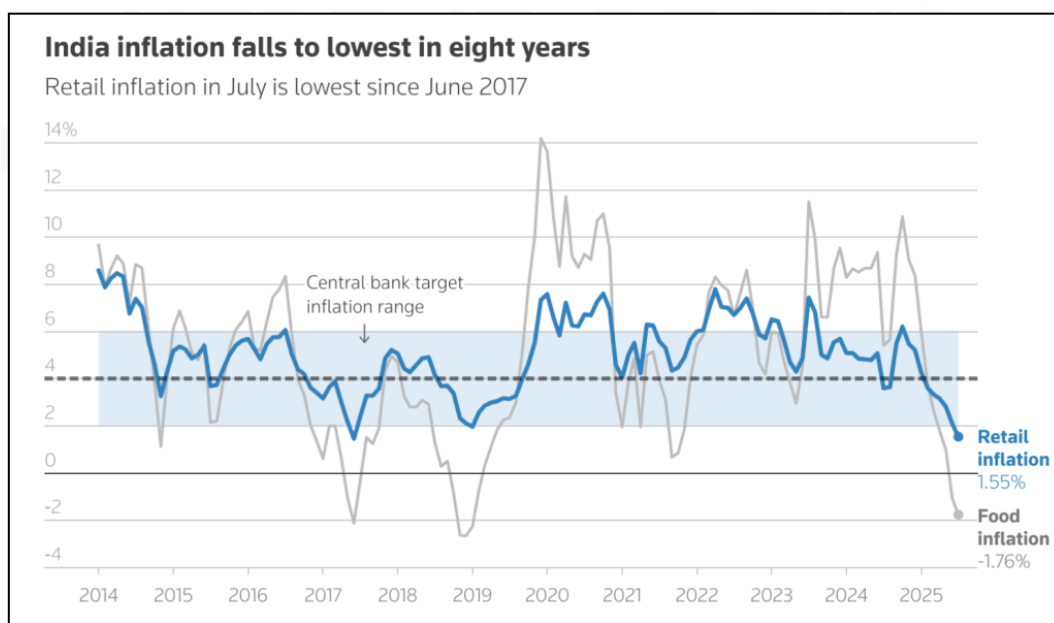
KEY GOVERNMENT INTERVENTIONS TO HELP LOWER RETAIL INFLATION:

- Bolstering buffer stocks of essential food items, and releasing them periodically in open markets.

- Subsidized retail sales of staples like rice, wheat flour, pulses, and onions.

- Simplified import duties on critical food items.

- Stricter stock limits to prevent hoarding.

- Reduced GST rates on essentials have further eased price pressures.

- Targeted subsidies, such as LPG support under Pradhan Mantri Ujjwala Yojana and the Pradhan Mantri Garib Kalyan Anna Yojana.

WHAT IS THE CONSUMER PRICE INDEX (CPI)?

- CPI is an economic indicator that measures inflation at retail level (changes in the level of retail prices over time).

- It reflects how much households need to spend on a fixed basket of goods and services they typically consume, such as food, clothing, housing, and fuel.

- **Compiled by:** National Statistical Office (NSO), under the Ministry of Statistics and Programme Implementation.

CALCULATED USING: BASE YEAR 2012

- CPI is a key benchmark for targeting inflation, monitoring price stability, and guiding monetary policy decisions by the Reserve Bank of India.

- It also serves as a deflator in the National Accounts to measure real economic growth.

- With inflation now at its lowest since 2017, India has reinforced macroeconomic stability and created an enabling environment for sustainable growth.

- However, the steep fall in food prices can lower farmer incomes and directly impact rural consumption demand.

23 CARRIAGE OF GOODS BY SEA ACT 2025 & COASTAL SHIPPING ACT 2025

In the biggest overhaul of India's maritime legal framework, two landmark legislations- 'Carriage of Goods by Sea Act, 2025', and the 'Coastal Shipping Act, 2025' have been enacted.

OVERHAUL OF INDIA'S MARITIME LEGAL FRAMEWORK

- The Carriage of Goods by Sea Act, 2025 replaces outdated provisions of the Indian Carriage of Goods by Sea Act, 1925.

- The Coastal Shipping Act, 2025 seeks to simplify and modernize the legal framework governing coastal shipping.

- It replaces outdated provisions of Part XIV of the Merchant Shipping Act, 1958.

CARRIAGE OF GOODS BY SEA ACT, 2025

- The Carriage of Goods by Sea Act, 2025 adopts Hague-Visby Rules, a globally accepted maritime standard. It standardizes Indian maritime trade law with globally accepted norms (especially regarding bills of lading and cargo liability).

- The Act lays out clearly defined roles, responsibilities, liabilities and protections for parties involved in the carriage of goods by sea to reduce legal disputes.

- It caps carrier liability to provide predictability for shippers and insurers. Exemptions cover force majeure events like war and natural disasters, while allowing negotiated terms for special cargo.

- The Act outlines clear rules around the Bill of Lading- including who is responsible if something goes wrong, and what rights both parties have. The government can update or modify the rules related to bills of lading, without needing to bring a new law to Parliament.

BILL OF LADING:

- It is a legal receipt issued by a shipping company to the person sending the goods.

- It lists what goods are being shipped, their quantity and condition, and where they are going.

- It acts as proof of ownership of the goods and is essential for international trade.

COASTAL SHIPPING ACT, 2025

- The Coastal Shipping Act, 2025 consolidates rules for coasting trade, defined as cargo or passenger movement between Indian ports or related offshore activities.

- It introduces a simplified licensing system for coastal shipping and lays down the framework for regulating foreign vessels engaged in coasting trade.

- It requires foreign vessels to obtain licences from the Director-General of Shipping.

- Indian vessels, while exempt from licensing, must meet reporting norms.

- The Act mandates formulation of National Coastal and Inland Shipping Strategic Plan to map routes, forecast traffic and integrate coastal shipping with inland waterways. It has to be updated every two years.

- It provides for creation of a National Database for Coastal Shipping to enable real-time access to authentic and regularly updated data. This database will keep potential investors informed about the government's development plans and policy priorities.

- Strict penalties target unlicensed operations, false declarations and safety breaches. The government is empowered to reroute or ban vessels in public interest or for national defense.

SIGNIFICANCE OF OVERHAULING INDIA'S MARITIME LEGAL FRAMEWORK:

- Align India's maritime framework with global conventions and international protocols.

- Streamline coastal trade and priorities Indian-owned vessels in domestic waters. Enhance supply-chain security by increasing Indian ships' participation in domestic cargo movement.

- The National Database for Coastal Shipping will promote transparency and confidence.

- Reduce India's dependence on foreign vessels thereby preventing the outflow of foreign exchange.

- Promotes ease of doing business for Indian shipping operators, cuts freight costs and enhances multimodal transport efficiency.

- Catalyses local economic development generating employment opportunities across coastal regions.

India moves a step closer to building a rule-aligned, integrated, efficient, and globally competitive coastal and inland shipping ecosystem, while securing the country's vast 7500 km coastline for strategic and commercial benefit.

| 24 | FISHING CAT |

India is home to 15 species of the cat family (Felidae). Smaller wild cats like the Fishing Cat remain lesser-known yet ecologically significant. The species faces growing threats from habitat loss and human-wildlife conflict, particularly due to the degradation of wetlands.

An elusive nocturnal cat, twice the size of the domestic cat. It weighs 7-12 kgs, and has a greyish brown fur lined with black spots.

BEHAVIOUR:

- In its territory, this cat is often the apex predator meaning no other creature preys on it.

- The diet is primarily fish; it also hunts on rodents, chickens, small animals.

- Well adapted to water with webbed paws, a waterproof coat, ability to swim underwater, and claws that stay out to help grip mud and catch fish.

HABITAT:

- Wetlands i.e., river floodplains, mangroves, marshes, swamps.

DISTRIBUTION IN INDIA:

- Terai region, marshes of western India, Sundarbans, East coast, Chilika Lake (Odisha), Sri Lanka; rediscovered in Keoladeo National Park (Rajasthan).

- The fishing cat spends 50% of its hunting time standing, sitting or crouching near the edge of water. Barely 5% of hunting time is spent submerged in water.

PROTECTION STATUS:

- **IUCN Red List:** Vulnerable

- **CITES:** Appendix II (trade regulated to avoid threats to survival)

- **Indian Wildlife (Protection) Act 1972:** Schedule I (the highest level of legal protection in India)

- Fishing cat numbers are rapidly declining in the Sundarbans and were once thought extinct in Rajasthan until recent sightings in Keoladeo National Park.

FACTORS RESPONSIBLE FOR DECLINE:

- **Habitat loss**: The decline is largely on account of habitat loss. It has been estimated that 30-40% of India's wetlands have been lost or severely degraded in the last four decades. Protecting wetland ecosystems is therefore crucial for the fishing cat.

- Human encroachment on wetlands and revenge killings of cats by humans.

**SCIENTIFIC RESEARCH & MONITORING:**

- **Fishing Cat Project (Tiasa Adhya**): Extensive surveys, community engagement.

- **Wildlife Institute of India's Godavari Estuary Project:** GPS collar tracking in Coringa Wildlife Sanctuary (Andhra Pradesh) to map habitat use and human interaction zones.

- **Community-Based Conservation:** Awareness campaigns to reduce animosity and promote co-existence.

