IAS ORIGIN

YOUR PATHWAY TO UPSC SUCCESS

21ST JULY TO 26TH JULY 2025

CURRENT AFFAIRS

Table of Contents

01 AGRICULTURAL OUTLOOK 2025–2034

The **Organization for Economic Co-operation and Development (OECD)** and the **Food and Agriculture Organization (FAO) Agricultural Outlook 2025-2034** report, offers a 10-year outlook on global agricultural and fish markets to guide evidence-based policymaking.

GLOBAL MARKET TRENDS ACCORDING TO OECD–FAO AGRICULTURAL OUTLOOK

Cereal Production and Biofuel Demand: **Global cereal production** is expected to grow at **1.1% annually**, driven largely by **yield increases** (0.9% per year). However, the expansion of harvested area will slow to **0.14%** annually through 2034.

- By 2034, **40% of cereal production** will be consumed directly by humans, while **33%** will be used for **animal feed** and **27%** will be diverted to **biofuels and industrial uses**.

- By 2034, **India and Southeast Asia will drive 39% of global cereal consumption growth**, while China's share will fall to 13% from 32%, reflecting changing consumption trends.

- **Biofuel demand** is projected to grow at **0.9% annually**, primarily due to increases in countries like **Brazil, India, and Indonesia**.

- **Agricultural and Fish Commodity Growth**: Global agricultural and fish production is projected to grow by **14%** through 2034, primarily driven by **productivity gains in middle-income nations**.

However, this growth will also lead to a **6% increase in agricultural greenhouse gas emissions**.

- **Rise in Animal Product Consumption**: Global **per capita calorie intake** from **livestock and fish products** is expected to increase by **6%** over

the next decade, driven by growth in **lower-middle-income countries**, where intake is anticipated to rise by **24%** nearly four times the global average.

- This increase will raise daily intake in lower-middle-income countries to **364 kcal**, but **low-income countries** will remain far behind, with an intake of just **143 kcal**, well below the **300 kcal/day** target for a healthy diet.

HOW DOES THE RISING DEMAND FOR BIOFUELS IMPACT GLOBAL FOOD SECURITY?

- **Land Use:** Growing **biofuel crops can reduce land available for food production**. To meet the **E20 target**, India would need 7.1 million hectares (around 3% of its total cropped area), raising serious concerns about land use and food security.

- **Pressure on Water and Resources:** Biofuel crops require significant water (ethanol production uses **8-12 liters of water per liter of ethanol)** and fertilizers, straining resources needed for food farming.

- **Food Inflation:** Biofuels raise food prices by increasing demand for feedstock crops. India's ethanol shift to **maize and rice may divert food supplies,** with rice prices **rising 14.5% in 2023,** hitting poor households hardest.

- Poorer nations face greater risks of food insecurity due to reduced **access and affordability.**

- **Environmental Trade-offs:** Expansion of biofuel crops can lead to deforestation and biodiversity loss, indirectly affecting food systems.

WHAT IS ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT?

- **OECD is an intergovernmental** body established in 1961 to promote economic growth and global trade. Headquartered **in Paris, France it has 38 member countries**, mostly high-income nations with high Human Development Index (HDI).

- While India is not a member, it is a key economic partner.

- The OECD releases several important reports and indices, including Government at a Glance and the Better Life Index.

WHAT IS FOOD AND AGRICULTURE ORGANIZATION (FAO)?

- The **FAO is the UN's oldest specialized agency,** founded in 1945, with headquarters in Rome. Its mandate is to **fight hunger, improve nutrition, and promote sustainable agriculture.**

- With 194 member states and the EU, FAO supports countries through research, technical aid, education, and data services.

- It focuses on agriculture, forestry, fisheries, and resource management, but food relief is handled by the **World Food Programme**.

- Key reports include **State of World Fisheries and Aquaculture (SOFIA), State of the World's Forests (SOFO), State of Food Security and Nutrition in the World (SOFI), and State of Food and Agriculture (SOFA).**

02	**BIRTH ANNIVERSARY OF SHAHEED MANGAL PANDEY**

The **Prime Minister** paid tribute to the great freedom fighter **Mangal Pandey** on his **birth anniversary on 19th July.**

Mangal Pandey: Hero of India's First War of Independence

EARLY LIFE

- Born on **19th July 1827** in **Nagwa village**, Ballia district, Uttar Pradesh.

- Belonged to a **Brahmin family** and joined the **34th Bengal Native Infantry** of the British East India Company.

SPARK OF REBELLION

- **In 1857,** the British introduced the Enfield rifle, with cartridges rumored to be greased with cow and pig fat.

- This hurt the religious sentiments of both **Hindu and Muslim soldiers.**

- **On 29th March 1857,** at **Barrackpore, Mangal Pandey:**

  o Openly rebelled against British officers.

  o Urged fellow soldiers to revolt.

  o Fired upon a British sergeant and wounded another.

- He **symbolized Indian resistance against British rule,** reflected the grievances of sepoys and peasants, and is recognized as a key figure in India's First War of Independence.

MARTYRDOM

- He was arrested, tried in a **military court**, and **executed on 8th April 1857**.

- His act became the **trigger for the Revolt of 1857**, also known as the **First War of Indian Independence**.

03	VICE–PRESIDENT SUBMITS RESIGNATION

The Vice-President of India, Jagdeep Dhankhar becomes the third **Vice-President** in India's history to resign before completing his term, after **V.V. Giri** and **R. Venkataraman** in accordance with **Article 67(a)** of the Constitution of India.

VICE PRESIDENT OF INDIA

- The **Vice President of India** is the **second-highest constitutional office** in the country.
- Acts as the **ex-officio Chairperson of the Rajya Sabha (Council of States)**.
- Discharges the functions of the **President in case of vacancy or absence**.

CONSTITUTIONAL PROVISIONS

Topic	Article of the Constitution
Office of Vice President	Article **63**
Election	Article **66**
Qualifications	Article **66(3)**
Term & Conditions	Article **67**
Removal	Article **67(b)**
Chairperson of Rajya Sabha	Article **64**

ELECTION OF THE VICE PRESIDENT (ARTICLE 66)

Elected by an electoral college consisting of:

- **Members of both Houses of Parliament (Lok Sabha + Rajya Sabha).**
- **Nominated members are also included** in contrast to the presidential election.

METHOD OF ELECTION:

- **Proportional Representation by Single Transferable Vote (STV).**
- **Secret ballot** conducted by the **Election Commission of India**.
- No state legislature is involved (unlike presidential election).

ELIGIBILITY CRITERIA (ARTICLE 66(3))

- Must be a **citizen of India**.
- Must have **completed 35 years** of age.
- Must be **qualified to be elected as a Member of the Rajya Sabha**.
- **Must not hold any office of profit** under the Government of India or any state government.

TERM OF OFFICE (ARTICLE 67)

- **5 years** from the date of entering office.
- Eligible for **re-election** any number of times.
- **Can continue** in office until successor assumes charge.

VACANCY IN OFFICE

Occurs due to:

- Expiry of term.
- Resignation to the President.
- Removal by resolution.
- Death or disqualification.

In case of vacancy, the **election must be held within 6 months**.

POWERS AND FUNCTIONS

Role	Description
Ex-officio Chairperson of Rajya Sabha	Presides over Rajya Sabha, decides on procedural matters

Acts as President	During vacancy due to death, resignation, impeachment, or illness of the President
Legislative Role	Can guide discussions in Rajya Sabha but has **no vote**, except **casting vote in tie**
No Executive Powers	Not part of Union Executive under Article 53

REMOVAL OF THE VICE PRESIDENT (ARTICLE 67(B))

- **Can be removed** by a **resolution of the Rajya Sabha** passed by a **majority of all the then members** of the House.

- The resolution must be **agreed to by the Lok Sabha** by a **simple majority**.

- **14 days' notice** must be given before moving the resolution.

- **No formal impeachment process** (unlike the President under Article 61).

JUDICIAL SCRUTINY

- Election disputes are **heard only by the Supreme Court** under Article 71.

- SC's decision is **final and binding**.

IMPORTANT FACTS

Fact	Details
First Vice President	Dr. **Sarvepalli Radhakrishnan** (1952–1962)
Current Vice President (as of 2025)	**Jagdeep Dhankhar** (since August 2022)
Total Vice Presidents to date	**14** (including acting terms)
Only Vice President to become President	Dr. **Sarvepalli Radhakrishnan**, **Zakir Husain**, **Shankar Dayal Sharma**, **Venkaiah Naidu** (served only as VP), etc.
Vice President's Salary	₹4 lakh/month + allowances (2024-25 data)
Oath Administered by	**President of India**
Office of Profit Exception	Vice President is **not considered holding an office of profit**

COMPARISON: PRESIDENT VS VICE PRESIDENT

Feature	President	Vice President
Article	52–62	63–67
Electoral College	MPs + MLAs	Only MPs (including nominated)
Acts as	Head of State, Executive authority	Rajya Sabha Chairperson, standby President
Removal	Impeachment (Article 61)	Resolution by Parliament

04 NATIONAL SPORTS GOVERNANCE BILL, 2025 IN THE LOK SABHA

WHAT IS NATIONAL SPORTS GOVERNANCE BILL, 2025?

The **National Sports Governance Bill, 2025**, introduced in the **Lok Sabha** by the **Ministry of Youth Affairs and Sports**, is a landmark legislative initiative aimed at **reforming, regulating, and modernizing sports governance in India**.

It is the **first-ever comprehensive bill** to bring **all national sports federations (NSFs), including the BCCI**, under a **unified legal and regulatory framework**.

OBJECTIVES OF THE BILL

- Ensure **transparency, accountability, and efficiency** in sports administration.

- Provide a **legal framework** for recognition, regulation, and functioning of NSFs.

- Promote **athlete welfare**, gender inclusion, and safe sporting environments.

- Set up a **dispute resolution mechanism** for sports matters.

- Bring federations like the **Board of Control for Cricket in India (BCCI)** under **public scrutiny** and **RTI**.

KEY FEATURES OF THE NATIONAL SPORTS GOVERNANCE BILL, 2025

ESTABLISHMENT OF NATIONAL SPORTS BOARD (NSB)

- A **statutory apex authority** to oversee NSFs.

- Empowered to **grant, suspend or withdraw recognition** of NSFs.

- Ensures federations comply with the **National Sports Code** and government guidelines.

AGE AND TENURE LIMITS

- **Maximum age limit: 70 years** (extendable to 75 in certain cases).

- **Tenure cap: 3 terms or 12 years** for top office-bearers (President, Secretary General, Treasurer).

MANDATORY REPRESENTATION

- **Minimum 4 women** and **2 sportspersons of outstanding merit (SOMs)** in every federation's executive body.

- Promotes **inclusivity, gender balance, and athlete representation**.

INCLUSION UNDER RTI ACT

- All **recognized sports federations**, including **BCCI**, declared as **public authorities**.

- Makes their decisions, expenditures, and selections open to **public scrutiny**.

NATIONAL SPORTS TRIBUNAL

- A **quasi-judicial body** with powers of a civil court.

- Handles disputes related to:

  - Federation elections

  - Athlete selection

- o Misconduct or violation of codes

- Appeals can only be made to the **Supreme Court**, bypassing normal civil courts.

ATHLETE WELFARE & SAFE SPORT CODE

- Mandates NSFs to adopt a **Safe Sport Policy**, ensuring:

  - o **Zero tolerance** to harassment or abuse.

  - o Grievance redressal mechanisms.

  - o Compliance with **WADA** and **POSH Act**.

ELECTION SUPERVISION

- Sets up a **National Sports Election Panel** to oversee federation elections.

- Comprises **former Election Commission officials** and experts.

- Ensures **free, fair, and regular elections** in all NSFs.

NATIONAL SPORTS BOARD FUND

- Federations must maintain **financial transparency**.

- Funds audited by the **Comptroller and Auditor General (CAG)**.

- Encourages **accountability** in government grants usage.

LEGAL AND CONSTITUTIONAL SIGNIFICANCE

- Brings sports governance under **legislative purview** for the first time.

- Reduces arbitrariness in selections, funding, and disputes.

- Strengthens **federal accountability** by balancing autonomy of sports bodies with transparency obligations.

- Supports India's goal of hosting the **2036 Olympic Games**.

BUDGETARY ALLOCATION FOR SPORTS (2024–25)

Scheme/Body	Allocation (₹ Crore)	% Change (YoY)
Total Ministry Budget	₹3,442.32	↑ 4.8%
Khelo India Scheme	₹1,200	↑ 14.28%
National Sports Federations (NSFs)	₹325	↑ 10%

Sports Authority of India (SAI)	₹785.52	↑ 3%
National Anti-Doping Agency (NADA)	₹21.80	↑ 15%
National Dope Testing Lab (NDTL)	₹19.50	↑ 12%

ATHLETE PARTICIPATION & GRASSROOTS REACH

Metric	Data (Latest Available)
Khelo India Athletes Registered	33,000+ (as of 2025)
Number of NSFs Recognised by Govt	67
Sports Training Centres (SAI)	273
Number of Coaches under SAI	1,579
Rural Talent Search Covered Districts	650+
Women Participation in Khelo India	~45%

KEY CONCERNS SURROUNDING THE BILL

AGE AND TENURE:

- The Bill raises the **upper age limit for administrators to 75** and **removes tenure restrictions**, ostensibly to help Indian administrators gain seniority in international sports bodies, and promote leadership continuity.

- It raises legitimate concerns about **entrenchment** and **institutional capture**, and demands cautious implementation.

AUTONOMY OF SPORTS BODIES:

- The proposed **Sports Regulatory Board** could undermine the autonomy of the IOA and NSFs, risking suspension by the IOC for government interference.

- The bill **lacks clarity on the role of State Olympic Associations,** potentially weakening decentralization efforts.

GOVERNMENT OVERREACH:

- Bill **replaces lower courts for sports disputes** and allows final appeals in the Supreme Court of India.

IMPLICATIONS FOR BOARD OF CONTROL FOR CRICKET IN INDIA (BCCI)

- BCCI has historically functioned **outside government control**. This Bill intends to change that by:
  - Bringing BCCI under the legal umbrella, despite it not being an NSF.
  - Potentially aligning its governance norms with those of the NSFs.
- This would alter existing BCCI rules on **age limits and term restrictions** for office-bearers.

05 | INDIA AND THE UNITED KINGDOM SIGNED A COMPREHENSIVE ECONOMIC TRADE AGREEMENT

India and the United Kingdom signed a **Comprehensive Economic Trade Agreement (CETA)** during Prime Minister Narendra Modi's visit to the U.K.

WHAT IS THE COMPREHENSIVE ECONOMIC AND TRADE AGREEMENT (CETA)?

CETA is a **free trade agreement (FTA)**, aimed at promoting:

- **Trade liberalization**
- **Economic cooperation**
- **Investment flows**
- **Regulatory cooperation**

OBJECTIVES OF CETA

- **Eliminate tariffs** on most goods (98%) traded between EU and Canada.
- **Open markets** for services, public procurement, and investments.
- **Protect intellectual property rights (IPR)** and geographical indications (GI).
- Promote **sustainable development**, labor rights, and environmental protection.
- Establish an **Investment Court System (ICS)** to resolve disputes.

KEY FEATURES OF CETA

TARIFF ELIMINATION

- Removes **98% of duties** on goods traded between EU and Canada.

- Full tariff elimination on **industrial products** and **agriculture goods** like wine, cheese, seafood.

MARKET ACCESS FOR SERVICES

- Canadian firms get **non-discriminatory access** to EU services markets (telecom, finance, transport).

- Recognition of **professional qualifications** (engineers, architects, etc.).

PUBLIC PROCUREMENT

- Canadian companies can bid for **EU government contracts** (and vice versa).

- Includes **sub-national government contracts** (provinces, municipalities).

INVESTMENT PROTECTION

- Introduces **Investment Court System (ICS)**:
    - Replaces Investor-State Dispute Settlement (ISDS)
    - Judges are publicly appointed, and proceedings are transparent

INTELLECTUAL PROPERTY RIGHTS (IPR)

- Strong protection for **patents, trademarks, and copyrights**.

- EU's **Geographical Indications (GIs)** like Champagne, Roquefort, Prosciutto are protected in Canada.

SUSTAINABLE DEVELOPMENT CHAPTERS

- Reaffirms commitments to **Paris Agreement** and **International Labour Organization (ILO)** standards.

- Includes **labor, environmental, and climate protections**.

WHAT'S NOT COVERED?

- **Investor-State Dispute Settlement (ISDS)** is replaced with ICS.

- Certain **sensitive sectors** like **audiovisual services** and **public education** are excluded.

- Does **not mandate harmonization of laws**, but encourages mutual cooperation.

BENEFITS OF CETA

Stakeholder	Benefits
Consumers	Lower prices due to reduced tariffs
Exporters	Easier access to new markets (especially SMEs)
Governments	Stronger regulatory cooperation, environmental goals
Investors	Legal certainty via investment court mechanism

CRITICISM OF CETA

Concern	Explanation
Sovereignty Concerns	Some EU countries fear loss of control over regulations and dispute settlement.
ICS Mechanism	Though more transparent, critics see it still favoring corporations over governments.
Environmental Impacts	Fears of undermining local environmental laws and policies.
Ratification Deadlock	Some EU parliaments (e.g. Belgium's Wallonia) oppose full ratification.

ABOUT AGREEMENT

- This marks **India's first major FTA** in over a decade and the **UK's fourth since its exit from the European Union (EU) in 2020.**

- India and the UK finalized the trade pact following **over three years of negotiations.**

- **Aim:** Making trade easier and more beneficial between India and the United Kingdom.

  - The bilateral trade between the two countries stands at nearly USD 56 billion, with a joint goal to **double this figure by 2030.**

- The agreement will come into effect **once ratified by both countries.**

  - While the Union Cabinet in India has approved the deal, it still requires approval from the UK Parliament.

KEY HIGHLIGHTS AND BENEFITS:

A win-win deal: Who gets what

India gains

- Zero-duty access for 99% of exports to the UK, including 95% of agri-cultural products
- Duty-free entry for gems & jewellery, seafood, generic drugs, medical devices, electronics, leather, footwear, textiles, rubber, and chemicals
- Major boost for food processing: Tariffs up to 70% eliminated

- 75,000 Indian workers exempt from UK social security payments for 3 years
- Indian professionals can work in 35 UK sectors for 24 months without a UK office
- 1,800+ chefs, yoga experts, and musicians can work annually in the UK

What it doesn't: The UK retains protections in sugar, milled rice, pork, chicken, and eggs

UK gains

- India to cut or eliminate tariffs on 90% of UK goods, covering 92% of current UK exports; 64% tariff-free from day one
- Average tariff drop from 15% to 3% on UK goods
- Steep tariff cuts: Aerospace (11% to 0%), automotive (110% to 10% under quota), electrical

- machinery (22% to 0% or halved)
- Whisky tariff to fall from 150% to 75% immediately, then to 40% over 10 years
- "Legally guaranteed access" to bid for 40,000 Indian government contracts worth £38 billion annually

What it doesn't: No tariff cuts in sensitive Indian sectors like dairy, apples, oats, and edible oils
- No access to India's legal services

FOR INDIA:

- **Duty-free access to the UK market for 99% of Indian products:** This is a huge win for Indian exports, especially in labor-intensive sectors like textiles, footwear, gems and jeweler, and engineering goods, which previously faced duties of 4% to 16%.

- **Easier entry for Indian professionals:** The agreement provides assured temporary access to the UK market for Indian professionals like chefs, yoga instructors, and IT specialists.

- **Exemption from social security contributions:** Under the agreement on **the Double Contribution Convention,** Indian workers temporarily posted in the UK can be exempt from paying social security for up to three years, saving them and their employers significant money.

- **Boost for Manufacturing:** Sectors like electronics, pharmaceuticals, chemicals, food processing, and plastics are expected to see a boost in exports.

- **Boost for Agriculture and Fisheries:** Indian farmers and the fisheries sector will benefit from duty-free access for many agricultural and marine products, allowing them to compete better in the UK market.

FOR THE UK:

- **Reduced tariffs on nearly 90% of UK goods entering India:** This will make British products more affordable in India.

- **Big cuts on duties for British whisky and gin:** Tariffs on popular British products like whisky and gin will drop significantly, from 150% to 75% immediately and then gradually to 40% within ten years. This gives UK distillers a significant advantage in the large Indian market.

- **Lower tariffs on certain UK-made automobiles:** Car duties will be reduced, improving the competitiveness of British car manufacturers in India.

- **Access to Indian federal government procurement tenders:** UK firms can bid for government contracts in India worth over a certain amount, opening up a large market.

- **Benefits for financial and professional services:** The agreement includes commitments that benefit UK companies in IT, financial services, and professional services like consulting and engineering.

06	CORAL COVER IN LAKSHADWEEP SAW A 50% REDUCTION: STUDY

A study revealed that corals in the **Lakshadweep archipelago have declined to half of what they were in 1998.** Over 24 years, coral cover declined from **37.24% to 19.6%**, reflecting a roughly 50% reduction from the 1998 baseline.

WHAT ARE CORALS?

Corals are **marine invertebrates** belonging to the phylum **Cnidaria**. They typically live in **compact colonies of many identical individual polyps**. These tiny polyps secrete calcium carbonate to form a hard skeleton, which over time builds up to form **coral reefs**.

- They are **sessile animals** (non-moving).

- Live in **symbiotic relationship** with **zooxanthellae** (algae), which provide food through photosynthesis.

EXAMPLES OF CORALS:

Type	Example	Description
Hard corals	Acropora, Porites	Build calcium carbonate skeletons (reef-building corals)
Soft corals	Sarcophyton, Sinularia	Do not build reefs, flexible bodies

Notable reefs	Great Barrier Reef (Australia), Gulf of Mannar (India)	Biodiversity hotspots

WHAT IS CORAL BLEACHING?

Coral bleaching is a phenomenon where **corals lose their vibrant colors** and turn white due to **expulsion or death of symbiotic algae (zooxanthellae)** from coral tissue.

Without zooxanthellae, corals lose a major energy source and are prone to disease and death.
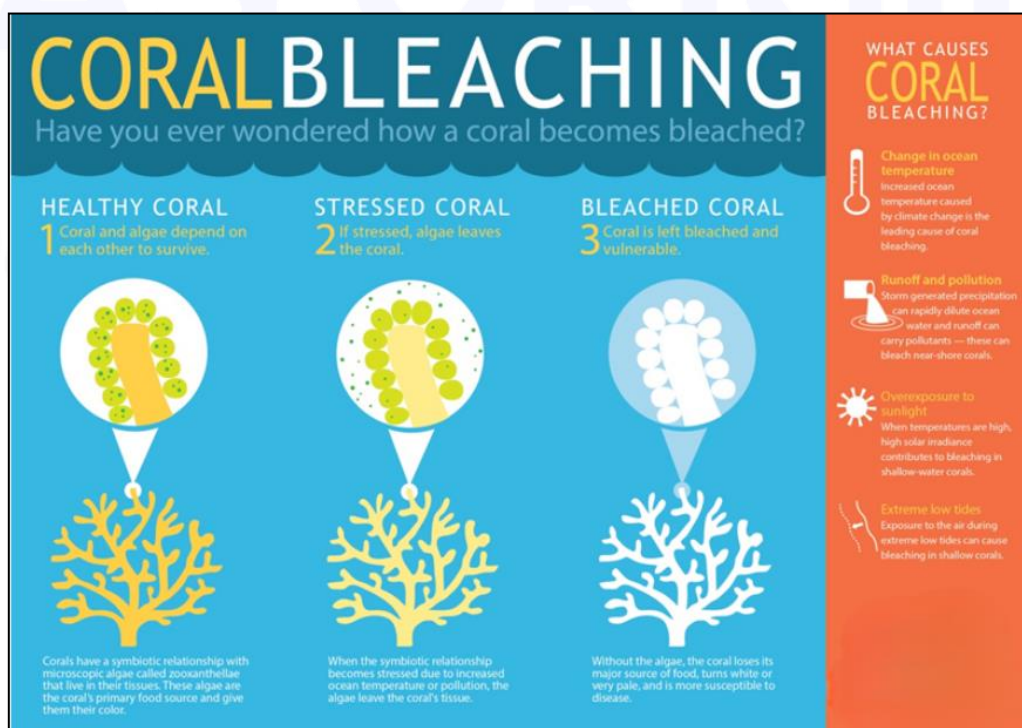
CAUSES OF CORAL BLEACHING:

Factor	Explanation
Rising sea temperatures	Even a 1–2°C increase can stress corals
Ocean acidification	Increased CO_2 lowers pH, dissolving calcium carbonate
Pollution	Chemical run-off, oil spills, and sewage harm coral health
Coastal development	Sediment and construction disturb coral habitats
Storms and cyclones	Physical damage from strong waves
Disease outbreaks	Caused by bacteria or fungi in warm, stressed environments
Excess sunlight (UV radiation)	High solar irradiance damages photosynthetic systems

INDIAN CONTEXT:

- India has coral reefs in:
    - **Gulf of Kutch**
    - **Gulf of Mannar**
    - **Lakshadweep**
    - **Andaman & Nicobar Islands**
- **Gulf of Mannar Biosphere Reserve** is India's first marine biosphere reserve.
- According to **Zoological Survey of India (ZSI)**:
    - ~ 200 species of hard corals in Indian waters.

CAN CORALS RECOVER FROM BLEACHING?

- Corals can recover from bleaching over time, but **only if temperatures drop and conditions return to normal.**
- When this happens, the **algae returns** and the corals gradually regain their health.

07 — CHIKUNGUNYA

The World Health Organization (WHO) has issued a warning about a **potential global chikungunya epidemic**, noting alarming similarities to a major 2004–2005 outbreak and urged early action.

Mosquito	Type of Mosquito	Disease caused
	Aedes	Chikungunya Dengue Lymphatic filariasis Rift Valley fever Yellow Fever Zika
	Anopheles	Lymphatic filariasis Malaria
	Culex	Japanese encephalitis Lymphatic filariasis West Nile fever

Most common mosquito-borne diseases

CHIKUNGUNYA

- Chikungunya is a mosquito-borne viral disease caused by the **chikungunya virus (CHIKV),** an RNA virus from the **alphavirus genus**.

- **Symptoms:** It causes fever and severe joint pain, which is often debilitating. In some cases, it can be deadly.
  - The symptoms of chikungunya are similar to those of dengue fever and Zika virus disease, making it difficult to diagnose.

- It is **transmitted** to humans by the bites of infected female mosquitoes, most commonly **Aedes aegypti and Aedes albopictus mosquitoes**.
  - The latter, which is known as the **tiger mosquito**, is venturing farther north as the world warms because of human-driven climate change.

- **Outbreaks:** CHIKV was first identified in the United Republic of Tanzania in 1952 and subsequently in other countries in Africa and Asia.

- As of 2025, major outbreaks have been reported in Reunion, Mayotte, and Mauritius, with the virus spreading to Madagascar, Somalia, Kenya, and parts of South Asia. Imported cases have also appeared in Europe, with local transmission in France and suspected cases in Italy.

- **Treatment**: Symptoms can be managed but there is no specific antiviral treatment.
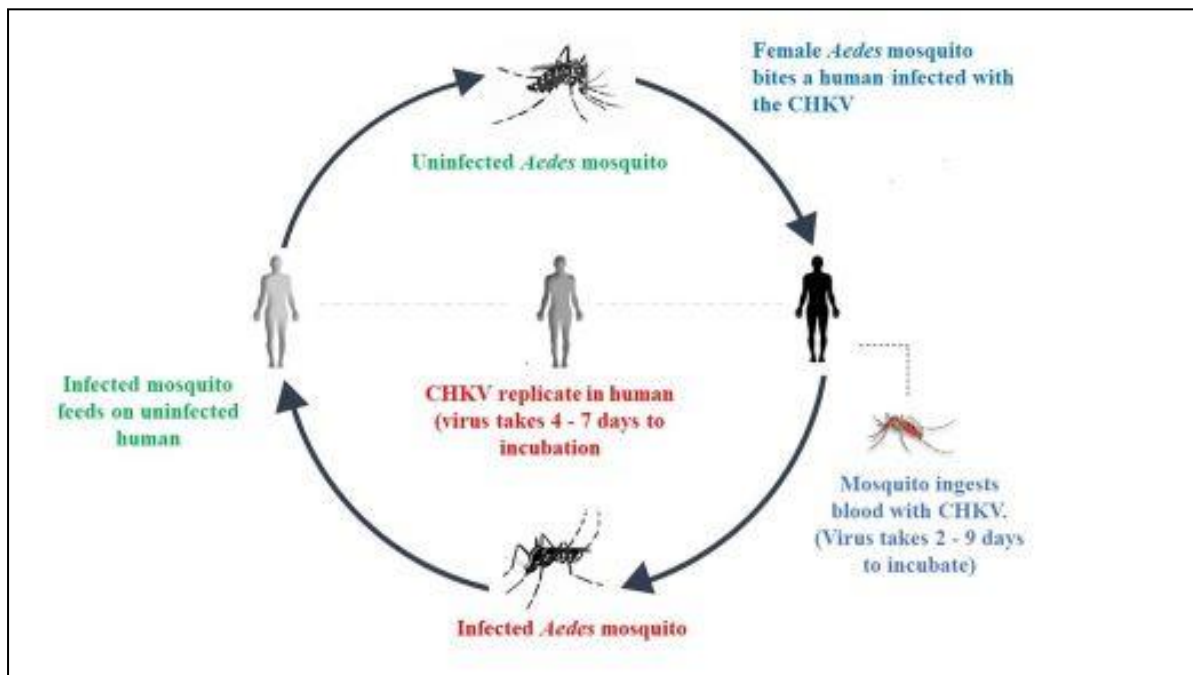
08   BAMBUSA TULDA

Indian Institute of Technology Guwahati Researchers have developed an eco-friendly composite material made of **'Bambusa tulda'**, a fast-growing bamboo species in Northeast India, combined with biodegradable polymers.

ABOUT BAMBUSA TULDA

- Commonly known as Bengal Bamboo, Indian Timber Bamboo, or Spineless Indian Bamboo.