25	**OCEAN MODEL AFFIRMS FUKUSHIMA WASTEWATER RELEASE IS SAFE**

A recent simulation study by Japanese researchers using an ocean circulation model has affirmed that Fukushima wastewater release is safe.
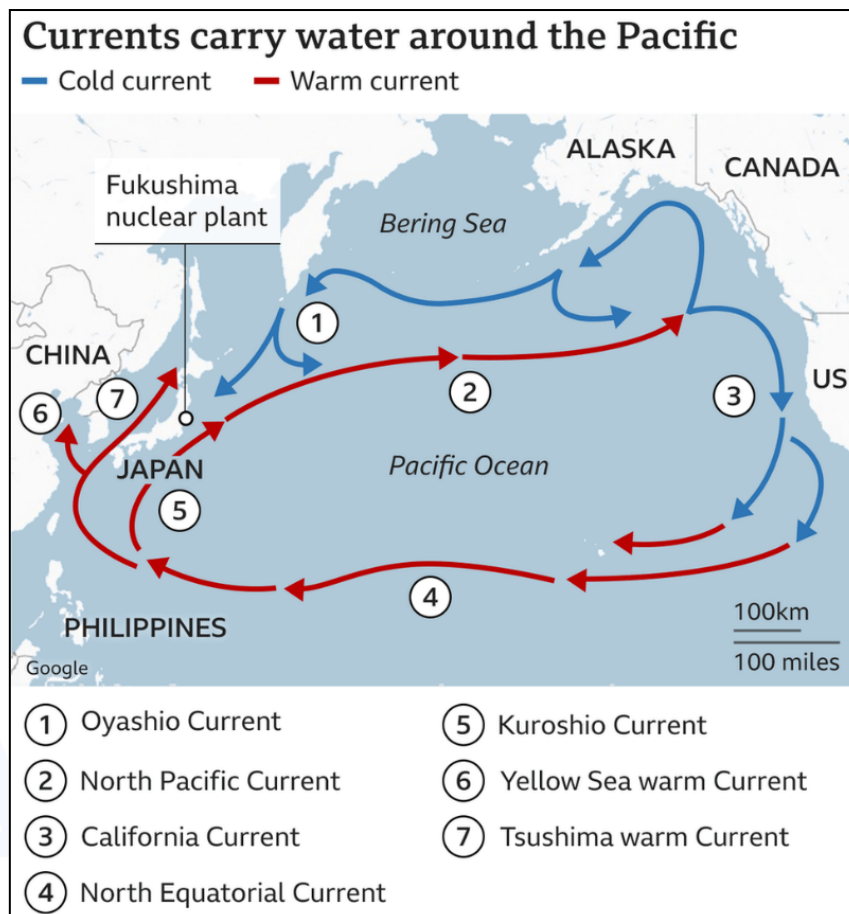
JAPAN RELEASES WASTEWATER FROM FUKUSHIMA NUCLEAR PLANT

- An earthquake followed by a tsunami in 2011 wrecked the Fukushima Daiichi Nuclear Power Plant in Japan, destroying its cooling system and causing reactor cores to overheat and contaminate water within the facility with highly radioactive material.

- Since the disaster, power plant company TEPCO has been pumping in water to cool down the damaged reactors' fuel rods. Every day the plants produce contaminated water which is stored in around 1,000 tanks, which are already filled to 98% of their 1.37-million-ton capacity.

- This water has been treated to remove most radioactive contaminants but still contains tritium (a radioactive isotope of hydrogen) and Carbon-14 which are difficult to separate from water.

- In 2021, Japan's government announced plans to release over one million tons of contamiated water from the Fukushima nuclear plant into the Pacific ocean over the next 30 years.

RATIONALE TO RELEASE WASTEWATER

- There is a lack of available space for additional storage tanks, as well as due to safety risks and expense of managing the accumulating water.

- Japan states that the water has been treated and diluted before releasing it into the ocean.

- The water contains about 190 becquerels of tritium per litre, below the World Health Organization drinking water limit of 10,000 becquerels per litre (Bq/L). (Becquerel is a unit of radioactivity).

ASSOCIATED CONCERNS:

- The release has raised concerns among China and South Korea, as well as environmental and anti-nuclear groups regarding its potential impact on public health (increase the risk of cancer), seafood and marine environment.

- Waste water released into the ocean off Fukushima will not be contained to waters surrounding Japan.

  - It will be carried by ocean currents, particularly the cross-Pacific Kuroshio current, to other parts of the world.

- Marine animals that migrate great distances, phytoplankton (free-floating organisms) and microplastics can all act as Trojan horses to spread radionucleotides far away.

FINDINGS OF THE LATEST RESEARCH BY JAPANESE RESEARCHERS:

- **Low radiation levels:** As the nuclear facility is releasing tritiated water gradually, the Tritium levels (radiation level) is even lower than that due to natural and historical sources. The peaks from the routine discharge never exceed 0.002 Bq/L, which is 25x (25 times) lower than natural background radiation levels.

- **Impact of Warming:** Warmer oceans might shift the Kuroshio Current a little North and strengthen eastward flow, speeding up tritium dispersion in the mid-Pacific. However, Tritium concentrations will still remain three orders of magnitude below detection threshold.

- Since, Tritium has a half-life of around 12 years, natural decay reduces long-term risk. Even under extreme warming or a worst-case eddy transport scenario, the

levels of the Tritium would remain undetectable across the wider Pacific Ocean by 2099.

ABOUT TRITIUM:

- Tritium is a radioactive isotope of Hydrogen with a half-life of about 12 years. Hydrogen has three isotopes:
    - **Protium-** one proton and zero neutron
    - **Deuterium -** one proton and one neutron
    - **Tritium -** one proton and two neutrons

OCCURRENCE:

- Naturally occurring tritium is extremely rare on Earth.

- The atmosphere has only trace amounts, formed by the interaction of Nitrogen with cosmic rays.

- It can be produced artificially as a low-abundance byproduct in nuclear reactors.

USES:

- Energy source in radio luminescent lights for watches, gun sights, numerous instruments and tools.

- Radioactive tracer in a medical and scientific setting.

- Nuclear fusion fuel, along with more abundant deuterium, in tokamak reactors and hydrogen bombs.

- **Concerns:** Tritium is easily absorbed by the bodies of living creatures and rapidly distributed via blood.

26	RUSSIAN TERRITORIAL CONTROL IN UKRAINE

Russia controls about one-fifth of Ukraine, including key industrial and strategic hubs.

KEY AREAS UNDER RUSSIAN CONTROL

- **Crimea:** Annexed in **2014**; strategic naval and military base in the **Black Sea**.

- **Luhansk:** Fully under control; industrial **Donbas hub** rich in metals and chemicals.

- **Kherson:** Roughly 73% controlled; crucial link in the **"land bridge"** to **Crimea**.

- **Kharkiv & Sumy:** Small but strategically important occupied pockets.

- **Zaporizhzhia:** Largely under control; home to **Europe's largest nuclear power plant**.

- **Donetsk:** About 75% controlled; part of **Donbas** with Ukraine's heavily fortified **"fortress belt"** defence.

RUSSIA–UKRAINE CRISIS

HISTORICAL ROOTS

- **Kievan Rus (9th–13th century):** The medieval state centered in Kyiv is often seen as the cultural and political ancestor of both Russia and Ukraine.

- **Mongol conquest (13th century):** Fragmentation followed, with Ukraine's lands later coming under the Polish-Lithuanian Commonwealth and Russia.

- **Russian Empire (17th–19th century):** Much of Ukraine gradually came under Russian rule, with attempts to suppress Ukrainian language and culture.

- **Soviet Union (1922–1991):** Ukraine became a founding republic of the USSR. The **Holodomor (1932–33)** famine under Stalin killed millions of Ukrainians and left deep scars.

INDEPENDENCE AND EARLY TENSIONS

- **1991:** After the USSR collapsed, Ukraine declared independence. In a referendum, over 90% voted for sovereignty, including Crimea.

- **Nuclear disarmament:** Ukraine gave up the world's 3rd largest nuclear arsenal under the **1994 Budapest Memorandum**, in exchange for Russia, the US, and the UK guaranteeing its sovereignty and borders.

- **1990s–2000s:** Ukraine's politics oscillated between **pro-Western** and **pro-Russian** leadership. NATO's eastward expansion worried Russia.

ORANGE REVOLUTION (2004–2005)

- A disputed presidential election, marred by fraud favoring pro-Russian candidate **Viktor Yanukovych**, triggered mass protests.

- The **Orange Revolution** led to a re-run of elections, won by **Viktor Yushchenko** (pro-Western). This marked a shift toward Europe.

EUROMAIDAN AND CRIMEA ANNEXATION (2013–2014)

- **2013:** President **Yanukovych** (returned to power in 2010) rejected an EU association agreement under Russian pressure, sparking the **Euromaidan protests**.

- **2014:** Violence escalated, Yanukovych fled, and a pro-Western interim government took over.

- **Russia responded by annexing Crimea (March 2014)** after a disputed referendum. This was condemned internationally as illegal.

- Around the same time, **Russia-backed separatists** in Donetsk and Luhansk (Donbas region) declared independence, leading to a war with Ukraine.

WAR IN DONBAS (2014–2021)

- Pro-Russian separatists, supported by Moscow, fought the Ukrainian army.

- **MH17 Tragedy (2014):** A Malaysian Airlines flight was shot down over Donbas, killing 298 people, allegedly by Russian-supplied missiles.

- **Minsk Agreements (2014 & 2015):** Peace deals brokered by France and Germany attempted to end fighting but failed to fully implement.

- The war became a "frozen conflict," with over **14,000 deaths** between 2014 and 2021.

FULL-SCALE INVASION (2022–PRESENT)

- **February 24, 2022:** Russia launched a full-scale invasion of Ukraine, calling it a "special military operation."

- **Russian aims:** "Demilitarization and denazification" of Ukraine, preventing NATO expansion.

- **Global response:** Massive Western sanctions on Russia, military and financial aid to Ukraine, and historic NATO unity.

- **War developments:**

  - Russia captured parts of eastern and southern Ukraine (including Mariupol, Kherson, Zaporizhzhia regions).

  - Ukraine launched counter-offensives, reclaiming Kherson city (Nov 2022).

  - The war became one of attrition, with heavy casualties on both sides.

GEOPOLITICAL DIMENSIONS

- **NATO & EU:** Ukraine applied for fast-track EU membership and deepened NATO cooperation.

- **Russia & China:** Russia leaned more on China, Iran, and Global South for support.

- **Global Economy:** Energy crises, food shortages, and inflation spread worldwide due to the war.

CURRENT SITUATION (2025)

- The war is ongoing, with neither side achieving decisive victory.

- Russia controls parts of Donbas and southern Ukraine, while Ukraine resists with Western backing.

- Peace talks remain stalled, with both sides demanding conditions unacceptable to the other.

- The conflict has reshaped global geopolitics, reviving Cold War–style divisions.

27 NEWLY DISCOVERED FRESHWATER CRAB SPECIES IN KERALA

Kerala University researchers have discovered Kasaragodina, a new freshwater crab genus, and Pilarta vaman, a new freshwater crab species, in the Western Ghats.

ABOUT KASARAGODINA

- Kasaragodina is newly described as a **freshwater crab genus** in **Kerala**.

- **Distribution:** Restricted to hill streams of Ranipuram in **Kasaragod district**, Western Ghats.

- **Microhabitat:** Inhabits **shaded stream zones** under stones and forest leaf litter, ensuring shelter.

- **Distinctive Features: Brown-orange upper shell** with lateral **black markings** aids field identification.