- It is a fast-growing, medium to large-sized, tropical clumping bamboo native to the Indian subcontinent, Southeast Asia (Indochina, Tibet, Yunnan).

- It is **monocarpic** (flowering once then dying) with an intermits interval typically of 15–60 years.

- Highly valued for its tensile strength and extensively used in paper pulp industry, construction, fencing, and various tools.

09	CENTRE BLOCKS 25 OTT PLATFORMS OVER OBSCENE CONTENT

The Ministry of Information and Broadcasting has directed the blocking of websites and apps of at least 25 OTT platforms for allegedly providing obscene and vulgar content.

WHAT IS OBSCENE CONTENT?

Obscene content refers to any material (such as text, images, audio, video, etc.) that:

- Offends public decency or morality,

- Has a **tendency to deprave or corrupt** those likely to view it,

- Is **sexually explicit**, vulgar, or lewd in nature, and

- Is considered **socially unacceptable or legally prohibited**.

LEGAL DEFINITION IN INDIA:

SECTION 292 OF THE INDIAN PENAL CODE (IPC):

It defines "obscenity" and makes the sale, distribution, public exhibition, or circulation of obscene materials a punishable offence.

Obscene material includes anything that:

- Is lascivious (sexually suggestive),

- Appeals to prurient interests,

- Tends to deprave and corrupt the audience.

Punishment: Up to 2 years imprisonment and/or fine (for first offence); up to 5 years for subsequent offences.

INFORMATION TECHNOLOGY ACT, 2000 (SECTION 67):

- Publishing, transmitting, or causing transmission of obscene material in electronic form is punishable.

- Covers digital content: websites, social media, messaging platforms, etc.

Punishment:

- **First conviction:** 3 years jail + ₹5 lakh fine.

- **Second/subsequent:** 5 years + ₹10 lakhs fine.

JUDICIAL PRECEDENTS:

AVEEK SARKAR V. STATE OF WEST BENGAL (2014):

- SC laid down the **"community standards test"** rather than a narrow Victorian morality test.
- **Held:** Nudity is not always obscene; context matters (e.g., nudity in art or protest).

RANJIT D. UDESHI V. STATE OF MAHARASHTRA (1965):

- Landmark case where the court applied the **Hicklin Test** from English law.

- Book "**Lady Chatterley's Lover**" banned for obscenity under IPC.

FACTORS CAUSING RISE IN OBSCENITY

- **Rapid Growth of Digital Platforms:** The proliferation of OTTs, social media, and video-sharing sites has enabled easy access and dissemination of objectionable content.

- **Lack of Pre-Screening on OTT Platforms:** Unlike films, OTT content is not subject to prior certification, allowing creators to bypass traditional censorship.

- **Inadequate Content Regulation Mechanisms:** Weak enforcement in self-regulatory frameworks result in unchecked publication of obscene material.

- **Anonymity and Encryption:** Users often exploit encrypted apps and anonymous browsing tools to share and consume explicit content, escaping legal scrutiny.

IMPLICATIONS OF RISING OBSCENITY IN INDIA

- **Impact on Social Morality:** The growing presence of obscene content in digital media influences public morality, especially among impressionable audiences such as children and young adults.

- **Cybercrime and Exploitation:** Increased obscenity online fuel exploitation, including cyberbullying, harassment, and trafficking.

- **Challenge to Regulatory Mechanisms:** Despite the IT Rules, enforcement remains a challenge due to technological evasions (VPNs, mirror sites).
  - Balancing freedom of expression with public decency continues to be contentious.

WAY AHEAD

- **Strengthening Implementation:** Regular monitoring and swift enforcement of IT Rules are essential.

- **Promoting Digital Literacy:** Empower users, especially youth, to responsibly engage with digital content.

- **Platform Accountability:** OTTs must adopt content rating systems, age-gating, and pre-screening mechanisms.

- **Judicial Oversight:** Ensure legal actions align with constitutional rights and due process to prevent misuse.

10	U.S. TO PULL OUT OF UNESCO

The United States has decided to withdraw from the UN cultural and education agency UNESCO.

WHAT IS UNESCO?

- **Full Form:** United Nations Educational, Scientific and Cultural Organization
- **Founded:** 16 November 1945
- **Headquarters:** Paris, France
- **Members:** 194 Member States + 12 Associate Members (As of 2024)

MANDATE:

UNESCO promotes international collaboration in:

- **Education**
- **Science**
- **Culture**
- **Communication & Information**

CORE OBJECTIVES:

- Foster peace and security through collaboration
- Promote universal respect for justice, human rights, and fundamental freedoms
- Safeguard the world's cultural and natural heritage (World Heritage Sites)
- Promote scientific research and freedom of expression

WHY THE USA LEFT UNESCO?

FIRST EXIT: 1984 – RONALD REAGAN ERA

- **Reason:** Allegations of pro-Soviet, anti-Western bias and mismanagement

- **Concern:** Politicization of science, inefficiency, budgetary irregularities

- **Impact:** USA withdrew funding (was the largest donor); returned in 2003 under George W. Bush

SECOND EXIT: 2017 – TRUMP ADMINISTRATION

- **Reason:**

  - **Anti-Israel Bias:** UNESCO recognized Palestine as a full member in 2011

  - **Historical Site Disputes:** UNESCO passed resolutions critical of Israel's actions in Jerusalem

  - **Financial Issues:** US stopped funding after 2011 but remained a member till 2017

REJOINING: IN JULY 2023, THE USA REJOINED UNESCO, CITING:

- The need to counter **Chinese influence**

- Importance of UNESCO's work in **AI regulation, education, and digital governance**

INDIA AND UNESCO:

INDIA'S MEMBERSHIP:

- **Founding member since 1946**

KEY AREAS OF COLLABORATION:

- Promotion of education (EFA, SDG-4 goals)

- Preservation of cultural heritage and world heritage sites

- Science and technology for sustainable development

- Disaster risk reduction, climate resilience

- Ethics of AI and digital inclusion

UNESCO WORLD HERITAGE SITES IN INDIA:

- **Total (As of 2024):** 42 Sites
    - 34 Cultural
    - 7 Natural
    - 1 Mixed (Khangchendzonga NP)

RECENT ADDITIONS:

- Santiniketan (2023)

- Sacred Ensembles of Hoysala (2023)

UNESCO CHAIRS IN INDIA:

INDIA HOSTS 11 UNESCO CHAIRS, IN FIELDS LIKE:

- Sustainable development

- Teacher education

- Peace, human rights, and democracy

KEY INDIAN PROGRAMS ASSOCIATED WITH UNESCO:

- **Project Mausam** – Reviving ancient maritime routes

- **International Literacy Day** initiatives

- **Man, and the Biosphere (MAB) Programme** – Several Indian biosphere reserves are part of it

11 SUICIDES CASES AMONG STUDENT

Recently, the Union Minister of State for Education presented in response to a **written question** in Parliament, highlighting student suicides in India.

STUDENTS SUICICE IN INDIA

- According to the **NCRB's Accidental Deaths and Suicides in India (ADSI) Report**, 7.6% of total suicides in 2022 were by students, 2,248 student suicides were directly attributed to exam failure.
  - It marks a slight decline from 8.0% in 2021 and 8.2% in 2020.

FACTORS RESPONSIBLE FOR STUDENT SUICIDE

- **Individual vulnerabilities:** Low self-esteem, impulsivity, trauma histories, history of physical or sexual abuse, and learning and intellectual disability.

- **Family Pressures:** Over-anxious and over-ambitious parents, dysfunctional family, criticisms, comparisons with peers and lack of support in the family, alcoholism, violence, psychological and economic problems in the family increases suicidal risk.

- **Systemic flaws:** One-point evaluation, media hype around results, and lack of career guidance.

- **Institutional stressors**: Pressure on teachers and students to achieve 100% pass rates.

CASE STUDY: KOTA

- India's obsession with competitive entrance exams has led to the rise of coaching hubs like Kota, Rajasthan, where over 200,000 students enroll annually.

- The intense study schedules, isolation, and lack of recreational outlets have contributed to 29 suicides in Kota alone in 2023.

PRESSURE OF PERFECTION?

- One student commits suicide every 55 minutes in India
- In academic year 2017-18, more than 150 students across AP and Telangana committed suicide
- In Hyderabad, more than 30 students committed suicide in academic year 2017-18
- 20% of city students in a single class are suffering from anxiety & depression

- Suicide incidence rate per 1,00,000 population for those below the age of 14 is 0.5
- Suicide incidence rate per 1,00,000 population for those in 14-17 age bracket is 9.52

WARNING SIGNS
- Isolation from family and friends
- Self-harm
- Drastic changes in mood and behaviour (extreme fear, sadness, irritability)
- Changes in sleeping and eating habits
- Drug and alcohol use
- Engaging in risky behaviours
- Showing less interest in activities they previously enjoyed

" According to statistics, over the past three years more than 26,000 students have committed suicide across India. A majority of student suicides are caused by underlying psychiatric factors such as stress, depression and anxiety. It could result from difficulty in coping with academics, unrealistic expectations and pressure from parents and lack of support from peers. It is very important to identify the illness at an early stage and consult a mental health professional
— Dr Virinchi Sharma | A PSYCHIATRIST

POLICY INITIATIVES AND MENTAL HEALTH INTERVENTIONS

- **Tele-MANAS Programme:** A national tele-mental health helpline (dial 14416), with over 1.36 million calls handled across 42 centers in 31 states & UTs .

- **District Mental Health Programme (DMHP):** Offers suicide prevention services and life skills training in schools.

- **National Suicide Prevention Strategy (NSPS)**: Aims to reduce suicide rates by 10% by 2030 through media sensitization, healthcare strengthening, and limiting access to lethal means.

- **Manodarpan Programme:** A flagship initiative by the Ministry of Education offering **psychological support** through helplines and live sessions.
  - It has reached lakhs of students across the country.

- **Anti-Drug Campaigns:** Recognizing addiction as a rising issue among youth, the Centre has intensified outreach efforts alongside mental health support.

- **UGC Advisories:** Urges higher education institutions to prioritize physical fitness, emotional well-being, and student welfare.

- **Stress Management Workshops:** Institutions like IIT-Madras, IIT-Delhi, and IIT-Guwahati have begun conducting resilience-building sessions under the **Malaviya Mission Teacher Training Programme.**

- **Supreme Court's Intervention (2025):** Declared a *'suicide epidemic'* among students and recommended flexible curricula, continuous assessment, and campus mental health support.

LOOKING AHEAD

- The **Ministry of Education** is drafting legislation to establish the **Higher Education Commission of India (HECI) a** unified regulatory body aimed at improving governance and transparency in higher education.
  - It aligns with the **National Education Policy (NEP) 2020**, which advocates for a **'light but tight' regulatory framework.**
  - Currently, higher education oversight is fragmented:
    - **UGC**: Non-technical education
    - **AICTE**: Technical institutions
    - **NCTE**: Teacher education

- HECI aims to integrate these functions under a single regulator, building on a **2018 draft bill** that proposed repealing the UGC Act.

12 MANUAL SCAVENGING AND SEWER DEATHS IN INDIA

A recent Social Audit (2022–23) by the Ministry of Social Justice and Empowerment revealed that over **90%** of sewer deaths occurred without safety gear or personalized protective equipment (PPE) kits.

WHAT IS MANUAL SCAVENGING?

- Manual scavenging refers to the practice of manually cleaning, carrying, and disposing of human excreta from dry latrines, open drains, sewers, and septic tanks.

- It is a hazardous and degrading occupation that primarily affects marginalized communities.

WHY MANUAL SCAVENGING CONTINUES TO EXIST IN INDIA?

- **Lack of Alternatives:** Limited access to education and job opportunities keeps people in manual scavenging.

- **Caste System:** Deep-seated caste-based discrimination traps many in this occupation.

- **Weak Law Enforcement:** Inadequate implementation of anti-manual scavenging laws.

- **Inadequate Sanitary Infrastructure:** Lack of modern sanitation systems necessitates manual cleaning.

  - Urban Local Bodies (ULBs) often lack trained personnel, mechanized equipment, and funds to modernize sanitation infrastructure.

- **Economic Factors:** Cheap labor costs make manual scavenging financially attractive.

CONSTITUTIONAL AND LEGAL DIMENSIONS

- **Constitutional Provisions:**
    - **Article 21:** Right to life with dignity includes the right to safe working conditions.
    - **Article 23:** Prohibits forced labour, applicable in cases where workers are coerced into hazardous cleaning without alternatives.
    - **Article 42:** Directs the state to ensure just and humane conditions of work.
- **Legal Framework:**
    - **The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013:** Bans manual scavenging and mandates rehabilitation of affected persons.
    - **The Supreme Court (Safai Karamchari Andolan v. Union of India, 2014)** ordered compensation of ₹10 lakh for each sewer/septic tank death and held the state liable.

THE NUMBERS

The numbers of manual scavengers in some of the states

State	Number
Maharashtra	63,713
Madhya Pradesh	23,093
Uttar Pradesh	17,619
Tripura	17,332
Karnataka	15,375
Punjab	11,949
Bihar	5,296
Jharkhand	4,903
Bengal	2,526
ALL INDIA:	**180,657**

Source: The socio-economic and caste census
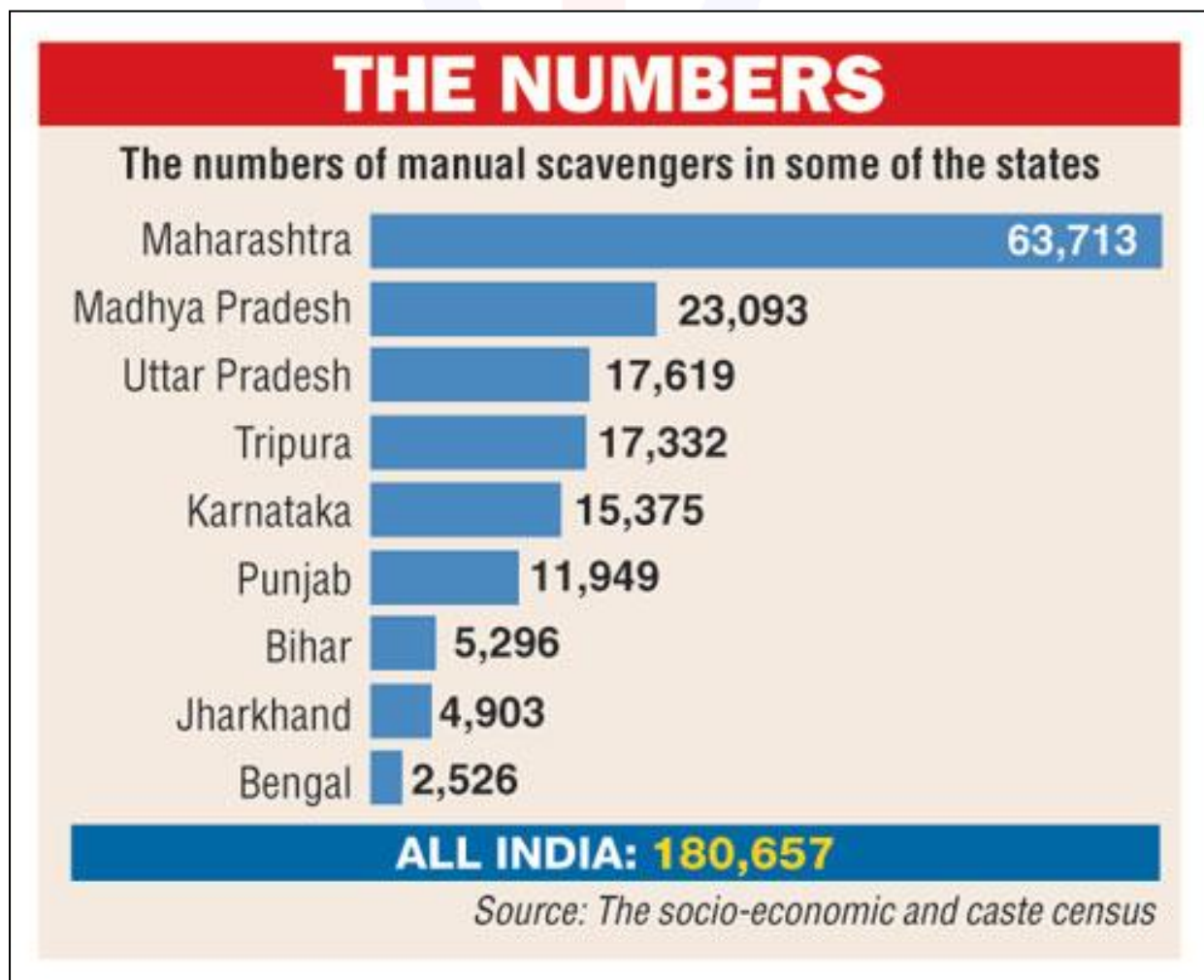
INITIATIVES TAKEN AGAINST MANUAL SCAVENGING

- The government has formulated the **NAMASTE scheme or National Action Plan for Mechanized Sanitation Ecosystem** in an effort to stop deaths due to hazardous cleaning of sewers and septic tanks.

- **Swachh Bharat Abhiyan:** Aims to promote sanitation and reduce manual scavenging.

- **Rastriya Garima Abhiyaan:** National Campaign focused on eradicating the dehumanizing practice of manual scavenging and ensuring comprehensive rehabilitation for manual scavengers throughout India.

- **The Bandicoot robot**, is India's first indigenous **manhole-cleaning robot**, introduced in **Kerala in 2018**. In 2023, Kerala became the first Indian state to fully robotize manhole cleaning.

- **ILO Guidelines:** Call for decent work conditions, safety, training, and social security for sanitation workers.

WAY AHEAD

- **Complete Mechanization of Sanitation Work:** Mandate use of modern machines for sewer and septic tank cleaning under the NAMASTE scheme, with dedicated funding and training.

- **Strengthening Urban Local Bodies (ULBs):** Equip ULBs with trained staff, adequate funds, and equipment to modernize sanitation systems and eliminate dependence on manual cleaning.

- **Maintain real-time data** on sanitation workers and sewer deaths with periodic audits and independent monitoring to ensure transparency and policy response.
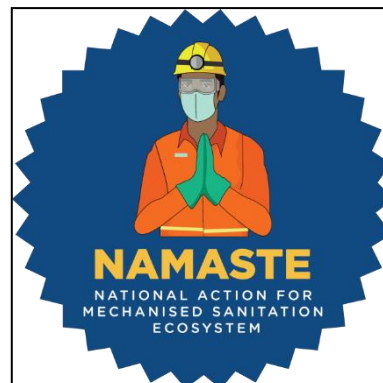
13	WHAT IS NAMASTE SCHEME?

NAMASTE stands for **National Action for Mechanized Sanitation Ecosystem**.

It is a **joint initiative** of:

- **Ministry of Social Justice & Empowerment (MoSJE)**

- **Ministry of Housing and Urban Affairs (MoHUA)**

- **Launched in:** 2022

- **Implemented by:** National Safai Karamcharis Finance & Development Corporation (NSKFDC) and MoHUA

OBJECTIVE OF NAMASTE

- To achieve **zero fatalities** in sanitation work in India.

- To ensure that **no sanitation worker** comes into direct contact with human faecal matter.

- To **formalize and professionalize** the sanitation workforce.

- To provide **occupational safety** and **dignity** to sanitation workers.

- To replace **manual cleaning** with **mechanized cleaning** technologies.

KEY FEATURES

Feature	Description
Target Workers	Sewer and Septic Tank Workers (SSWs)
Pilot Phase	500 cities under AMRUT (Atal Mission for Rejuvenation and Urban Transformation)
Mechanization	Use of modern machines like jetting machines, robotic sewer cleaners, etc.
Skill Development	Training of workers in using machinery and safety practices
Livelihood Support	Linking workers to welfare schemes, financial support, and insurance
Safety Gear	Provision of PPE kits, gas detectors, etc.

Health Insurance	Coverage under PM-SYM and Ayushman Bharat
Tracking	Digitized database of sanitation workers through Swachhata App

COMPONENTS OF NAMASTE

- **Identification and Registration** of sanitation workers
- **Capacity Building and Skilling** of workers
- **Provision of Equipment** and PPE kits
- **Assistance for Livelihood Diversification**
- **Convergence** with other government schemes like:
    - Ayushman Bharat
    - PM Suraksha Bima Yojana
    - National Pension Scheme for Unorganised Workers

SIGNIFICANCE

- Addresses **social stigma** and marginalization of manual scavengers.
- Aims to **end manual scavenging**—an inhuman practice still reported despite legal prohibition.
- Promotes **safe working conditions**, **gender inclusivity**, and **urban sanitation goals**.
- Enhances India's **compliance with SDG 6 (Clean Water & Sanitation)** and **SDG 8 (Decent Work)**.

CONSTITUTIONAL AND LEGAL BACKING

- **Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013**
- Article 21 – Right to life and dignity
- Article 17 – Abolition of untouchability

CHALLENGES IN IMPLEMENTATION OF NAMASTE SCHEME:

IDENTIFICATION OF MANUAL SCAVENGERS

- **Problem:** States often deny the presence of manual scavenging.

- **Data:** As per Government records, *only 58,098 manual scavengers* have been officially identified across India (2023), but independent organizations estimate numbers to be much higher.
- **Example:** Tamil Nadu, Uttar Pradesh, and Maharashtra report high fatalities, yet often underreport actual manual scavenger data.

LACK OF ACCURATE SURVEYS

- **Issue:** Many local bodies do not conduct comprehensive surveys.
- **Impact:** Exclusion of real workers from the benefits of the scheme.
- **Example:** In 2022, the Supreme Court pulled up several states for *zero reporting* despite media reporting multiple deaths in sewer cleaning.

TECHNOLOGY & INFRASTRUCTURE GAPS

- **Problem:** Many municipalities lack adequate machinery.
- **Example:** Delhi and Mumbai have large informal sanitation sectors with no access to mechanized cleaning equipment.
- **Issue:** Machines like jetting machines, robotic sewer cleaners are either unavailable or not functional.

FINANCIAL EXCLUSION

- **Challenge:** Sanitation workers, often from marginalized communities, lack access to credit.
- **Example:** Difficulties in availing loans under Mudra or other schemes due to lack of documentation or awareness.

POOR REHABILITATION AND SOCIAL REINTEGRATION

- **Fact:** Manual scavengers continue to face social ostracism.
- **Example:** In many areas, even after shifting to machine-based work, the social stigma persists (e.g., parts of Rajasthan, Madhya Pradesh).

IMPLEMENTATION GAP

- **Observation:** Despite being a central sector scheme, the **State Governments** are slow in implementation.
- **Example:** States like Bihar and Jharkhand showed poor utilization of funds under the NAMASTE program.

DATA TRANSPARENCY AND MONITORING

- **Issue:** Poor tracking of scheme impact, lack of centralized digital dashboards.

- **Judgement:** The *Supreme Court in Safai Karamchari Andolan v. Union of India (2014)* directed strict implementation of the **Prohibition of Employment as Manual Scavengers Act, 2013**, yet deaths continue.

CONTINUED DEATHS IN SEWER WORK

- **Fact:** Over **400 deaths reported (2016–2023)** due to hazardous sewer cleaning.

- **2023 NCRB Data:** Over 60% of sewer cleaning deaths occurred in urban local bodies without proper safety gear.

WAY FORWARD:

- **Strict enforcement** of the 2013 Prohibition of Manual Scavenging Act.

- **Time-bound rehabilitation** and **mandatory mechanization**.

- Regular third-party **audits and social inclusion programs**.

- **Real-time dashboards** for tracking deaths, surveys, and machinery use.

- Enhanced **budgetary allocations** and **skill upgradation programs**.

14	RBI'S FINANCIAL INCLUSION INDEX

The Reserve Bank of India's Financial Inclusion Index (FI-Index) rose by **4.3% in FY25**.

WHAT IS FINANCIAL INCLUSION?

- It means that individuals and businesses have access to and use affordable financial products and services that meet their needs, which are delivered in a responsible and sustainable way.
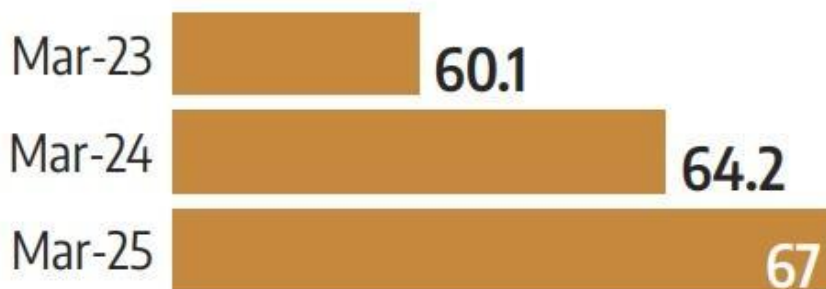
FINANCIAL INCLUSION INDEX (THE FI-INDEX)

- It is a comprehensive index incorporating details of banking, investments, insurance, postal, as well as the pension sector in consultation with government and respective sectoral regulators.
- It captures information on various aspects of financial inclusion in a single value ranging between **0 and 100**, where **0 represents complete financial exclusion** and **100 indicates full financial inclusion.**
- It comprises three broad parameters
  - **Access, with 35 per cent weightage**: It reflects how easily financial services are available
  - **Usage with 45 per cent weightage:** It indicates how frequently and effectively people are using these services.
  - **Quality with 20 per cent weightage:** It includes aspects like financial literacy, consumer protection, and reduction in inequalities and service deficiencies.

KEY FINDINGS OF RECENT DATA

- The index value increased from **64.2 in March 2024 to 67 in March 2025.**

- The growth was witnessed across all sub-indices – access, usage, and quality.

  - The improvement in FY25 was mainly driven by gains in the usage and quality dimensions, highlighting deeper engagement with financial products and services and the impact of ongoing financial literacy efforts.

IMPORTANCE

- Financial inclusion supports entrepreneurship and business growth.

- It is a catalyst for achieving seven of the 17 Sustainable Development Goals (SDGs).

- It fosters economic growth and employment, promotes economic empowerment of women, and contributes to eliminating poverty.

- It helps build resilience for people and businesses vulnerable to climate change and natural disasters

- The rise in the FI-Index signals India's growing success in expanding financial access to underserved populations and **enhancing the quality of financial services available.**

- This progress supports the government's broader agenda of economic empowerment and inclusive growth, **contributing to the strengthening of India's formal financial ecosystem.**

RELATED INITIATIVES

The **Pradhan Mantri Jan Dhan Yojana (PMJDY)** has opened over 54.58 crore accounts, with deposits rising to ₹2.46 lakh crore by January 2025. **The Atal Pension Yojana (APY)** has seen a surge in enrolments, reaching 7.33 crore by January 2025, with more than 89.95 lakh new enrolments in FY 2024-25.

The **Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)** has enrolled 22.52 crore individuals, with ₹17,600 crore disbursed for 8.8 lakh claims.

The **Pradhan Mantri Suraksha Bima Yojana (PMSBY)** has covered 49.12 crore people, processing ₹2,994.75 crore against accident claims.

The **Stand-Up India Scheme** has sanctioned ₹53,609 crore in loans for 2.36 lakh entrepreneurs, with a focus on SC/ST and women.

The **Pradhan Mantri Mudra Yojana (PMMY)** has sanctioned ₹32.36 lakh crore for 51.41 crore loans, with 68% of the loans benefiting women and 50% going to SC/ST/OBC categories.

CHALLENGES OF FINANCIAL INCLUSION

- Large gaps remain between high- and low-income countries in account ownership.

- Women, especially in developing countries, are less likely to have access to financial services.

- Inadequate digital infrastructure and low digital literacy hinder access to mobile financial services.

- Weak consumer protection leaves users vulnerable to fraud, misuse, and lack of transparency.

SUGGESTIONS AND WAY AHEAD

- The Government of India's Financial Inclusion (FI) initiatives serve as a cornerstone for empowering economically and socially marginalized communities by facilitating equitable access to formal financial services.

- There is a need to enhance regulatory frameworks and consumer protection to ensure safe and fair use of digital financial services.

15	**INDIA WITNESSES SURGE IN IP FILINGS OVER FIVE YEARS**

The IP filings in India in the last five years have increased by 44%, rising from 4,77,533 in 2020–21 to 6,89,991 in 2024–25.

KEY FINDINGS

- The highest growth was observed in Geographical Indications (GI) with a 380% increase, followed by Designs (266%), Patents (180%), Copyright (83%), Trademarks (28%), and Semiconductor Integrated Circuits Layout-Designs (SICLD) with a 20% rise.

INTELLECTUAL PROPERTY (IP) RIGHTS

- Intellectual Property (IP) is generally defined as the **'Product of Mind'.**
  - It is a property that results from the **creations of intellect in industrial, scientific, literary or artistic fields.**

- **Intellectual Property Right (IPR)** is the **legally enforceable exclusive right** granted to the owner of the intellectual property for a limited period.
  - IPR **rewards creativity & human endeavo**r which fuel the progress of humankind.

- **Forms of IPR:** Patents, Copyrights, Trademarks, Industrial Designs, Geographical Indications, Layout Design of Integrated Circuits, Protection of Plant Varieties & Farmers' Rights, Protection of undisclosed information/ Trade Secrets.

Type of IPR	What It Protects	Example	Duration	Governing Law (India)
Patent	Inventions, new processes, or technical solutions	COVID-19 vaccine formula by Bharat Biotech	20 years from filing date	Patents Act, 1970 (amended in 2005)
Trademark	Symbols, names, logos, slogans that distinguish goods/services	"Amul", "Tata", Nike Swoosh	10 years (renewable indefinitely)	Trade Marks Act, 1999

Copyright	Literary, artistic, musical, dramatic, software and cinematographic works	Films, books, software, songs	Author's life + 60 years (post death)	Copyright Act, 1957
Geographical Indication (GI)	Goods with specific geographic origin and unique characteristics	Darjeeling Tea, Banarasi Saree	10 years (renewable)	Geographical Indications of Goods Act, 1999
Industrial Design	Aesthetic or ornamental aspect of an article (shape, configuration, pattern)	Shape of Coca-Cola bottle	10 years (extendable by 5 years)	Designs Act, 2000
Trade Secret	Confidential business information that gives a competitive edge	Coca-Cola formula, Google algorithm	Unlimited (as long as secrecy is maintained)	No specific law (Protected under common law, contracts)

IS AN INDIAN PATENT VALID IN OTHER COUNTRIES?