- **Ecological Role:** Likely aids **leaf-litter decomposition**, enhancing nutrient recycling in headwaters.

- **Indicator:** Presence signals **undisturbed riparian vegetation** and stable watershed conditions.

ABOUT PILARTA VAMAN

- Pilarta vaman is newly described as a **freshwater crab species** in **Kerala**.

- **Distribution:** Located in **clear montane streams of Gavi** in the southern Western Ghats.

- **Habitat Preference:** Occupies **gravel-bed streams** within dense, **high-elevation forest** catchments.

- **Distinctive Features: Squarish upper shell** provides a reliable marker for species recognition.

- **Etymology:** Named "**vaman**" from Sanskrit, denoting a **smaller size** than the related species.

- **Ecological Role: Regulates benthic invertebrate** abundance, aiding balance in aquatic ecosystems.

- **Indicator:** Associated with **high water clarity** and minimal sediment disturbance.

28 NARROW-BANDED RAIN SNAKE (SMITHOPHIS LEPTOFASCIATUS)

A new species of narrow-banded rain snake, Smithophis leptofasciatus, has been recorded in Mizoram, enriching reptile diversity in sensitive montane forests.

ABOUT THE SPECIES

- **Scientific name:** *Smithophis leptofasciatus*

- **Common name:** Narrow-banded Rain Snake

- **Family:** Colubridae (non-venomous snakes)

- **Description:**

  o Slender-bodied snake with **narrow light bands** across its body.

  o Semi-aquatic, often associated with **rain-fed forest streams**.

  o Harmless to humans, feeds on small amphibians, fish, and invertebrates.

DISCOVERY IN MIZORAM

- Recently **recorded in Mizoram**, adding to the state's growing list of reptilian diversity.

- Earlier, *Smithophis* species were described only in parts of **Arunachal Pradesh, Nagaland, and Myanmar**.

- Mizoram's record extends its known distribution, showing the **ecological continuity** of Indo-Burma forests.
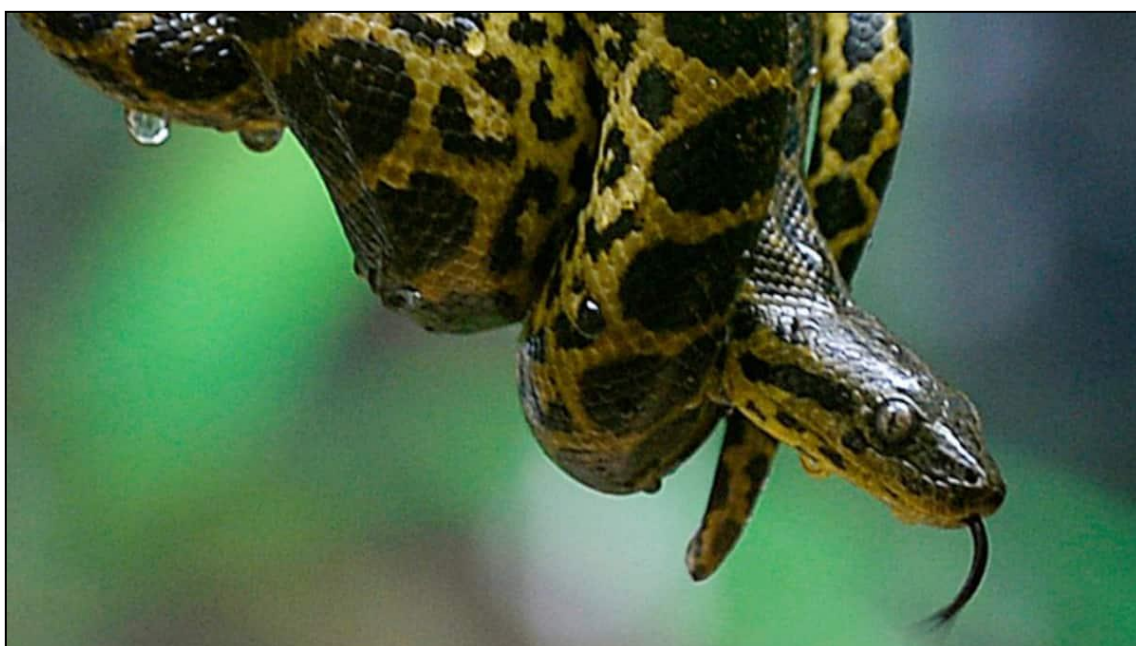
ECOLOGICAL SIGNIFICANCE

- **Indicator species:** Presence of rain snakes reflects **healthy freshwater and forest ecosystems**, as they thrive only in clean, moist habitats.

- **Montane forests of Mizoram:**
  - Located within the **Indo-Burma Biodiversity Hotspot**.
  - Rich in reptiles, amphibians, orchids, and bird species.
  - Sensitive to **climate change and human disturbance**.

- **Trophic role:** Helps regulate amphibian populations, maintaining ecological balance.

BIODIVERSITY HOTSPOT CONTEXT

- **Indo-Burma Hotspot** (includes Mizoram and NE states) is one of the **top global hotspots** with very high endemism.

- New discoveries like *Smithophis leptofasciatus* highlight that much of this biodiversity is still **undocumented**.

- Mizoram acts as a **biogeographic bridge** between India and Southeast Asia.

CONSERVATION CONCERNS

- **Threats:**
  - Shifting cultivation (jhum) → deforestation.
  - Road building and infrastructure → habitat fragmentation.
  - Climate change altering rainfall → impacts on rain-dependent species.
- **Importance of discovery:**
  - Strengthens the case for **habitat protection** in Mizoram's montane forests.
  - Enhances global recognition of NE India as a center for **herpetological diversity**.

POLICY AND LEGAL ASPECTS

- India is signatory to **Convention on Biological Diversity (CBD)**.
- Species like *Smithophis leptofasciatus* stress the need for **environmental safeguards** under:
  - **Wildlife Protection Act, 1972** (though many new reptiles are yet to be listed).
  - **Biological Diversity Act, 2002**.
  - **Forest Rights Act, 2006** – ensuring tribal communities coexist with biodiversity conservation.

29 SIMULTANEOUS COMMISSIONING OF UDAYGIRI AND HIMGIRI STEALTH FRIGATES

The Indian Navy will commission Himgiri and Udaygiri together at Visakhapatnam, marking its first simultaneous induction of major combatants from different domestic shipyards.

WHAT IS SIMULTANEOUS COMMISSIONING?

- **Milestone:** This marks the **first simultaneous commissioning** of two large frontline stealth frigates.

- **Advanced Class:** Both are **Project 17A** frigates replacing the **older Shivalik-class designs**.

- **Propulsion:** CODOG provides fuel economy while enabling high-speed operational manoeuvres.

- **Integrated Control:** IPMS centralises machinery systems to enhance safety and combat readiness.

ABOUT HIMGIRI

- Himgiri is a **Project 17A frigate** built by **Garden Reach Shipbuilders and Engineers (GRSE), Kolkata**.

- **Stealth Design:** Its **reduced radar** and **infrared signatures** enhance survivability in contested waters.

- **Mission Profile:** The ship is configured for **anti-air**, **surface**, and **submarine** warfare.

- **Weapons Fit:** It carries BrahMos, Barak-8, torpedoes, and advanced anti-submarine sensors.

ABOUT UDAYGIRI

- Udaygiri is the **2nd Project 17A frigate** built by **Mazagon Dock Shipbuilders Limited (MDL), Mumbai**.
- **Design Milestone:** It marks the **100th ship** designed by the **Indian Navy's Warship Design Bureau**.
- **Stealth Design:** Its **hull shaping** reduces detection across multiple surveillance spectrums.
- **Mission Profile:** The ship is designed for **blue-water escort** and maritime security operations.
- **Weapons Fit:** It carries supersonic SSMs and medium-range SAMs for **layered defence capability**.

30	FIRST FREIGHT TRAIN TO KASHMIR

Recently, the first freight train arrived in Anantnag, Jammu & Kashmir, covering 600 km from Rupnagar, Punjab, in under 18 hours.

HISTORICAL MILESTONE: FIRST FREIGHT TRAIN TO KASHMIR VALLEY

WHAT HAPPENED?

- On **August 9, 2025**, the **first-ever freight train** carrying **21 BCN wagons of cement** arrived at the newly commissioned **Anantnag Goods Shed** in the Kashmir Valley, traveling from Rupnagar in Punjab a journey of nearly **600 km** completed in **under 18 hours**.

- This event symbolized the integration of Kashmir's rail infrastructure into India's **national freight network**, enabling direct movement of goods into and out of the Valley.

INFRASTRUCTURE ENABLED

- The milestone was made possible by the **Udhampur–Srinagar–Baramulla Rail Link (USBRL)** project a 272 km rail line featuring engineering marvels such as the **world's highest arch bridge over the Chenab River**, the **Anji Khad cable-stayed bridge**, and extensive tunneling across the Himalayas.

- Anantnag Goods Shed, specifically empowered for freight operations in **August 2025**, is capable of handling most goods except petroleum, oil, and lubricants (POL), operating daily from 6 am to 10 pm.

ECONOMIC AND STRATEGIC SIGNIFICANCE

- This freight connectivity holds substantial promise for Kashmir's economy:

  - **Reduced transportation costs** and **uninterrupted all-weather supply chains**, especially crucial during winter when road routes are often blocked by landslides or snowfall.

  - Enhanced logistics for **horticultural produce** like apples, **handicrafts**, **saffron**, and **building materials**, bolstering local businesses and traders.

  - A powerful symbol of **integration, progress, and prosperity**, celebrated by Prime Minister Narendra Modi and Railways Minister Ashwini Vaishnaw.

MILESTONE IN NATIONAL INTEGRATION

- The event marked the culmination of decades-long efforts to connect the Valley via rail, linking it seamlessly with India's broader freight corridors. The completion of the USBRL was a strategic and logistical breakthrough.

31 WALLACEAN HOMINID ARTEFACTS

Archaeologists found potential artefacts of the oldest (~1.48 million years old) known Wallacean hominids in Indonesia's Sulawesi Island.

WALLACEAN HOMINID ARTEFACTS

WHAT IS WALLACEA?

- **Wallacea** = Biogeographic transition zone in **Island Southeast Asia**, between the **Asian Sunda Shelf** and the **Australian Sahul Shelf**.

- Includes **Sulawesi, Flores, Timor, Halmahera, Seram, and nearby islands**.

- Named after naturalist **Alfred Russel Wallace**.

- Known for its **faunal barriers** (deep ocean trenches preventing easy migration of land animals).