- No. **Patent rights are territorial rights**, which will be **valid within the territory of the Country which has issued Patent.**

- Hence, an Indian Patent, which is granted by the Indian Government, will be **valid only in India.**

INDIA'S INITIATIVE

- **National IPR Policy 2016** encompassing all IPRs into a single vision document setting in place an institutional mechanism for implementation, monitoring and review of IP laws.

  - The policy encourages innovation and creativity by providing stronger protection and incentives for inventors, artists, and creators.

- **Artificial Intelligence (AI) and Machine Learning (ML) based Trademark Search Technology** has been introduced for a more efficient and accurate examination and faster disposal of Trade Mark applications.

- **The Start-Ups Intellectual Property Protection (SIPP) scheme** was launched in 2016 to provide pro bono facilitation to startups for the filing and processing of patent, trademark, and design applications.

- **Cell for IPR Promotion and Management (CIPAM):** It has been set up to coordinate the implementation of the National IPR Policy.

- **National Intellectual Property Awareness Mission (NIPAM),** a flagship program to impart IP awareness and basic training in educational institutes.

- **Atal Innovation Mission (AIM):** It was set up by **NITI Aayog in 2016 to** promote a culture of innovation and entrepreneurship in India. AIM has created **four programs** to support these functions:

  - Atal Tinkering Labs

  - Atal Incubation Centers

  - Atal New India Challenges and Atal Grand Challenges

  - Mentor India.

16	SEAWEED CULTIVATION IN INDIA

In a significant step towards enhancing marine-based livelihoods and sustainable resource use, India has identified **384 potential sites across 24,707 hectares** for seaweed cultivation.

WHAT ARE SEAWEEDS?

- **Seaweed** refers to various species of **macroscopic, multicellular marine algae** belonging primarily to the green, red, and brown algae groups that grow in seas, oceans, and tidal areas.

- Unlike terrestrial plants, seaweeds do not have true stems, roots, or leaves.

- They absorb nutrients and photosynthesize through their entire body.

- Seaweed is used globally for **food, cosmetics, fertilizers, pharmaceuticals, biofuel**, and **bioplastics.**
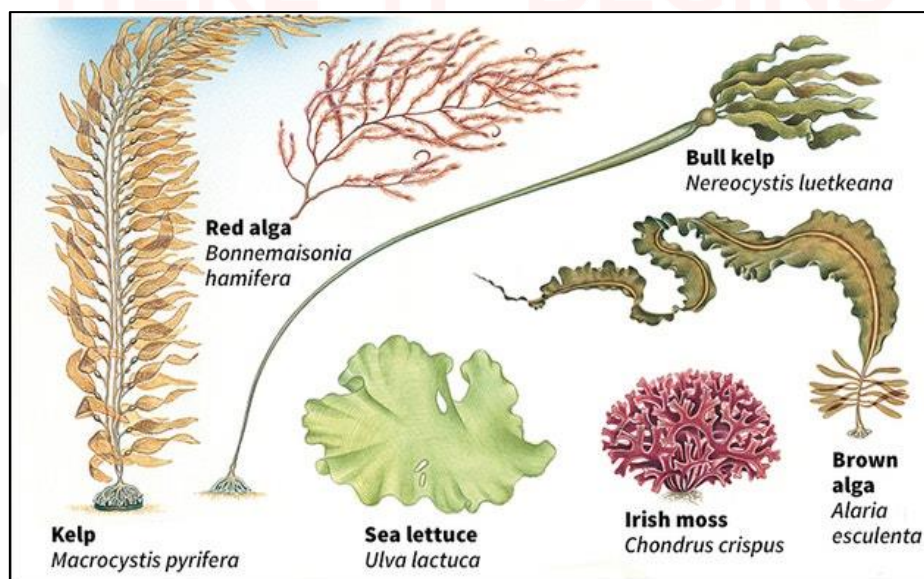
CLIMATIC CONDITIONS

- Optimal growth occurs in waters with salinity **above 30 ppt**.

- Temperature lies **between 26°C** and **30°C**.

- Water depth of **1 metre during low tide** is essential.

- Seaweeds grow best on **rocky bottoms** in **clear waters**.

- **Transparent water** ensures adequate **sunlight penetration** for photosynthesis.

- **Mild water currents** are ideal for maintaining nutrient flow and oxygen supply.

USES OF SEAWEEDS

- Seaweeds are consumed in sushi, salads, snacks, and seaweed-based condiments.

- They are rich in **iodine**, **fibre**, **vitamins**, and **antioxidant** compounds.

- Seaweed compounds act as **binding agents** in toothpaste, jelly, and as **emollients** in organic cosmetics.

- Liquid extracts from seaweeds act as **bio-stimulants** in organic agriculture.

- Compounds offer **anti-inflammatory**, **anti-cancer**, & heart-protective properties.

- Seaweeds are processed for **bioethanol** and **biogas** as renewable fuel alternatives.

SEAWEED CULTIVATION IN INDIA

Coastal States Involved: Tamil Nadu, Gujarat, Maharashtra, Odisha, Andhra Pradesh, Lakshadweep.

TYPES CULTIVATED:

- **Red algae:** Gracilaria, Gelidiella
- **Brown algae**: Sargassum, Turbinaria
- **Green algae**: Ulva
- **Major Uses**: Agar-agar, carrageenan (used in food stabilizers), manure, animal feed, cosmetics, pharma, and bioplastics.

GOVERNMENT INITIATIVES FOR SEAWEED CULTIVATION

Seaweed Park (Tamil Nadu)	India's first integrated seaweed park to boost cultivation, processing, and exports.

Marine Bioresource Mission	Part of the **Deep Ocean Mission** to harness marine resources like seaweed.
Pradhan Mantri Matsya Sampada Yojana	Encourages seaweed cultivation under the aquaculture component.

INDIA

Arabian Sea

Bay of Bengal

Lakshadweep group of Islands

Andaman &Nicobar Islands

Indian Ocean
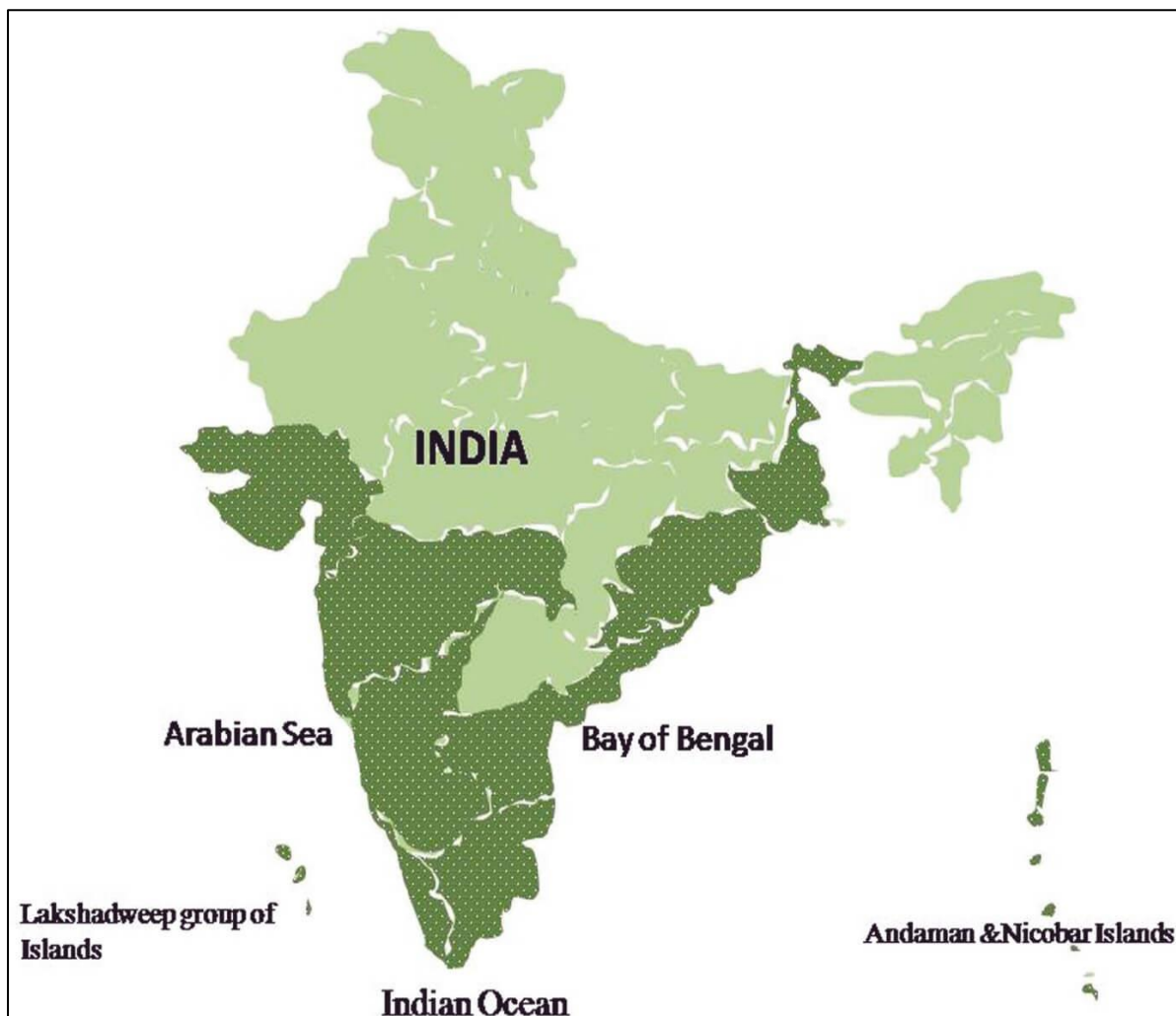
17 BAL GANGADHAR TILAK

PM Narendra Modi paid tribute to pioneering nationalist leader **Bal Gangadhar Tilak** on his **169th birth anniversary** on **23 July 2025.**

- Tilak was born on **July 23, 1856**, in **Ratnagiri**, and died on **August 1, 1920**, in **Bombay**.

- He was popularly known as **Lokmanya** (meaning 'accepted by the people'), while **Mahatma Gandhi** called him the **"Maker of Modern India"** for awakening Indian national consciousness.

- He coined the slogan **"Swaraj is my birthright,"** asserting self-rule as a national right.

- In **1916**, he co-founded the **Home Rule League** to institutionalize self-rule demand.

- He popularized **Ganesh Chaturthi** and **Shivaji Jayanti** to foster patriotic feeling.

- He launched newspapers, **Kesari (Marathi)** and **The Mahratta (English).**
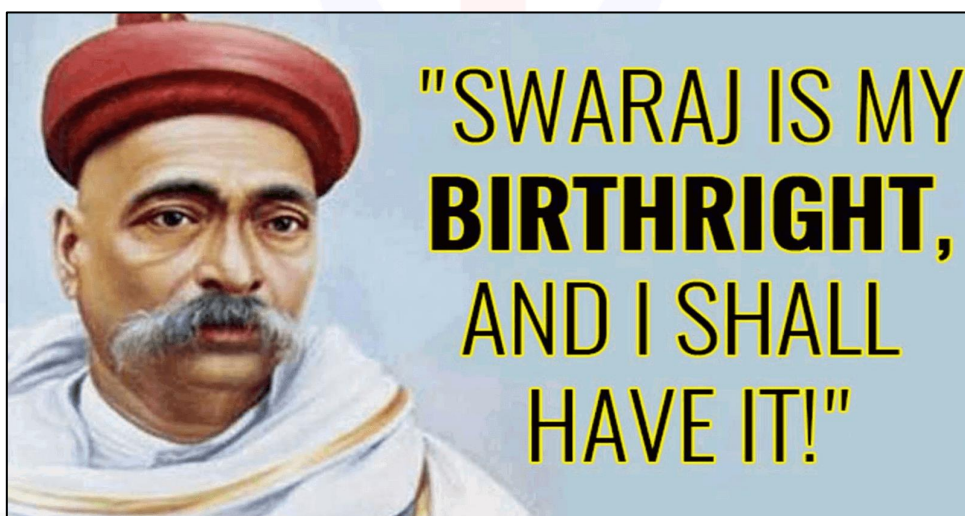
BOOKS BY TILAK

- **The Orion, Or, Researches into the Antiquity of the Vedas (English)**

- **The Arctic Home in the Vedas (English; about the origins of the Indo-Aryan people)**

- **Gita Rahasya** (**Marathi**; authored in 1915 while he was in **prison at Mandalay, Burma**. d

- According to him, the real message behind the Bhagavad Gita is **Nishkam Karmayoga (selfless action)**, rather than **Karma Sanyasa (renouncing of actions)**)

MAJOR CONTRIBUTIONS TO INDIAN FREEDOM MOVEMENT

ASSERTIVE NATIONALISM:

- Believed in **direct action**, unlike moderates of Indian National Congress.
- Advocated **Swaraj (self-rule)** and **boycott of British goods**.

NEWSPAPERS AND PUBLICATIONS:

- Founded **Kesari** (Marathi) and **Mahratta** (English) newspapers.
- Used press to awaken political consciousness.

EDUCATION REFORMS:

- Co-founded the **Deccan Education Society (1884)**.
- Established **Fergusson College** in Pune.

CULTURAL NATIONALISM:

- Started **Ganesh Utsav (1893)** and **Shivaji Utsav (1895)** to unite Indians through cultural pride.
- Promoted **Hindi and vernacular languages** for national awakening.

HOME RULE MOVEMENT (1916):

- Along with Annie Besant, launched the **Home Rule League**.
- Demanded **self-government within British India**.

CONGRESS SPLIT (1907):

- At **Surat Session**, Tilak led the **extremists**, split from **moderates**.
- Called for **direct political action**.

IMPRISONMENT:

- Arrested for sedition in 1908 (for Kesari articles).
- Sent to **Mandlay jail in Burma** for 6 years (1908–1914).

HINDU REVIVALISM:

- Emphasized **Bhagavad Gita** as a call to action.
- Wanted Hindu traditions to be reinterpreted for national regeneration.

18	**INDIA SIGNED AN AGREEMENT WITH NEPAL TO IMPLEMENT 5 HIGH-IMPACT COMMUNITY DEVELOPMENT PROJECTS**

Recently, India signed an agreement with Nepal to implement **5 high-impact community development projects (HICDPs)** in education and health sectors under an Indian **grant of ₹390 million**.

HIGH-IMPACT COMMUNITY DEVELOPMENT PROJECTS (HICDPS)

Sector	Projects
Education	Construction of **4 Secondary Schools** in Dhanusha, Parsa, Achham & Bara districts
Health	Construction of a 5-bed **hospital** in Manang district

STRATEGIC SIGNIFICANCE

- Enhances access to **health and education** in Nepal's underserved areas, aligning with its decentralization goals.

- Reinforces India's image as a **reliable and benevolent partner**, strengthening people-to-people ties through grassroots projects.

- Reflects India's proactive commitment as a **"Big Brother"** in regional development, fostering goodwill and regional stability.

CHALLENGES

- At **Susta**, **Kalapani**, and the **'tri-junction'** of **Lipulekh area**.

- Agreements such as **Kosi** (1954) and **Mahakali** (1996) remain stalled, leading to the pending of the Pancheshwar Multipurpose Project.

- Porous & open borders **lead to illegal migration**, infiltration, human trafficking, etc.

- China's **chequebook diplomacy** & its presence in the region pose challenges to the India-Nepal relationship.

India and Nepal both claim the Kalapani territory

Disputed Kalapani region

Nepal

Kathmandu

Bhutan

TRI-JUNCTION TROUBLE

Lipulekh mountain pass at the 80-km-long Uttarakhand-Nepal border

Kalapani
Lowest point
11,980 ft

Highest point
20,280 ft
(Lipulekh Pass)

C H I N A

Uttarakhand

Dharchula

N E P A L

➤ Nepal has two tri-junctions with India and China

➤ The one in dispute now is Lipulekh in Kalapani, at the border of Uttarakhand with Nepal

➤ In 1816, the Sugauli Treaty signed by Nepal and British India identified Kali river as

Nepal's boundary with India

➤ Nepal claims the river to Kalapani's west is the main Kali, and thus Nepal has territorial rights to it

➤ India holds that a ridgeline to Kalapani's east is the border, thus Kalapani falls within its territory
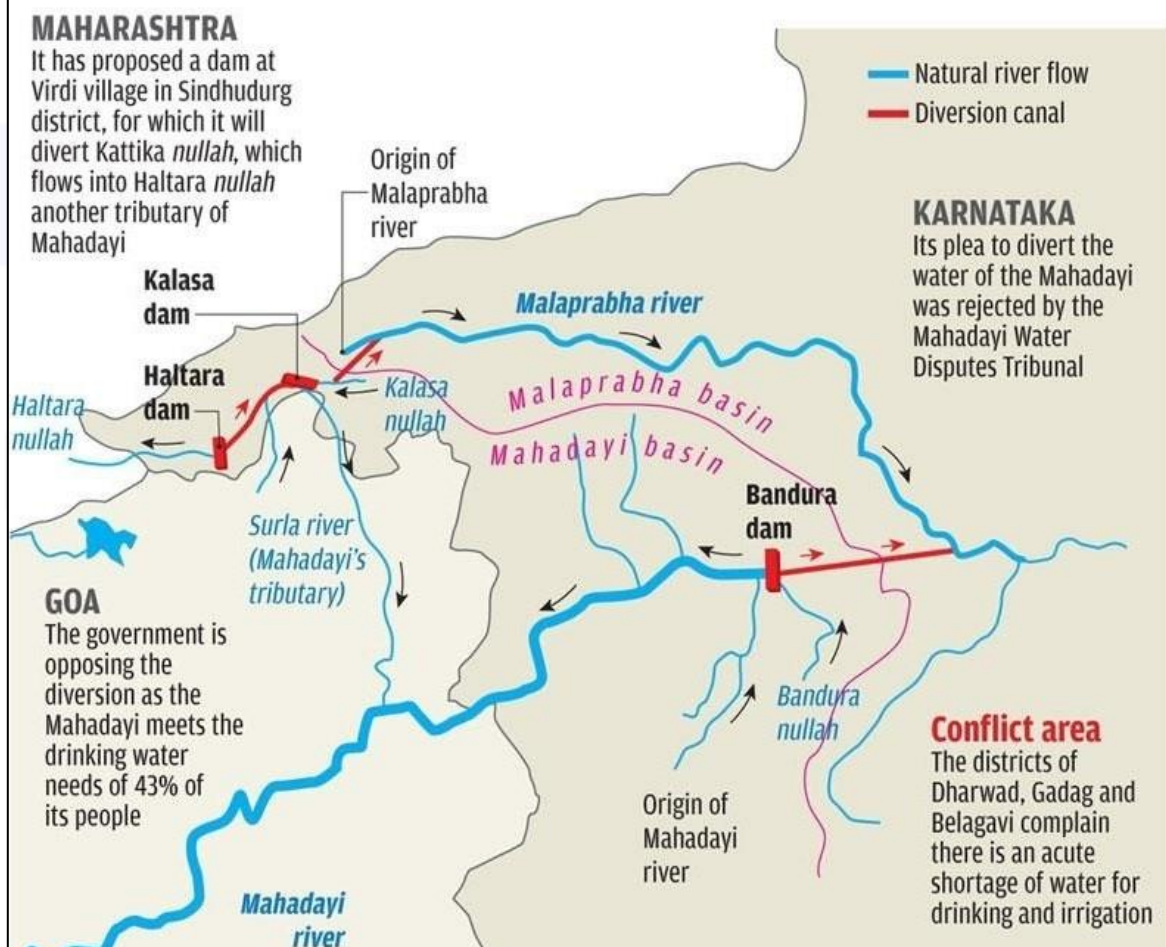
19   MHADEI RIVER'S

Goa is taking Karnataka to the Supreme Court, accusing it of illegally diverting water from the Mhadei river's Kalasa tributary.

MHADEI RIVER

- **River Origin:** Mhadei (also called Mandovi in Goa) originates in Karnataka's Western Ghats (Belagavi district).

- **Length & Flow:** ~111 km; 35 km in Karnataka, 76 km in Goa.

- **Tributaries:** Malaprabha, Pandari, Bailnadi (in Karnataka); Khandepar, Valvanti (in Goa).

- **Drainage:** Arabian Sea (via Goa).

- **States Involved:** Karnataka, Goa, Maharashtra.

Controversial water diversion plan

Under the Kalasa Bandura project, the Karnataka government has proposed dams and canals to divert the Mahadayi's water to address the water deficit in the Malaprabha basin

MAHARASHTRA
It has proposed a dam at Virdi village in Sindhudurg district, for which it will divert Kattika *nullah*, which flows into Haltara *nullah* another tributary of Mahadayi

— Natural river flow
— Diversion canal

KARNATAKA
Its plea to divert the water of the Mahadayi was rejected by the Mahadayi Water Disputes Tribunal

Origin of Malaprabha river

Kalasa dam

Haltara dam

Haltara nullah

Malaprabha river

Kalasa nullah

Malaprabha basin

Mahadayi basin

Bandura dam

Surla river (Mahadayi's tributary)

GOA
The government is opposing the diversion as the Mahadayi meets the drinking water needs of 43% of its people

Bandura nullah

Origin of Mahadayi river

Conflict area
The districts of Dharwad, Gadag and Belagavi complain there is an acute shortage of water for drinking and irrigation

Mahadayi river

KEY FACTS:

- **Basin Area:** 2,032 sq. km (Goa: 1,580 sq. km, Karnataka: 375 sq. km, Maharashtra: 77 sq. km).

- **Lifeline of Goa:** Critical for drinking water, agriculture, and biodiversity.

- **Major Projects:** Kalasa-Banduri Nala Project (Karnataka) proposes diversion to Malaprabha River.

- **Parties:** Karnataka, Goa, Maharashtra.

- **Karnataka's Demand:** Divert water to Malaprabha basin for drought-prone regions (Hubballi-Dharwad, Gadag).

- **Goa's Opposition:** Argues diversion harms ecology, water security, and violates tribunal orders.

- **Mahadayi Tribunal (2018):** Allocated 13.42 TMC to Karnataka, 24 TMC to Goa, 1.33 TMC to Maharashtra.

- **Current Status:** Both states challenged the award in Supreme Court.
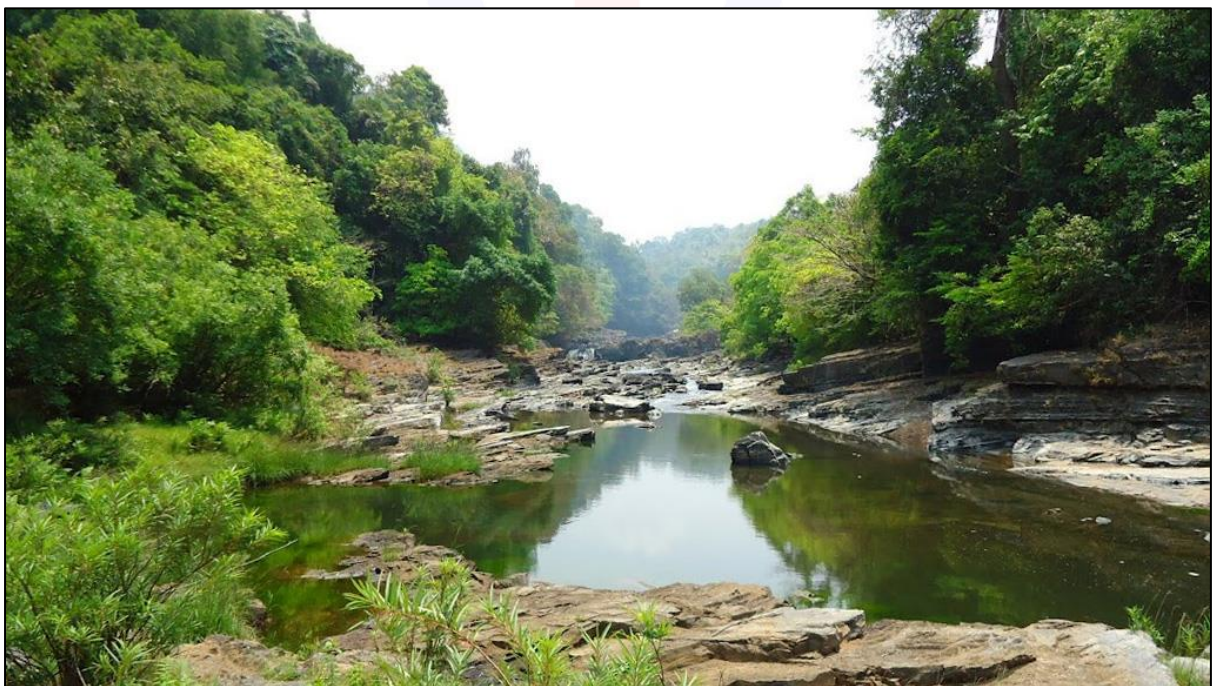
20   MIG-21 BISON JETS

Over six decades of service, the Indian Air Force (IAF) is set to formally retire its last MiG-21 Bison jets, marking the end of one of the world's longest-serving fighter platforms.

- **Full Name:** Mikoyan-Gurevich MiG-21

- **Origin:** Soviet Union

- **Entered IAF Service:** 1963

- **Speed:** Mach 2.1 (supersonic; over 2,200 km/h)

- **Category:** Interceptor and fighter aircraft

- **Significance:** First **supersonic** combat aircraft of the Indian Air Force (IAF)

IMPORTANCE OF MIG 21 IN INDIAN DEFENCE HISTORY

SUPERSONIC ENTRY:

- Marked India's entry into the **supersonic jet era**.

- Allowed the IAF to match the capabilities of advanced air forces globally.

COMBAT RECORD:

- Played a **key role in 1965, 1971, and Kargil wars**.

- Notable achievement: MiG-21 shot down the advanced F-104 Starfighter of Pakistan in 1971

LICENSE PRODUCTION:

- Initially imported, later **manufactured under license by HAL (Hindustan Aeronautics Ltd.)**.

- Helped develop India's aerospace production capacity.

VARIANTS IN INDIA:

- MiG-21FL, MiG-21M, MiG-21bis, and MiG-21 Bison (upgraded version).

- Bison is equipped with improved radar, missiles, and avionics.

OPERATIONAL LEGACY

- **Longest-serving fighter aircraft** in IAF history – over **60 years**.

- Over **850 MiG-21s** inducted over time.

- **IAF Pilots nicknamed it:** "Flying Coffin" due to aging and safety issues in later years.

TYPES OF FIGHTER JETS

Fighter Jet	Origin	Engine Type	Induction Year
Dassault Rafale	France	Twin-engine	2020
Sukhoi Su-30MKI	Russia	Twin-engine	2002
HAL Tejas	India	Single-engine	2016
Mirage 2000	France	Single-engine	1985
MiG-29 UPG	Russia	Twin-engine	1985 (Upgraded)
SEPECAT Jaguar	UK–France	Twin-engine	1979
MiG-21 Bison	Russia	Single-engine	1963 (Upgraded)

21	HATTI TRIBE

Himachal Pradesh, two brothers from the Hatti tribe married one woman in a polyandrous marriage, a traditional practice still seen in some Himalayan tribal communities.

Locally known as **"Jodidara"** or **"Jajda"**, is a traditional practice among the Hatti community where **brothers marry the same woman**.

HATTI TRIBE

- **The Hatti** are a **close-knit tribal community** residing along the **Himachal Pradesh–Uttarakhand border**.

- Their name comes from their traditional occupation of **selling crops** and meat at **local haats (marketplaces).**

- The Hattis has two main clans—**Trans-Giri** (in **Himachal Pradesh**) and **Jaunsar Bawar** (in **Uttarakhand**).
- They were granted **Schedule Tribe** status in August 2023.

WHAT IS POLYANDRY?

- Polyandry is a form of marriage where **one woman marries multiple men**.

- It is of two main types:

  - **Fraternal (Adelphic)**: All husbands are **brothers**.

- o **Non-Fraternal**: Husbands are **unrelated**, and share the woman by rotation.

- **Polyandry** is illegal under Indian law, but the **Himachal Pradesh revenue law** has upheld the **Hatti tribe's tradition of Jodidara**, allowing them to continue the practice under **customary tribal law**.

- **Traditional Council**: The Hatti community is governed by a local body called the **Khumbli**, which handles **social issues** and **community decisions**.

Tribe	Region
Toda	Nilgiri Hills, Tamil Nadu
Khasa	Uttarakhand (especially Jaunsar Bawar region)
Hatti	Himachal Pradesh (Sirmaur, Trans-Giri region)
Khasi	Meghalaya
Ladani Bota	Northern India (exact locality not well defin
Nayar	Kerala (historically, in matrilineal setup)

22	ETHANOL BLENDING IN PETROL

India met its 20% ethanol blending goal in 2025, ahead of the 2030 target, and now aims to scale blending to 27% by 2030 under the National Policy on Biofuels.
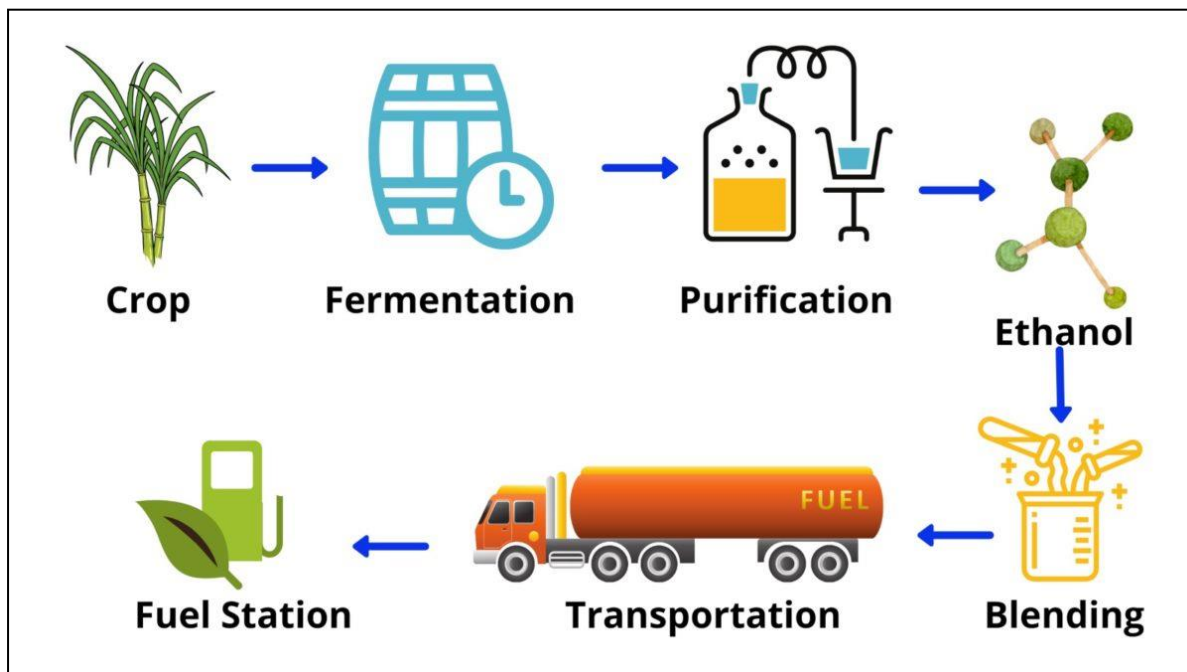
ETHANOL

- Ethanol (C_2H_5OH) is a **renewable**, flammable, colorless **bio-alcohol** used as a transport fuel.