HOMINID PRESENCE IN WALLACEA

- For decades, Wallacea was seen as a major **barrier to human dispersal** because crossing deep seas required advanced navigation.

- Recent findings show **hominins were present here for at least 1 million years**.

- Evidence challenges old models that only *Homo sapiens* had the skill to make sea crossings.

KEY DISCOVERIES OF ARTEFACTS

(A) FLORES (INDONESIA) – HOMO FLORESIENSIS

- Famous "**Hobbit**" (*Homo floresiensis*) lived around **100,000 – 50,000 years ago**.

- Associated artefacts: **Simple flake tools, cores, retouched flakes**, found at Liang Bua cave.

- Suggests local tool-making tradition, adapted to island resources.

(B) SULAWESI

- Stone artefacts discovered at **Talepu site** in southwest Sulawesi.
- Dated to at least **118,000 years ago**.
- Indicates archaic hominins (possibly *Homo erectus* or related) were present long before modern humans.

(C) TIMOR, ALOR, HALMAHERA

- Artefacts linked to early *Homo sapiens* arrivals (~42,000 years ago).

- Includes **flakes, blades, grinding stones**, and evidence of advanced **maritime adaptations** (fishing, shell working).

SIGNIFICANCE OF ARTEFACTS

- **Technological Insight:**
  - Early Wallacean artefacts are mostly **simple lithic tools**, contrasting with more sophisticated technologies in Africa/Eurasia.
  - Suggests **independent adaptations** by isolated populations.

- **Seafaring Evidence:**
  - Presence of artefacts deep inside Wallacea indicates **intentional ocean crossings** by hominins.
  - Even archaic hominids like *Homo erectus* may have managed basic seafaring.

- **Cultural Adaptations:**
  - Later *Homo sapiens* artefacts show greater complexity—**symbolic art, ornaments, bone tools**—suggesting Wallacea was a corridor of cultural expansion into Australia.

BROADER ANTHROPOLOGICAL IMPORTANCE

- **Human Evolution:** Wallacean artefacts prove that multiple hominin species (not only modern humans) had the ability to colonize islands separated by deep seas.

- **Out of Africa Expansion:** Supports models that human dispersals into Australia (~65,000 years ago) passed through Wallacea.

- **Biogeography:** Explains why Wallacea acted as a **filter zone**—hominins crossed, but large mammals (tigers, elephants) couldn't.

32	PARLIAMENT CLEARS MULTIPLE BILLS

WHAT IS THE TAXATION LAWS (AMENDMENT) BILL, 2025?

This legislation, passed by the Lok Sabha on **August 11, 2025**, amends both the **Income-tax Act, 1961** and the **Finance Act, 2025**. It delivers targeted changes to align recent policy objectives, simplify procedures, correct drafting oversights, and broaden tax benefit coverage.

KEY PROVISIONS & HIGHLIGHTS

UNIFIED PENSION SCHEME (UPS) – TAX PARITY WITH NPS

- Introduces tax exemption on up to **60% of the corpus** and specified lump-sum payouts under the **Unified Pension Scheme (UPS)**, granting subscribers benefits on par with the **National Pension System (NPS)**.

- Implemented as amendments to Section 10 (Clauses 12AA and 12AB) effective **from April 1, 2025**.

EXTENSION OF STANDARD DEDUCTION UNDER NEW TAX REGIME

- Reinstates the **₹75,000 standard deduction**—formerly under the old tax regime—for taxpayers opting into the **new tax regime** (Section 115BAC) **from Assessment Year 2026–27 onward**.

TAX EXEMPTION FOR SAUDI ARABIA'S PUBLIC INVESTMENT FUND (PIF)

- Extends Section 10(23FE) exemption to include the **Public Investment Fund of Saudi Arabia** and its wholly-owned subsidiaries. This facilitates enhanced foreign direct investment via sovereign funds.

PROCEDURAL SIMPLIFICATIONS

- Specifies that in **search-related cases**, any block period proceedings initiated after the search will **automatically abate**, easing litigation burdens.

IMPACT & IMPORTANCE

FOR TAXPAYERS:

- **Fair treatment for UPS subscribers**, aligning them with NPS participants.

- **Continued relief** for new regime taxpayers via standard deduction retention.

- **Simplified compliance** and clarity in procedural aspects.

FOR FOREIGN INVESTORS:

- **Tax clarity and incentives** for investments by large sovereign funds like Saudi PIF.

FOR THE TAX ECOSYSTEM:

- Ensures **continuity and accuracy** by rectifying errors from the original Income Tax Bill and Finance Bill drafts.

LEGISLATIVE CONTEXT & INTEGRATION

This Amendment Bill complements and integrates with the broader **Income Tax Bill, 2025**, which itself aims to consolidate and overhaul India's tax structure. Key features of the overarching tax reform include:

- Replacing "Assessment Year" and "Previous Year" with a single **"Tax Year"**

- Reducing total sections from over **800 to approximately 536**

- Introducing **faceless digital assessments**, **faster refunds**, and **digital-first compliance procedures**

WHAT IS THE INCOME-TAX (NO. 2) BILL, 2025?

- Introduced in the **Lok Sabha on August 11, 2025**, this revised version replaces the earlier Income-Tax Bill of February 2025, incorporating nearly all **285 recommendations** from the Parliamentary Select Committee chaired by Baijayant Panda.

- It seeks to **repeal and replace** the six-decade-old **Income-Tax Act, 1961**, aiming to modernize and streamline India's direct tax law.

- The Bill was passed by the **Lok Sabha** on August 11, and subsequently by the **Rajya Sabha** on August 12, 2025, after which it was sent back to the Lok Sabha and will proceed to be signed by the President.

KEY FEATURES & REFORMS

STRUCTURAL OVERHAUL

- **Sections reduced** from 819 to **536**, and chapters consolidated to **23**, with **16 schedules**—making the law more concise and approachable.

- Emphasis on **plain language**, clarity, and streamlined provisions to minimize litigation.

SINGLE "TAX YEAR" CONCEPT

- Eliminates the dual structure of "Previous Year" and "Assessment Year," replacing it with a unified **Tax Year**—simplifying compliance and planning.

STREAMLINED TDS/TCS PROVISIONS

- Consolidates numerous **TDS (Tax Deducted at Source)** rules into **three tables** (Residents, Non-Residents, Any Person), built for clarity.

- Likewise, **TCS (Tax Collected at Source)** provisions are also compacted into a tabular, easy-reference format.

LLP TAXATION SIMPLIFIED

- Retains LLPs as separate legal entities for taxation, but enhances flexibility in **loss-set-off** and carry-forward provisions—easing compliance for businesses.

EASE OF FILING

- Introduces **simplified ITR forms** tailored for salaried taxpayers, pensioners, and small businesses, reducing disclosure burdens and form complexity.

TAX EXEMPTION & PROCESS ENHANCEMENTS

- Confirms continuation of the **₹12 lakh tax exemption threshold** and maintains **₹75,000 standard deduction**, ensuring no unintended burden on middle-income taxpayers.

- Adds provisions like **faceless assessments**, **digital-first compliance**, and allows for **TDS refunds even after delayed ITR filings**, enhancing transparency and reducing friction

NATIONAL SPORTS GOVERNANCE BILL, 2025

OVERVIEW & LEGISLATIVE JOURNEY

- **Introduced in Lok Sabha** on **July 23, 2025** by the Ministry of Youth Affairs and Sports. Its twin, the National Anti-Doping (Amendment) Bill, was also introduced as part of the same reform push.

- **Passed by Lok Sabha** on **August 11, 2025** and by **Rajya Sabha** on **August 12, 2025**. Shortly after, it received **presidential assent** and became the **National Sports Governance Act, 2025**.

KEY PROVISIONS & STRUCTURAL REFORM

NATIONAL SPORTS GOVERNING BODIES (NSGS)

- Establishes **National Olympic Committee**, **National Paralympic Committee**, and **National & Regional Sports Federations** for each designated sport, each with affiliates at state/district levels.

- Each body must implement governance reforms:

- o Executive Committees with age and tenure limits, inclusion of sportspersons of "outstanding merit," athlete representation, and women.
- o Mandatory **ethics codes**, **grievance redressal**, and **safe sports mechanisms**.

NATIONAL SPORTS BOARD (NSB)

- Empowers the **central government** to form the NSB—as the apex regulatory body for recognition, oversight, and funding eligibility of sports federations.
- NSB can act on misuse of funds, govern ethical standards, and create ad hoc bodies if recognition is revoked.

NATIONAL SPORTS TRIBUNAL (NST)

- Establishes a **specialized tribunal** to resolve sports-related disputes (e.g., elections, selections), with civil court powers and appeal lying before the **Supreme Court**

ELECTIONS & OVERSIGHT

- Specifies the creation of a **National Sports Election Panel** (comprising former ECI/state election members) to oversee transparent elections across federations.

BRINGING BCCI & OTHERS UNDER RTI

- Bodies like the **BCCI**—previously outside RTI—are now categorized as National Sports Federations, bringing them under public accountability and transparency mandates.

SAFE SPORT, ETHICS, AND ATHLETE-CENTRICITY

- All accredited bodies must adopt **Safe Sports Policies** (including POSH standards), grievance mechanisms, and independent ethics boards.

WHY IT MATTERS

- **Reining in misgovernance**: Targets decades of opaque administration and internal politics within NSFs.
- **Empowering athletes**: Ensures athlete representation in decision-making and faster remedy for disputes.
- **Enhancing credibility**: Aligns Indian sports governance with **Olympic and Paralympic Charters** and improves transparency.

- **Accelerating India's Olympic ambitions**: If India bids to host the 2036 Olympics, these reforms create the necessary institutional foundation.

- **Public endorsement**: Praised by sport legends like PT Usha and Abhinav Bindra for promoting transparency and professionalism.

NATIONAL ANTI-DOPING (AMENDMENT) BILL, 2025

LEGISLATIVE JOURNEY & OBJECTIVES

- **Introduced** in the Lok Sabha on **July 23, 2025** by the Ministry of Youth Affairs and Sports.

- **Passed** by the Lok Sabha on **August 11, 2025**, followed by approval in the Rajya Sabha on **August 12, 2025**, alongside the National Sports Governance Bill.

- Aimed at **amending the National Anti-Doping Act, 2022**, this Bill addresses concerns raised by the World Anti-Doping Agency (WADA) regarding the autonomy and credibility of India's anti-doping framework.

KEY AMENDMENTS & PROVISIONS

ENHANCED INDEPENDENCE FOR NADA & APPEAL PANEL

- The Bill removes centralized government or Board control over the **Appeal Panel,** transferring that authority **directly to the central government**.

- NADA's Director General and staff are now granted operational independence from all sports bodies national or international federations, the IOC, government bodies, and the Anti-Doping Board.

APPEALS TO THE COURT OF ARBITRATION FOR SPORT (CAS)

- Access to **CAS appeals** is now restricted solely to select entities—including **WADA, IOC, IPC**, and appropriate international federations. **Athletes can no longer file appeals directly**.

- In international-level disputes, **direct appeals to CAS** are permitted for affected athletes, NADA, WADA, and relevant international bodies. Notably, **WADA may also file an appeal** if no other party does so in India.

ALIGNMENT WITH WADA CODE

- The Bill **incorporates Article 2** of the WADA Code—detailing anti-doping rule violations—into its Schedule, making these definitions legally enforceable in India.

- The concept of **"whereabouts failure"** is now defined per the WADA Code for uniformity.

MANDATORY WADA-ACCREDITED LABORATORIES

- Testing labs in India **must now be accredited by WADA** and maintain that accreditation at all times, thereby ensuring globally credible doping tests.

ENHANCED REVIEW OF ADVERSE TEST REPORTS

- NADA must now verify whether any loopholes in lab practices, testing, or investigations could have tainted an **adverse test result**—adding an extra layer of athlete protection.

SIGNIFICANCE & IMPLICATIONS

- **Global Compliance:** The Bill responds to WADA's concerns and aligns Indian anti-doping regulations with **international norms**—averting a potential suspension or derecognition of India's official lab.

- **Operational Autonomy:** By cutting back government controls, the Bill enhances **institutional integrity** of NADA, strengthening its credibility.

- **Fair Process:** Limiting direct appeals to CAS and setting clear appeal routes ensures due process while shielding Indian athletes from frivolous litigation.

- **Legal Clarity:** Incorporating WADA standards into law and requiring certified labs minimizes potential legal ambiguities in anti-doping disputes.

- **Strategic Sports Vision:** These reforms bolster India's reputation in global sports and align with broader goals, like bidding for the **2036 Olympic Games**

33 | CATCH GRANT PROGRAM

IndiaAI Independent Business Division (IBD) and National Cancer Grid launched the CATCH Grant Program for AI in cancer screening, diagnostics, and decision support.

KEY FEATURES

- **Aim:** The initiative aims to promote **AI-driven innovations for cancer** screening, diagnostics, treatment support, and operational efficiency in Indian healthcare.

- **Funding Support:** Up to ₹50 lakh per project; additional ₹1 crore available for successful scale-up.

- **Eligibility:** Start-ups, health-tech companies, academic institutions, and public/private hospitals.

- **Implementation Focus:** Responsible AI development, clinical validation, & readiness for deployment in Indian healthcare settings.

34 | CHINA'S NEW RAILWAY PROJECT

China will start building the Xinjiang–Tibet railway line near the Ladakh border, close to the Line of Actual Control (LAC).

China Tibet Train Route Map

XINJIANG–TIBET RAILWAY LINE

- **Proposed Route:** The line will connect the existing **Lhasa-Shigatse route** with a new **Hotan to Shigatse line,** creating a **2,000 km** strategic corridor linking northwestern and southwestern China.

- **Border Proximity:** Part of the railway line will pass **close to the LAC** & through the disputed **Aksai Chin**.

- **Elevation & Terrain:** The route averages **over 4,500m**, passing through **Kunlun**, **Karakoram**, **Kailash**, and the **Himalayan Mountain ranges**.

- **Strategic Impact:** It will strengthen **China's border security**, allow **quick troop mobilisation**, and boost **Tibet's economic integration**.

35	DEODAR FALLING INTENSIFIED UTTARKASHI FLASH FLOOD

The Uttarkashi flash flood was intensified by decades of deodar felling, weakening slope stability and natural flood-buffering capacity.

ABOUT DEODAR (CEDRUS DEODARA)

- **Evergreen Conifer:** Deodar is a **tall evergreen coniferous** tree species of the **cedar genus**.

- **Habitat:** Native to **Western Himalayas** from **Afghanistan to Tibet**, at 1,500-3,200 m elevation.

- **Distribution:** Found in high-altitude regions of **Jammu & Kashmir**, **Himachal Pradesh**, & **Uttarakhand**.

- **Climatic Needs:** Thrives in cool, moist climates, tolerating monsoon rains and winter snow.

- **Soil Preference:** Prefers well-drained loamy, sandy, or silicate mountain soils.

- **Physical Traits:** Mature deodars grow **~50 meters tall** with a broad, conical crown & drooping branches.

- **Root System: Dense, intricate roots anchor soil** and **stabilise slopes** against erosion.

- **Timber:** Produces durable, **rot-resistant wood** used in temples, boats, and construction.

- **Other Uses:** Yields **aromatic oils** for incense, insect repellents, and traditional medicines.

- **Conservation Status:** Classified as Least Concern by **IUCN**.

MITIGATION ROLE AGAINST FLASH FLOOD

- **Stability & Infiltration:** Dense roots **anchor soil** and enhance **rainwater percolation**, reducing runoff.
- **Interception & Buffering:** Canopy **slows rainfall**, moderating downstream flood peak intensity.
- **Hydraulic Roughness:** Tree trunks and debris **obstruct flow**, reducing floodwater velocity and damage.

36   EXTENDING THE CREAMY LAYER TO SC/STS

The Supreme Court is hearing a plea to extend creamy layer rules to SC/ST reservations to ensure equitable benefit distribution among subgroups.

ABOUT THE CREAMY LAYER

- The creamy layer **excludes socially** and **economically advanced** members from reservation benefits.

- **Policy Purpose:** It **prevents dominant subgroups** from monopolizing affirmative action advantages.

- **Current Scope:** No creamy layer provision applies to SC/ST reservations; **only to OBCs**.

- **Legal Basis: Indra Sawhney case (1992)** established the principle for efficient affirmative actions.

- **State Authority: States** can frame the **OBC creamy layer criteria** within their respective jurisdictions.

NEED FOR EXTENDING THE CREAMY LAYER TO SC/STS

- Economic prioritization within caste groups **fosters equity** without eroding caste-based justice.

- **Prevent Concentration:** Exclusion stops affluent SC/ST families from **monopolizing quota benefits**.

- **Substantive Equality:** Prioritizing the poorest households **enables genuine** socio-economic upliftment.

- **Reduce Inequality:** Redistribution **addresses internal economic disparities** within SC/ST categories.

- **Improve Efficiency:** Targeting genuine need **ensures optimal use** of limited policy resources.

- **Build Legitimacy:** Transparent allocation increases **public trust in reservation policies**.

KEY CHALLENGES FOR EXTENDING THE CREAMY LAYER

- Designing exclusion in affirmative action risks unsettling hard-earned constitutional balances.

- **Persistent Barriers:** Caste-based **discrimination remains prevalent** despite economic mobility.

- **Legal Risk:** Lacking a constitutional mandate could weaken affirmative action's protective framework.

- **Design Challenge:** Creating creamy layer criteria for uniform nationwide application remains challenging.

- **Social Division:** Exclusion risks **fueling resentment and fragmentation** within SC/ST communities.

- **Political Backlash:** Dominant subgroups may resist reforms, threatening policy stability.

JUDICIAL LANDMARKS ON CREAMY LAYER AND SUB-CLASSIFICATION

Evolving jurisprudence reflects a shift from homogeneity to intra-group equity in reservations.

- **Indra Sawhney (1992):** Introduced the creamy layer principle for OBC reservations only.

- **E.V. Chinnaiah (2005):** Held SCs homogeneous, disallowing internal sub-classification for reservations.

- **Jarnail Singh (2018):** Extended the creamy layer principle to SC/ST promotion-related reservations.

- **Davinder Singh (2024):** Upheld sub-classification within SC/STs to ensure equitable benefit.

- **Ramashankar Prajapati (2025):** Issued notice to Centre on proposed SC/ST creamy layer mechanism.

37 AYUSHMAN BHARAT HEALTH ACCOUNT (ABHA)

India has crossed **79.91 crore Ayushman Bharat Health Account (ABHA)** registrations under **Ayushman Bharat Digital Mission (ABDM)**, marking progress in digital health integration.

PRESENT COVERAGE OF ABHA

- **79.91 crore ABHA IDs** issued, providing standardized digital health identities.

- **4,18,964 facilities on Health Facility Registry (HFR)** and **6,79,692 verified professionals** on Healthcare Professionals Registry (HPR).

- **67.19 crore** linked health records ensuring treatment continuity and interoperability in services.

ABOUT AYUSHMAN BHARAT HEALTH ACCOUNT (ABHA)

- **14-digit unique ID** enabling secure, portable digital health records under the Ayushman Bharat Digital Mission.

- Implemented by the **Ministry of Health and Family Welfare (MoHFW)** and managed by the **National Health Authority**.

- **Allows authorized access** to patient history, ensuring seamless treatment and data privacy.

- **Open to all Indian residents** with an opt-out option for data autonomy.

| 38 | **CABINET APPROVES FOUR NEW SEMICONDUCTOR PLANTS** |

The Union Cabinet approved four new semiconductor assembly and testing plants under India Semiconductor Mission (ISM), boosting domestic manufacturing and import substitution.

KEY DETAILS OF THE APPROVAL

- The **Union Cabinet**, under the **India Semiconductor Mission (ISM)**, has approved **four new semiconductor projects** with a combined investment of approximately **₹4,600 crore** (or ₹4,594 crore).

- These additions bring the total number of approved ISM projects to **ten**, spanning **six states**, with aggregate investments close to **₹1.6 lakh crore**.

- The new plants are strategically located in Odisha (two), Andhra Pradesh (one), and Punjab (one).

PROJECT–SPECIFIC HIGHLIGHTS

- **SiCSem Private Limited (Odisha)**
  - Establishing **India's first commercial Silicon Carbide (SiC) compound semiconductor fabrication facility** in Bhubaneswar's Info Valley.
  - Investment: **₹2,066 crore**.
  - Annual capacity: **60,000 wafers** and **96 million packaged units**, serving sectors like defense, EVs, railways, solar, data centers, and fast charging infrastructure.