- Produced through **fermentation** of sugars/starches or by **ethylene hydration**.

- Ethanol has a **high-octane** rating but is 27% **less energy-dense** than petrol.

- It serves as a petrol **additive** and as a **standalone** fuel (E85, E100) in flex-fuel cars.

- Ethanol is also used in sanitizers, perfumes, beverages, and industrial solvents.

- Distillers' dried grains (**DDGS**) from grain ethanol are reused as **animal feed**.

- Ethanol is classified by **feedstock origin** into three generations:

  - From **food crops** like sugarcane and maize.

  - From **crop residues**, bagasse, and bamboo.

- **3G Ethanol:** From **algae**; still in R&D stage.

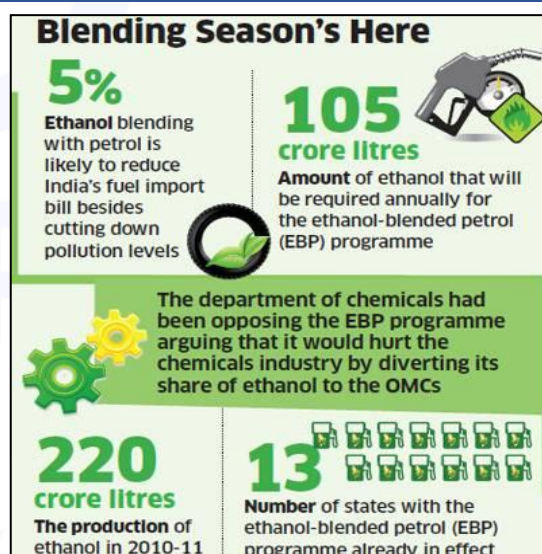- Ethanol is **99.9% pure alcohol** and blends with petrol due to **chemical miscibility**.

- Ethanol blending improves fuel combustion and reduces CO and hydrocarbon emissions.

ETHANOL BLENDING PROGRAMME (EBP)

- **Programme Evolution:** EBP began in 2003 and achieved nationwide rollout by **2019**.

- **Blending Progress:** Blending rose from **1.5%** (2014) to **10%** (2022) and 20% (2025).

- **E27 Target:** India aims to reach 27% ethanol blending by 2030 with phased rollout support.

- **Nodal Ministry: Ministry of Petroleum and Natural Gas** oversees EBP with multi-ministry coordination.

- **Labelling:** Fuel **pumps** and **vehicles** must display ethanol blend level to ensure consumer awareness.

OTHER GOVERNMENT INITIATIVES

- **Policy Backbone: National Biofuel Policy 2018** (amended in 2022) enables surplus foodgrain usage.
- **Loan Support:** Ethanol Interest Subvention Scheme (**EISS**) offers **6% interest subsidy** to new distilleries.
- **GST Reform:** GST on blending ethanol reduced from **18% to 5%** to lower production cost.
- **E20 Compliance:** All **BS-VI petrol vehicles** must meet **E20 certification norms** from April 2025.

Blending Season's Here

5%
Ethanol blending with petrol is likely to reduce India's fuel import bill besides cutting down pollution levels

105 crore litres
Amount of ethanol that will be required annually for the ethanol-blended petrol (EBP) programme

The department of chemicals had been opposing the EBP programme arguing that it would hurt the chemicals industry by diverting its share of ethanol to the OMCs

220 crore litres
The production of ethanol in 2010-11

13
Number of states with the ethanol-blended petrol (EBP) programme already in effect

SIGNIFICANCE OF ETHANOL BLENDING

- **Import Reduction:** Ethanol blending reduces India's dependency on **crude oil imports**.

- **Forex Saving:** ₹1.36 lakh crore saved in foreign exchange through **import substitution**.

- **Lifecycle Emissions:** 2G ethanol cuts GHGs by **over 50%** compared to petrol.

- **Farmer Income:** Since 2014, farmers have received **~₹1 lakh crore** through procurement transfers.

- **Agro Waste Utilization:** Promotes a circular economy by using stubble, dung, and biomass.

- **Crop Diversification:** Incentivizes maize cultivation and **reduces cane dependency**.

- **Blending Buffer:** Ethanol stockpiles offer **blending flexibility** to manage price shocks in crude oil.

ISSUES WITH ETHANOL BLENDING

- **Food–Fuel Conflict:** Ethanol from foodgrains risks **inflation** and **nutritional insecurity**.

- **Water Intensity:** Producing 1 litre of ethanol consumes **~3000 litres** of water, raising groundwater stress.

- **Environmental Burden:** Expansion risks **deforestation**, soil degradation, and **monoculture**.

- **Pollution Concerns:** Ethanol plants emit **acetaldehyde**, release **vinasse**, and fail to curb **nitrous oxide**.

- **Mileage Reduction:** E10-E20 blends lower fuel efficiency by **up to 7%**, while E100 cuts it by nearly **30%**.

- **Logistics Lag:** Ethanol pipelines, storage, and rural blending depots remain inadequate.

- **Price Uncertainty:** Inconsistent feedstock pricing **weakens investor confidence** in ethanol distilleries.

WAY FORWARD

- **E27 Rollout: Prepare roadmap** for scaling up blending to 27% by 2030.
- **Maize Push:** Increase **MSP and acreage** under maize to reduce foodgrain diversion.
- **2G Expansion:** Fast-track bamboo, bagasse, and **stubble-based ethanol** plants.
- **Water-Audit Mandate:** Enforce water-use audits for all distilleries under CPCB norms.
- **Balanced Allocation:** Cap FCI foodgrain usage and incentivize non-edible feedstocks.
- **Vehicle R&D:** Develop E20-E100 compliant engines with **corrosion & mileage safeguards**.
- **Global Partnerships:** Collaborate with **Brazil** and **Sweden** for flex-fuel and lifecycle audit tech.

23	TRACKING INDIA'S CLIMATE COMMITMENTS

India has crossed a major climate milestone by achieving key targets under the Paris Agreement (2015) well ahead of schedule.

PROGRESS ON KEY CLIMATE TARGETS

INSTALLED CAPACITY:

- **Target:** 50% of electricity capacity from **non-fossil fuels** by **2030**.

- **Achieved:** As of June 2025, non-fossil sources contribute over **50% (242.78 GW)** of the total installed capacity of 484.82 GW, target achieved 5 years ahead of schedule.

EMISSIONS INTENSITY:

- **Target: 45% reduction** in emissions intensity (from 2005 levels) by 2030.

- **Achieved:** By 2020, India had already **achieved a 36% reduction**. The current pace suggests the 2030 goal will be met comfortably.

CARBON SINK:

- **Target:** Additional **2.5 to 3 billion tonnes** of CO_2-equivalent sink by **2030**.

- **Achieved:** By 2021, India had already created a carbon sink of **2.29 billion tonnes** CO_2-equivalent. Updated figures are expected in the next ISFR to assess progress after 2021.

WHAT IS PARIS AGREEMENT?

The **Paris Agreement** is a legally binding international treaty on **climate change**, adopted by **196 countries** at the **United Nations Climate Change Conference (COP21)** in **Paris, on December 12, 2015**, and came into force on **November 4, 2016**.

KEY FEATURES OF THE PARIS AGREEMENT:

MAIN GOAL:

To limit **global warming** to **well below 2°C**, preferably **1.5°C**, compared to **pre-industrial levels**.

### NATIONALLY DETERMINED CONTRIBUTIONS (NDCS):

- Each country must **submit a climate action plan** known as **NDC**.

- These plans are **not legally binding** but must be updated every **5 years** to reflect **increasing ambition**.

NET ZERO EMISSIONS GOAL:

- The agreement aims to achieve **net-zero greenhouse gas emissions** in the **second half of the century** (by **2050–2100**).

CLIMATE FINANCE:

- Developed countries agreed to **mobilize $100 billion/year by 2020** to support **developing nations** in climate action.

- This amount may increase after 2025.
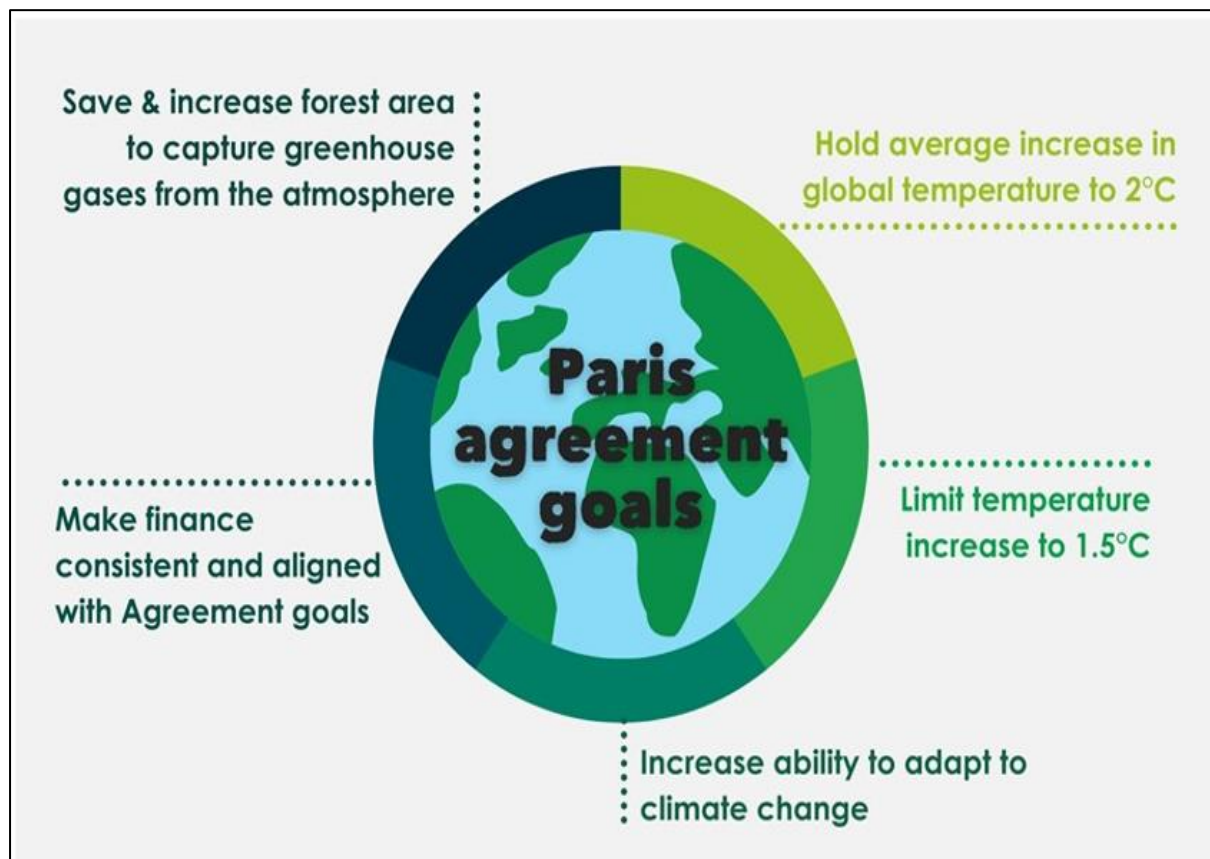
TRANSPARENCY MECHANISM:

- Countries must **report emissions and efforts** using a **common transparency framework (CTF).**

- There is a system of **global stocktaking** every **5 years** to assess collective progress.

GLOBAL PARTICIPATION:

- As of now, **almost all nations**, including major emitters like the **USA, China, and India**, are parties to the agreement.

AMBITION MECHANISM IN THE PARIS AGREEMENT
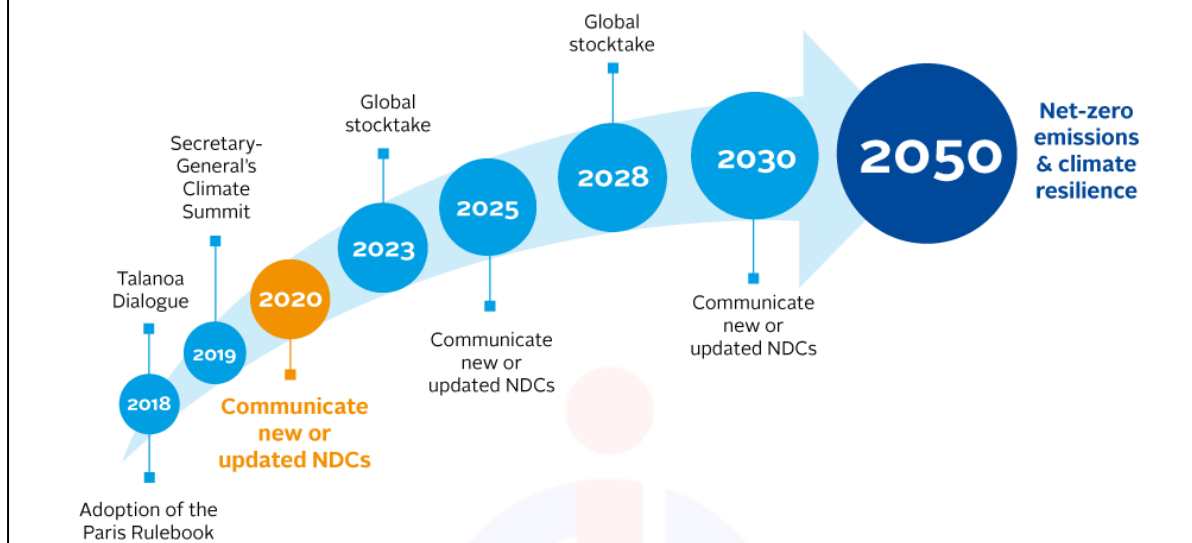
INDIA'S ROLE:

- Committed to reducing emissions intensity of GDP by **33–35% by 2030** from 2005 levels.