- **3D Glass Solutions Inc. (Odisha)**
  - Setting up a **high-tech advanced packaging and embedded glass substrate unit** in Info Valley.
  - **Investment: ₹1,943 crore**.
  - **Output: 69,600 glass panel substrates**, **50 million assembled units**, and **13,200 3D Heterogeneous Integration (3DHI) modules** annually.
  - Technologies include glass interposers, silicon bridges, and 3DHI, for use in AI, high-performance computing, photonics, automotive electronics, defense, and co-packaged optics.

- **Advanced System in Package (ASIP) Technologies (Andhra Pradesh)**

- o Partnering with South Korea's **APACT Co. Ltd.**, this plant will focus on chip packaging.
  - o **Investment: ₹468 crore**.
  - o **Capacity**: **96 million units per year**, aimed at mobile phones, set-top boxes, and automotive electronics.
- **Continental Device India Pvt. Ltd. (CDIL, Punjab)**
  - o Expanding its **discrete semiconductor manufacturing facility** in Mohali.
  - o **Investment**: **₹117 crore**.
  - o **Products:** high-power discrete components like MOSFETs, IGBTs, Schottky diodes, and transistors (silicon and Silicon Carbide).
  - o **Annual capacity: 158.38 million units**, targeting EVs, renewable energy systems, industrial and telecom infrastructure.

STRATEGIC SIGNIFICANCE

- **Enhancing India's semiconductor self-reliance**: The Cabinet's decision marks a critical step toward Atmanirbhar Bharat in electronics manufacturing, diversifying the domestic chip ecosystem.
- **Strengthening advanced technology capabilities**: These facilities encompass cutting-edge domains compound semiconductors, advanced packaging, and high-power discrete components catering to both defense and civilian needs.
- **Employment boost**: The four projects are expected to create over **2,000 skilled direct jobs**, with broader indirect employment across the electronics sector.
- **Momentum for India's chip ambitions**: With six previously approved projects already underway, these approvals accelerate India's stand in global chip production and tech supply chains.
- **Industry endorsement**: The move has been praised by industry bodies like **ELCINA**, recognizing it as a major stride in enhancing India's electronics and semiconductor capabilities

39 | 15 AUGUST 2025 INDEPENDENCE DAY SPEECH

OVERVIEW & SIGNIFICANCE

- Delivered from the Red Fort, this was PM Modi's **longest Independence Day address** to date, spanning **103 minutes**—a record for any Indian Prime Minister.

KEY THEMES & MESSAGING

SELF-RELIANCE & VISION FOR 2047

- The speech heavily emphasized **"Atmanirbhar Bharat" (self-reliant India)**, portrayed as the foundational pillar for achieving **"Viksit Bharat 2047"**—a developed India.

- Modi lauded the Rashtriya Swayamsevak Sangh's 100-year contribution, calling it "the world's largest NGO" and commending its discipline, service, and nation-building ethos.

ADDRESSING INTERNAL SECURITY & DEMOGRAPHY

- Highlighted the dramatic reduction of Naxal-affected districts—from over 125 to just 20—crediting it to sustained efforts toward tribal empowerment

- He addressed demographic concerns, announcing a **High-Power Demography Mission** to combat illegal infiltration and protect border-region integrity, especially tribal lands.

MAJOR ANNOUNCEMENTS & INITIATIVES

DEFENCE & NATIONAL SECURITY ENHANCEMENTS

- **Operation Sindoor**: Modi praised the armed forces for dealing a "blow beyond imagination," setting a "new normal" where India won't differentiate between terrorists and their backers.

- **Mission Sudarshan Chakra**: Announced as India's next-gen strategic shield—inspired by mythology—to integrate precision counterstrike, cyber-security measures, and protect critical infrastructure by 2035.

ECONOMIC & TAX REFORMS

- **Next-General GST Reforms**: Touted as a "Diwali gift," these reforms aim to simplify taxation and lower the burden on citizens, potentially reducing slabs to 5% and 18% and reducing compliance complexity.

- **Projected Impact**: While these reforms may strain revenues, they are expected to boost GDP growth (~0.6%), stimulate consumer demand, and improve business sentiment—especially during state elections.

EMPLOYMENT & YOUTH EMPOWERMENT

- **Pradhan Mantri Viksit Bharat Rozgar Yojana**: A ₹1 lakh crore scheme providing ₹15,000 monthly for first-time private sector hires, aiming to create 3–3.5 crore jobs by mid-2027.

- This aligns with the broader demographic strategy and youth-focused "140 crore resolutions" messaging.

TECHNOLOGICAL SOVEREIGNTY

- **Made-in-India Chips**: Modi announced that domestic semiconductor chips will hit the market by year-end, citing past missed opportunities and a shift into "mission mode." Six units are operational, with four more approved.

ENERGY INDEPENDENCE & STRATEGIC RESOURCES

- **Clean Energy & Nuclear Expansion**: Solar capacity has grown 30×; India aims to boost nuclear capacity tenfold by 2047. Private participation in nuclear energy is now being promoted.

- **"Samudra Manthan" (Deep-Sea Energy Exploration)**: Announced as a mission-mode push to tap offshore oil and gas reserves strengthening energy security.

- A **Critical Minerals Mission** was unveiled to secure key inputs for technology and defense sectors.

DIGITAL ECOSYSTEM & CULTURAL INTEGRITY

- **Vocal for Local**: Modi urged creation of indigenous digital platforms and quality-conscious manufacturing ("Zero Defect – Zero Effect") to foster global competitiveness with environmental responsibility.

- Celebrated UPI's international success as a "marvel," and champions of Mudra-enabled entrepreneurship.

CONSTITUTIONAL VALUES & NATIONAL COHESION

- Paid homage to the Constituent Assembly and reaffirmed "One Nation, One Constitution," especially post-Article 370 reforms.

- Emphasized pluralism and unity via language status recognition and the Prayagraj Kumbh example.

- Acknowledged recent natural disasters and assured state-centre coordination in rescue and relief

40 | DHIRIO

Despite a 1997 ban, illegal dhirio bullfights continue in Goa due to the absence of clear SOPs for permissible traditional sports.

WHAT IS DHIRIO?

- In Dhirio, **two specially trained bulls** (usually of local or crossbred varieties) are made to fight each other in an open ground or arena.

- The fight continues until one bull withdraws, showing submission by turning away.

- Unlike Spanish bullfighting, in Dhirio **humans do not fight or kill the bull**; it is strictly bull vs. bull.

- Owners spend significant time and resources training their bulls, focusing on strength, endurance, and aggression.

CULTURAL SIGNIFICANCE

- Dhirio was a part of **Goan rural festivals and feasts**, often linked to harvest celebrations.

- It also had a **community bonding element**, where villages would gather to watch.

- Winning bulls became symbols of prestige and pride for their owners.

LEGAL STATUS

- The practice of Dhirio came under criticism from **animal rights activists** for causing cruelty and injuries to animals.

- In **1996**, the **Supreme Court of India banned Dhirio**, under the **Prevention of Cruelty to Animals Act, 1960**.

- Despite the ban, **illegal Dhirio fights** have continued in some parts of Goa, especially during village feasts, though usually held discreetly to avoid police action.

CURRENT SITUATION

- Today, Dhirio survives in a **clandestine form**. Organizers sometimes arrange fights in remote areas.

- There have been occasional demands from certain sections of Goan society to **legalize and regulate Dhirio** as a cultural sport (similar to Tamil Nadu's *Jallikattu*), but animal welfare concerns remain strong.

- The issue remains a **conflict between tradition and animal rights**.

41 BROWN REVOLUTION 2.0

The proposed Brown Revolution 2.0 seeks to restore soil fertility through the Amul cooperative model for agricultural waste management.

WHY BROWN REVOLUTION 2.0?

- **Soil Degradation Crisis:** Large areas of Indian farmland now fall below **critical soil organic matter** thresholds, threatening sustainable productivity.

- **Agro-Waste Mismanagement: Less than 20% of crop residues** are scientifically recycled, and the rest are burned or dumped.

- **Environmental Hazards:** Burning residues **release large quantities** of PM2.5, carbon monoxide, carbon dioxide, and other pollutants, and runoff leads to water eutrophication.

THE PROPOSED MODEL

- **Amul-Inspired Model:** Establish **village-level cooperatives** for scientific processing of agro-waste.

- **Value Addition: Convert waste** into compost, vermicompost, and biochar.

- **Dual Benefits:** Restore soil health & **reduce dependence** on **costly chemical fertilizers**.

- **Technology Integration:** Deploy **AI-based monitoring** and **IoT platforms** for soil tracking, production optimization, and participation in carbon credit mechanisms.

POLICY FRAMEWORK

- **Mandatory funding** for cooperative-based agro-waste clusters in every district.

- **Economic incentives**, such as a minimum support price for processed biomass.

- **Strict enforcement of a ban** on open burning.

- **Integration with existing schemes** like Soil Health Card to provide farmers with data-driven feedback.

42 UTTARAKHAND FREEDOM OF RELIGION (AMENDMENT) BILL, 2025

Uttarakhand Freedom of Religion (Amendment) Bill, 2025, was approved by the Uttarakhand State Cabinet.

MAJOR PROVISIONS OF UTTARAKHAND FREEDOM OF RELIGION (AMENDMENT) BILL

- **Ban on Digital Propaganda:** Promoting or inciting conversion via social media, messaging apps, or any online medium is a punishable offence.

- **The definition of inducement has been expanded** in the bill to include gifts, cash/goods benefits, employment, free education, a promise of marriage, hurting religious faith, or glorifying another religion, categorizing all of them as a crime.

- **Stricter Punishments:**
  - **General violation:** 3–10 years' imprisonment
  - **Sensitive class cases:** 5–14 years' imprisonment
  - **Serious offences:** 20 years to life imprisonment + heavy fines

- **Marriage-related Provisions:** It includes punishment for marriage by fake identity or hiding religion.

- **Purpose of the Law as per the State Government:**
  - Protect the religious rights of citizens.
  - Prohibit conversions by fraud, inducement, or pressure.
  - Maintain social harmony.

- **Victim support:** Medical, travel, rehabilitation, and maintenance expenses.

ARGUMENTS AGAINST THE LAW

- **Constitutional Concerns:** It violates fundamental rights guaranteed by the Indian Constitution, such as the right to freedom of religion and the right to privacy.

- **Ambiguity in Definitions:** The bill has been criticized for its ambiguous definition of inducement, which can lead to arbitrary interpretation and misuse by law enforcement agencies.

- **Impact on Interfaith Relationships:** The law could be misused to target interfaith couples, particularly those involving Hindu-Muslim relationships, by accusing one party of converting the other through coercion or fraud.

- **Social Polarization:** The enactment of such laws has the potential to exacerbate social tensions and polarize communities along religious lines, leading to increased communal disharmony.

ARGUMENTS IN FAVOUR OF THE LAW

- **Prevention of Forced Conversions:** The primary objective of the Bill is to prevent forced conversions, such conversions often exploit vulnerable individuals, particularly women and members of marginalized communities, and the law is necessary to protect their rights and autonomy.

- **Preservation of Social Harmony:** Regulating religious conversions helps to maintain social harmony and prevent tensions between different religious communities.

- **Deterrence Against Conversion Rackets:** The Bill serves as a deterrent against conversion rackets and fraudulent religious organizations that exploit individuals for financial or other gains.

- **Promotion of Religious Freedom with Responsibility:** The bill is viewed as a balanced approach to safeguarding religious freedom while preventing abuses and ensuring that conversions are conducted ethically and transparently.

WAY AHEAD

- The Uttarakhand Freedom of Religion (Amendment) Bill, 2025, seeks to curb illegal religious conversions through fraud, inducement, or coercion.

- However, for it to uphold both social harmony and constitutional freedoms, it must be implemented with precision, safeguards, and transparency.

- Striking this balance will ensure that the law serves its intended purpose without undermining India's pluralistic ethos.

43 KANCHA GACHIBOWLI FOREST

The Chief Justice of India said that the Telangana government must submit a proposal **to restore the "devastated" Kancha Gachibowli forest.** The government had cleared **over 100 acres in the Kancha Gachibowli forest area** abutting the University of Hyderabad for an IT infrastructure project.

KANCHA GACHIBOWLI FOREST (KGF)

- Kancha Gachibowli Forest (KGF) is a vital urban forest spanning around 400 acres adjacent to the University of Hyderabad, located in **Telangana**.

  o It belongs to the **Deccan scrub forest ecosystem**—one of India's most ecologically significant and under-protected landscapes.

- **Biodiversity:** About 233 bird species, including migratory ones, approximately 72 tree species, and over 40,000 trees.

  o Scheduled and protected fauna, including spotted deer, wild boars, monitor lizards, star tortoises, Indian rock pythons, peacocks, and the rare tree-trunk spider (Murricia hyderabadensis)—the only known habitat of this species.

THE DECCAN THORN SCRUB FORESTS

- The Deccan Thorn Scrub Forests are a tropical dry shrubland ecoregion found mainly in the **Deccan Plateau and adjoining areas of India** and **parts of northern Sri Lanka.**

- They represent the **driest and most degraded form of tropical dry deciduous forests,** occurring in regions with very low and erratic rainfall.

- These areas are often subject to **overgrazing, fuelwood collection, and agricultural expansion,** leading to sparse vegetation.

- **Major states:** Andhra Pradesh, Telangana, Maharashtra, Karnataka, Tamil Nadu.

ECOLOGICAL IMPORTANCE

- Provides habitat for arid-adapted species and endemic birds.

- Acts as a buffer against desertification.

- Grazing lands for pastoral communities.

44	SOUTH CHINA SEA

Recently, the United States deployed two warships near the disputed **Scarborough Shoal** in the **South China Sea** following a collision between Chinese naval vessels attempting to block a Philippine coast guard ship.


Philippines removes China sea barrier

The Philippines has removed a floating barrier recently installed by Chinese Coast Guard boats to block access to a prime fishing patch within a disputed area of the South China Sea

China lays claim to 90% of South China Sea, believed to be rich in oil and gas reserves

China's nine-dash line maritime claim

Sep 22: Philippine Coast Guard discovers 300m barrier placed across the entrance to an atoll

ABOUT THE SOUTH CHINA SEA

- It is a vital **maritime corridor in the Indo-Pacific**, bordering **China and Taiwan** to the north, **Vietnam, Malaysia, Thailand, and Singapore** to the west, **Indonesia and Brunei** to the south, and **Philippines** to the east.

- It has become a flashpoint of geopolitical tension, territorial disputes, and strategic maneuvering, including **Spratly Islands, Paracel Islands, and Scarborough Shoal.**

- China asserts control over nearly the entire region via **its 'nine-dash line'.**
    - China has built artificial islands and military outposts, defying a 2016 international tribunal ruling that invalidated its expansive claims.
- Philippines, Vietnam, Malaysia, Brunei, and Taiwan have overlapping claims.
    - **Scarborough Shoal** is claimed by China, Philippines, Vietnam, Malaysia, Brunei, and Taiwan.

INDIA'S POSITION AND ENGAGEMENT

- India views the South China Sea as part of the **global commons** and **supports freedom of navigation under international law.**
- **India's evolving approach includes:**
    - Backing the 2016 tribunal ruling in favor of the Philippines.
    - Participating in oil exploration projects in Vietnam's EEZ through ONGC Videsh.
    - Transitioning from **Look East to Act East**, emphasizing strategic engagement with ASEAN and Indo-Pacific partners.
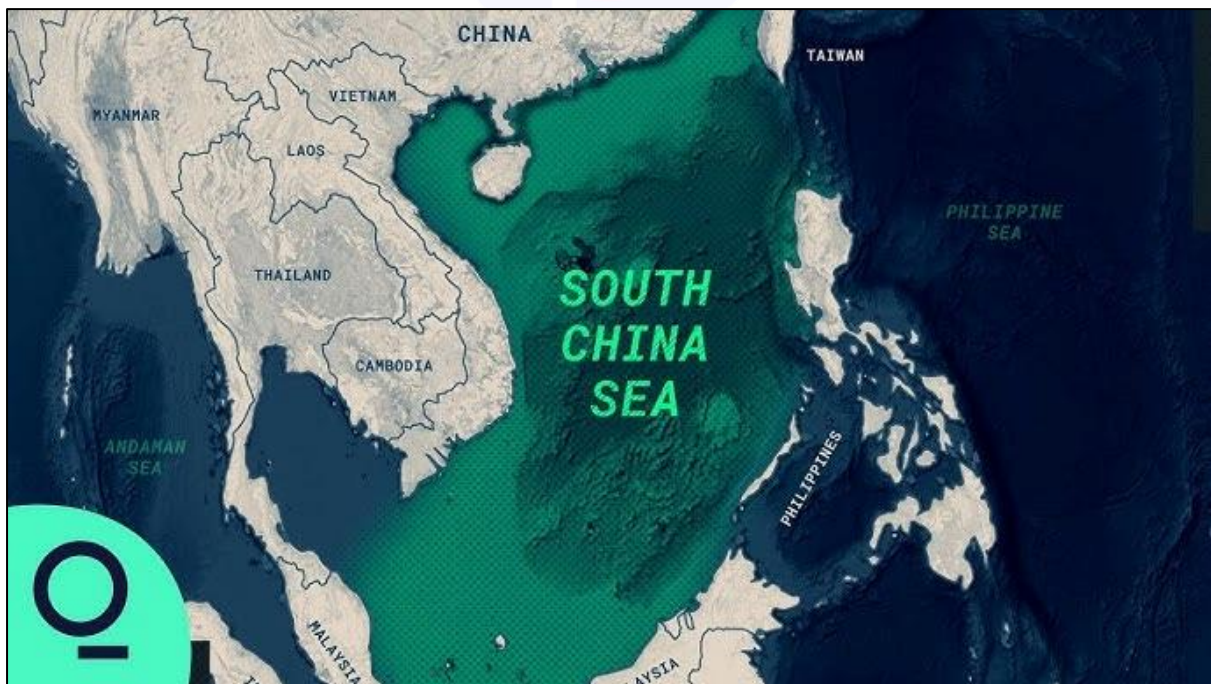
45 | SABHASAAR

The Union Government will launch **'SabhaSaar'** in Tripura on **Independence Day (15 August)**, with plans to extend it to other states.

ABOUT SABHASAAR

- **Purpose:** AI-powered tool to automatically generate minutes of gram sabha meetings.

- **Functioning:**
  - Generates **transcriptions** from audio or video recordings.
  - Panchayat officials can upload recordings using **e-GramSwaraj login credentials**.

- **Technology Base:** Built on **Bhashini**, the government's AI-powered **language translation platform**.

- **Language Support:** All major Indian languages **Hindi, Bengali, Tamil, Telugu, Marathi, Gujarati** and **English**.

46 THIRD EDITION OF THE INDIA–SINGAPORE MINISTERIAL ROUNDTABLE (ISMR)

Recently, India and Singapore, at the **third edition of the India-Singapore Ministerial Roundtable (ISMR)**, have reaffirmed their strategic partnership with a renewed focus on collaboration across critical sectors including healthcare, digitalisation, advanced technology, and connectivity.

INDIA & SINGAPORE RELATIONS: HISTORICAL BACKGROUND

- India and Singapore have shared cultural and commercial ties for over a millennium, with maritime trade routes connecting the two regions.

- **Singapore was governed from Kolkata until 1867** under British rule, leaving a legacy of shared institutions, legal systems, and the widespread use of English.

- India was **among the first countries** to recognize **Singapore's independence in 1965.**

PRESENT-DAY COOPERATION

- **Strategic Partnership:** India & Singapore elevated their ties to a **Strategic Partnership** during the India's Prime Minister visit to Singapore in 2015.

  o It was further upgraded to a **Comprehensive Strategic Partnership in 2023**.

- **Economic and Trade:** As per the Ministry of Commerce, **India's Exports** to Singapore was $14.4 billion, and **India's Imports** from Singapore was $21.2 billion in 2023–24. Singapore is **India's largest trading partner in ASEAN** and a top source of **Foreign Direct Investment (FDI)**. Key agreements include:

  o **Comprehensive Economic Cooperation Agreement (CECA)** – signed in 2005, reviewed in 2018.

  o **Double Taxation Avoidance Agreement (DTAA);**

  o **FinTech Cooperation Agreement;**

- **Digital and Financial Connectivity:** In 2023, **India's UPI** was linked with **Singapore's PayNow**, enabling seamless cross-border digital payments.

  o Singaporean firms are investing in India's digital infrastructure and smart cities.

- **Defence and Security:** Joint military exercises and training programs are held regularly.

  o **Defence Cooperation Agreement** signed in 2003, enhanced in 2015.

- **Geopolitical Significance:** Singapore is central to **India's Act East Policy** and **Indo-Pacific vision.**
  - Both nations are active members of forums like **G20, East Asia Summit, and IORA.**

- **Ministerial Roundtable Mechanism (ISMR):** It is a high-level dialogue platform, launched in 2022. It covers **six strategic pillars** like **advanced manufacturing, connectivity, digitalization, healthcare & medicine, skills development, and sustainability.**
  - Its **inaugural meeting** was held in **New Delhi** in 2022 the **2nd meeting** was held in **Singapore** in August 2024, and **third edition was held in New Delhi in 2025.**

KEY CONCERNS & CHALLENGES

- **Investment Bottlenecks:** Despite Singapore being India's largest FDI source, investment levels dropped by over 30% in the past year.
  - Singaporean businesses cite regulatory complexity, bureaucratic delays, and unpredictable policy shifts as barriers to investing in India.

- **Missed Trade Opportunities:** India's withdrawal from the **Regional Comprehensive Economic Partnership (RCEP)** was seen by Singapore as a 'missed opportunity' **for deeper ASEAN integration.**
  - Although India cited strategic **concerns over China's influence**, the move created a gap in regional trade alignment.

- **Infrastructure and Connectivity:** Ambitious proposals like the undersea solar energy and data cable between India and Singapore face technical and regulatory hurdles.
  - Building trusted data corridors and energy pipelines requires alignment on cybersecurity, environmental standards, and cross-border protocols.

- **Talent and Skilling Gaps:** Singapore has expressed interest in India's demographic dividend, but matching skills with industry needs remains a challenge.
  - Joint skilling initiatives are underway, but scaling them to meet demand in sectors like semiconductors and AI is still a work in progress.

47	ARMENIA AND AZERBAIJAN PEACE TREATY

Armenia and Azerbaijan signed a historic U.S.-brokered peace agreement at the White House, ending decades of **conflict over Nagorno-Karabakh.**

NAGORNO-KARABAKH

- It is located within the international borders of Azerbaijan.

- It is in the South Caucasus region between eastern Europe and western Asia, spanning the southern part of the Caucasus mountains that roughly includes modern-day **Armenia, Azerbaijan, and Georgia.**

    o The Armenians are Christians, while Azeris are Muslims.
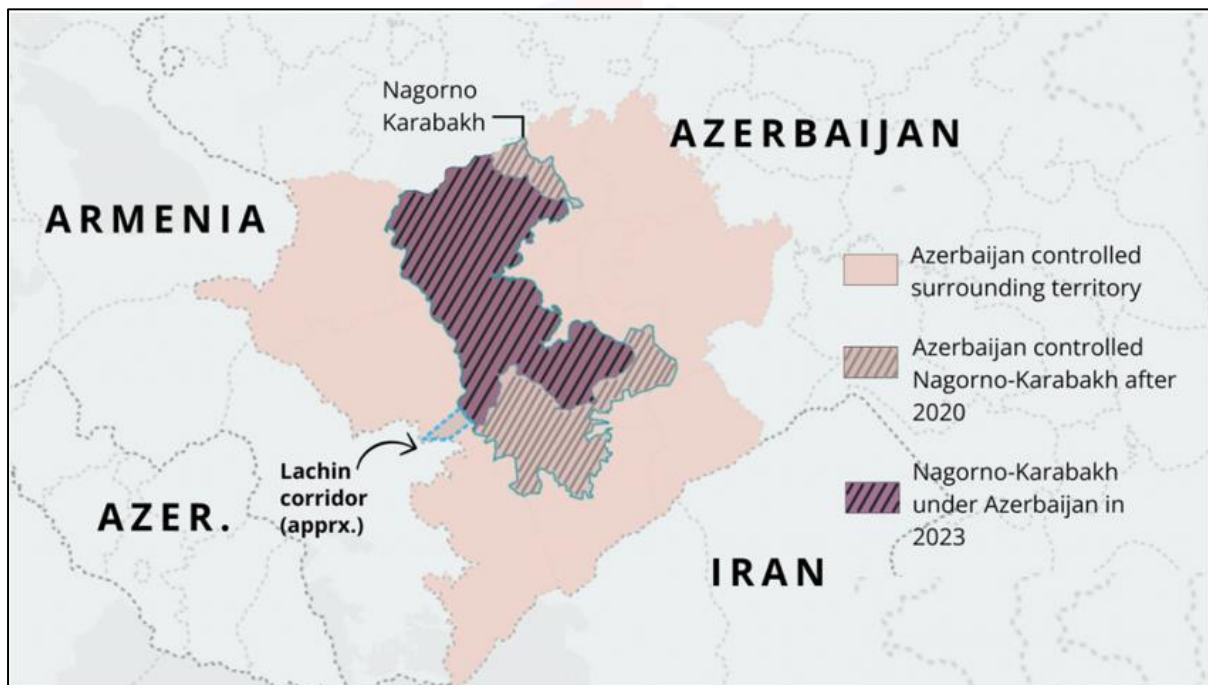
WHAT IS THE DISPUTE?

- **Nagorno-Karabakh, historically part of the Armenian Kingdom,** was ruled by empires like the Ottomans, Persians, and Russians.

    o Tsarist Russia controlled the South Caucasus during the 19th century, but its influence declined after the 1917 Russian Revolution.

- The Armenia-Azerbaijan conflict dates back nearly a century, originating during **World War I when Ottoman and Azeri** forces targeted ethnic **Armenians in the South Caucasus.**

- Nagorno-Karabakh, a predominantly Armenian region within Azerbaijan, became a key flashpoint, rooted in ethnic, religious, and geopolitical tensions.

- As the Soviet Union collapsed in 1991, **Armenians in Nagorno-Karabakh declared independence**, leading to a war that lasted until 1994 and caused around 30,000 deaths.

    o A Russia-brokered ceasefire followed, but borders remained unsettled despite international peace efforts.

- In **2020**, Azerbaijan launched a successful offensive, regaining surrounding territories with support from Turkey and Pakistan.

    o Another offensive in 2023 allowed **Azerbaijan to claim full control.**

KEY OUTCOMES OF RECENT DEAL

- **Cessation of Hostilities:** The peace deal ends nearly 35 years of tensions and paves the way for regional stability and development.

- **Trump Route for International Peace and Prosperity (TRIPP):** It includes reopening key transport routes and creating the "**Trump Route for International Peace and Prosperity**" to link Azerbaijan with its Nakhchivan exclave via Armenia.

- **U.S. Exclusive Development Rights:** The U.S. won't send soldiers, but it will have the exclusive right to develop and manage the route, likely with American companies involved.

INDIA'S STRATEGIC INTEREST

- **Relations with Armenia:** India has deep historical and cultural ties with Armenia, dating back millennia.

    o The two countries share strong modern relations, including a $250 million defense deal in 2022.

    o Armenia also supports India's positions on Kashmir and the UN Security Council.

- **Connectivity Interest:** Strategically, the South Caucasus region, including Armenia and Azerbaijan, is key to India's connectivity goals with Russia and Europe via the **International North South Transport Corridor (INSTC)**, which India hopes to strengthen through Chabahar Port.

48 RESERVE BANK OF INDIA (RBI)

The Reserve Bank of India (RBI) has issued revised guidelines to tighten co-lending arrangements between banks and non-banking financial companies (NBFCs), effective **January 1, 2026.**

WHAT IS CO-LENDING?

- It refers to the **collaborative loan service** where two lending **institutions jointly fund loans** to borrowers.

- This partnership allows both entities to distribute their resources more efficiently, providing customers with the combined expertise and financial muscle of both lenders.

- The RBI introduced the co-origination framework in **2018**, allowing banks and NBFCs to co-originate loans. This framework was later updated in **2020** and renamed the **Co-Lending Model (CLM).**

KEY HIGHLIGHTS OF CO-LENDING GUIDELINES

- **Mandatory Loan Retention:** All regulated entities (REs) involved in co-lending (banks, NBFCs, etc.) must retain at least 10% of each individual loan on their balance sheet.

- **Default Loss Guarantee Cap:** The loan-originating entity can provide a default loss guarantee capped at 5% of the outstanding loan amount.

- **Uniform Asset Classification:** If one lender classifies a borrower as a **Special Mention Account (SMA)** or **non-performing asset (NPA)** due to default, the same status must be adopted by the co-lending partner for its share of the exposure.

- **Credit Information Sharing:** Both entities must also share relevant credit information on a near real-time basis, and no later than the end of the next working day.

- **Internal Policy Requirements:** REs must update their credit policies and prepare dedicated internal guidelines covering; Target borrower segments, Internal portfolio limits, Fee structures, Partner due diligence processes, Customer service protocols, Grievance redressal mechanisms.

SIGNIFICANCE OF CO-LENDING GUIDELINES

- **Improved Transparency:** Clear borrower-level disclosures and uniform NPA classification reduce confusion and misreporting.

- **Strengthening Priority Sector Lending (PSL):** It banks to meet PSL targets by partnering with NBFCs and fintechs that have deeper rural and MSME reach.

- **Regulatory Discipline:** Near real-time credit information sharing **promotes early detection of stress** and prevents "evergreening" of loans in co-lending portfolios.

IMPLEMENTATION CHALLENGES

- **Technology Integration:** Linking multiple lenders' systems for near real-time credit info sharing will be costly and complex.

- **Capital Constraints:** Retention requirements may reduce lending appetite in certain sectors, impacting small-ticket loans.

- **Operational Coordination:** Ensuring uniform asset classification across different institutions requires process alignment and strong governance frameworks.

- **Transition Period Risks:** Existing agreements need renegotiation; and confusion could arise during the transition to the new norms.

WAY AHEAD

- **Gradual Phase-In:** Consider a phased capital retention increase for smaller players to avoid sudden liquidity shocks.

- **Regular Audits:** Third-party audits of co-lending arrangements to ensure adherence to asset classification, DLG caps, and retention rules.

- **Stakeholder Forums:** Create an industry-RBI working group to address implementation issues promptly during the transition phase.
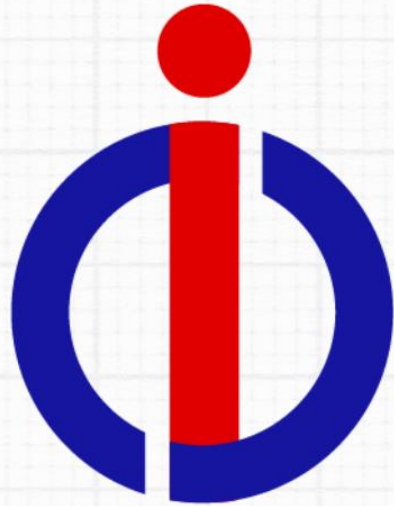
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