- Target to achieve **50% cumulative electric power from non-fossil fuel sources by 2030**.

- Committed to achieving **net-zero by 2070** (declared at COP26 in Glasgow, 2021).

COUNTRIES THAT JOINED THE PARIS CLIMATE AGREEMENT

Ratified (146) Signed (48) Not signed/Withdrawing (3)

IMPORTANCE OF THE PARIS AGREEMENT:

- First universal climate agreement binding all nations to climate targets.

- Promotes **climate justice**, sustainable development, and cooperation.

- Key tool for ensuring **global unity** against climate change.

LIMITATIONS AND CHALLENGES

- **Capacity-Generation Mismatch:** While **50% of installed capacity** is non-fossil, **only 28%** of actual electricity generation comes from renewable sources.

- **Share in Energy Mix:** Electricity accounts for **less than 22%** of India's total energy consumption. The remaining energy use is from the **direct burning of fossil fuels**, such as oil, coal, & gas.

- **Nuclear Power:** Nuclear energy contributes just **~7 GW** and is expected to grow only slightly by 2030. Hence, the pressure remains on solar, wind, & hydro to drive clean energy growth.

- **Capacity–Generation Gap:** Although non-fossil sources account for **over 50% of installed capacity**, they generate **only ~28%** of actual electricity, due to intermittency and storage issues.

- **Fossil Fuel Dominance: Electricity forms <22%** of India's total energy use; the rest still relies heavily on direct fossil fuel consumption.

- **Limited Nuclear Role:** Nuclear contributes **only ~7 GW**, with minimal expected growth, putting more pressure on solar, wind, and hydro.

WAY FORWARD

- **Broaden Decarbonization:** Tackle emissions in transport, industry, and heating via EVs, green hydrogen, and biofuels.

- **Enhance Storage:** Invest in **battery storage** and **smart grids** to manage renewable intermittency.

- **Improve Carbon Data:** Ensure accurate carbon accounting **to validate afforestation** and enhance climate credibility.

- **Accelerate Capacity Addition:** Match global pace, especially China's, to **stay competitive in the clean energy** transition.

| 24 | 'ADFALCIVAX' |

India has developed a new multi-stage malaria vaccine candidate called AdFalciVax

ADFALCIVAX VACCINE

- **Developed By:** ICMR's Regional Medical Research Centre (RMRC), National Institute of Malaria Research (NIMR), and Department of Biotechnology's National Institute of Immunology (DBT-NII).

- **Type:** A recombinant chimeric multi-stage malaria vaccine, genetically engineered using antigens from multiple life stages of the malaria parasite.

- Uniquely developed using *Lactococcus lactis*, a food-grade bacterium used in dairy fermentation.

- **Target Parasite: Plasmodium falciparum,** the **deadliest** of the five **human malaria parasites**.

DUAL OBJECTIVE:

- Prevent **human infection** from P. falciparum.

- Curb **community-level transmission** by targeting parasite stages within the mosquito vector.

- **Current Status:** Demonstrated high efficacy in preclinical trials. Not yet approved for clinical use.

BENEFITS OVER EXISTING MALARIA VACCINES

- **Dual Protection:** Targets **two parasite stages** for improved efficacy.
- **Stronger Immune Response:** Reduces the **risk of immune evasion** seen in single-antigen vaccines.
- **Thermal Stability:** Remains effective for over **9 months** at room temperature, aiding remote deployment.

25	BITRA ISLAND

The government has initiated the acquisition of Bitra Island in Lakshadweep for defence purposes.

BITRA ISLAND:

- It is the smallest inhabited island in the **Union Territory of Lakshadweep**.

- Situated at **11°36'N, 72°11'E**, Bitra lies about **483 km (261 nautical miles)** from **Kochi**, the gateway to Lakshadweep.

- It is part of the **Aminidivi subgroup** and spans **0.57 km in length** and **0.28 km** at its widest.

- The **climate of Bitra** closely resembles that of **Kerala**.

- **Hot period: March to May**, temperatures range from **25°C to 35°C**.

- **Annual Rainfall: 1600 mm**.

- It is surrounded by a vast **lagoon area of 45.61 sq km**, supporting rich **marine biodiversity**.

- As per the 2011 census , it has a **population of 271**, mostly dependent on **fishing** and **coconut cultivation**.

- **Bitra** is **strategically located** near major **shipping lanes** and is set to host a **defense establishment**, complementing **naval bases** at **Kavaratti (**INS Dweeprakshak**)** and **Minicoy (**INS Jatayu**).**

26 INDIA BECOMES GLOBAL LEADER IN FAST PAYMENTS

India has become the global leader in real-time payments as UPI processed 18.39 billion transactions in June 2025, according to an IMF-supported report.

WHAT THE REPORT IS?

- Jointly developed by the **International Monetary Fund (IMF) and FIS Global, this Fast Payments Report 2025 analyses global public digital infrastructure.**

- It uses a new metric**: Faster Payment Adoption Score (FPAS) to benchmark digital payment adoption.**

INDIA'S ACHIEVEMENTS:

- **Top Global Rank (FPAS: 87.5%):** India leads 30 countries, surpassing Brazil, Singapore, UK, and USA.

- **UPI Scale:** Processes over 640 million transactions daily, serving 491 million individuals and 65 million merchants via 675 banks.

- **Speed and Cost:** Delivers payments within 5 seconds, with near-zero cost per transaction.

- **Global Reach:** UPI is now operational in 7 countries, including France, UAE, and Singapore.

- **BRICS Integration:** India is advocating UPI as a cross-border payment standard among BRICS+ nations.
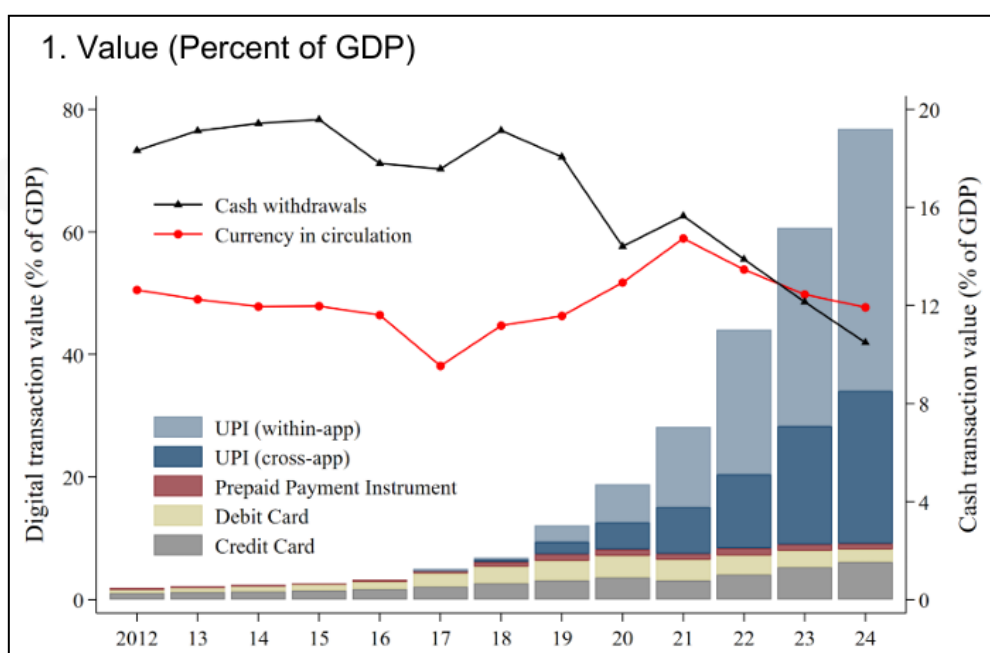
KEY FEATURES OF INDIA'S UPI ECOSYSTEM:

INTEROPERABILITY:

- Seamless fund transfer across multiple banks and platforms using a single interface.

REAL-TIME TRANSACTIONS:

- Instant money transfer, 24x7 availability including weekends and bank holidays.

USER-FRIENDLY INTERFACE:

- Simple two-factor authentication using mobile number and UPI PIN; no need for account details.

MULTIPLE USE-CASES:

- Peer-to-peer (P2P), merchant payments, bill payments, QR code scanning, recurring mandates (e.g., OTT subscriptions, loan EMIs).

COST-EFFECTIVE:

- Mostly free or nominal charges, promoting financial inclusion, especially among low-income groups.

STRONG GROWTH AND ADOPTION:

- Over **12 billion transactions/month** (as of 2025), expanding into **rural areas** and **tier-2/3 cities**.

GOVERNMENT AND PRIVATE INTEGRATION:

- Used in various schemes like **PM SVANidhi**, digital DBT (Direct Benefit Transfer), and integrated with **e-RUPI** and **DigiLocker**.

SECURITY AND PRIVACY:

- Built on two-factor authentication with **NPCI-regulated guidelines**, minimizing frauds through device-binding, UPI PIN, and tokenization.

CROSS-BORDER EXPANSION:

- Linked with **Singapore, UAE, France, Bhutan, Sri Lanka**, and others, boosting **digital diplomacy** and **remittance efficiency**.

INNOVATIVE ADDITIONS:

- Features like **UPI Lite**, **UPI123Pay** (for feature phones), and **Conversational Payments** using AI/voice tech.

LIMITATIONS AND CHALLENGES OF UPI ECOSYSTEM:

CYBERSECURITY RISKS:

- Rising instances of phishing, social engineering scams, and fake app frauds.

TECHNICAL GLITCHES:

- Server downtimes, failed transactions, and delays due to high volumes, especially during peak hours.

DEPENDENCE ON INTERNET AND SMARTPHONES:

- Limits access in areas with low digital literacy or poor connectivity.

LOW REVENUE MODEL:

- No MDR (Merchant Discount Rate) policy has discouraged some banks and fintechs due to unsustainable revenue.

INTEROPERABILITY GAPS:

- Some banks/platforms restrict UPI features (e.g., transaction limits, authentication methods).

DIGITAL DIVIDE:

- Rural elderly population, less tech-savvy users face hurdles in adoption despite UPI123Pay.

MONOPOLY CONCERNS:

- Market dominance of PhonePe and Google Pay (combined >80% market share) raises antitrust and competition issues.

LIMITED DISPUTE RESOLUTION MECHANISM:

- Grievance redressal is often delayed or inefficient in transaction failures and fraud.

PRIVACY CONCERNS:

- Potential misuse of data by third-party apps and lack of user awareness about data sharing policies.

INTERNATIONAL EXPANSION CHALLENGES:

- Regulatory barriers, compliance issues, and currency conversion complexities in cross-border UPI rollouts.

WAY AHEAD:

BUILD ROBUST OFFLINE CAPABILITY:

- Expand USSD and NFC-based UPI Lite+ to ensure reach in rural, low-connectivity zones.

GLOBAL REGULATORY ALIGNMENT:

- Collaborate with central banks to harmonize data security, authentication, and settlement systems for UPI's cross-border use.

STRENGTHEN LEGAL FRAMEWORKS:

- Introduce a comprehensive Digital Payments Consumer Protection Act to address data misuse and transaction failures.

INCLUSIVE DESIGN PRINCIPLES:

- Promote accessibility features (voice-assisted UPI, vernacular UIs) for elderly, disabled, and digitally illiterate populations.

UNIFIED GRIEVANCE REDRESSAL PLATFORM:

- Create a central, AI-assisted resolution portal for UPI complaints, integrated with NPCI and RBI systems.

27	GURYUL RAVINE FOSSIL SITE

The Geological Survey of India (GSI) has warned of severe threats to the Guryul Ravine fossil site in Kashmir due to ongoing quarrying and land diversion.

WHAT IS THE GURYUL RAVINE FOSSIL SITE?

- **Permian–Triassic Boundary Marker (≈252 million years ago)**
  Guryul Ravine is renowned as one of the few terrestrial locations preserving an extensive, well-preserved section of the Permian–Triassic mass-extinction event, often called "the Great Dying," which wiped out up to 96% of marine and 70% of land species.

- **World's Earliest Tsunami Evidence**
  Geological layers at the site contain seismite-tsunamite structures interpreted as records of Earth's first known tsunami during the PTB transition.

- **Rich Fossil Beds**
  The Zewan–Khunamuh sedimentary formations host fossils of primordial corals, invertebrates, plant life, and therapsid reptiles (mammal-like reptiles from pre-dinosaur periods).

- **Global Research Hub**
  Geologists from India, Japan, China, Canada, and beyond have studied it since the 19th century. Its fossil section is far thicker and better-preserved than comparable sites like China's Meishan.

CURRENT THREATS & DEGRADATION

ILLEGAL QUARRYING & MINING

Despite being declared a protected site under a 2017 government order, illegal extraction has continued. Limestone with embedded fossils is dispatched to cement factories and construction sites, driven largely by local industrial demand.

ENVIRONMENTAL VANDALISM: GARBAGE DUMPING

Recently, a large illegal waste dumping ground was set up adjacent to the fossil park. Authorities have enclosed the area and built a garbage shed, violating environmental laws like the Environment (Protection) Act, Wildlife (Protection) Act, and Solid Waste Management Rules.

GOVERNANCE FAILURES

Monitoring has been sporadic: nocturnal mining often escapes detection. Local truck owners and cement industries exert economic pressures. Previous court orders and bans on quarrying have largely been unenforced.

SCIENTIFIC & HERITAGE SIGNIFICANCE

Feature	Importance
PTB Record	Offers unmatched stratigraphic record of the Permian–Triassic transition
Fossil Diversity	Encases a wider and more complete fossil range than many global counterparts
Geoheritage & Education Value	Potential UNESCO Global Geopark and geological monument
Research Potential	Ongoing studies by scientists from over 10 countries

CONSERVATION IMPERATIVES & WAY FORWARD

- **Legal Designation** as an **Eco-Sensitive Zone** and **No-Dumping Area**, ensuring buffer protection around the fossil beds.

- **Immediate Removal of Garbage Yard**, strict enforcement against polluters, and dismantling of illegal dumpsite infrastructure.

- **Ban Quarrying Enforcement**: Monitoring should be strengthened and punishments meted to violators.

- **Site Fencing & Controlled Access**, combined with geological surveys and education outreach to reduce unauthorized entry and damage.

- **Promotion as Geo-Tourism/R&D Hub**: Under care of GSI and educational institutions, it could serve as a valuable research site and heritage tourism destination.

28 | KASHI DECLARATION

The Youth Spiritual Summit concluded in Varanasi with the adoption of the Kashi Declaration, setting a national roadmap for youth-led action against drug abuse.

WHAT IS THE KASHI DECLARATION ON DRUGS?

- The **Kashi Declaration** is a **national action roadmap** adopted at the **Youth Spiritual Summit** in **Varanasi (Kashi)**, held from **July 18–20, 2025**, under the theme **"Nasha Mukt Yuva for Viksit Bharat" (Drug-Free Youth for a Developed India)**.

- It represents a collective pledge made by **over 600 youth leaders** and **more than 120 spiritual and socio-cultural organizations** to launch a **youth-led, spiritually anchored, pan-India anti-drug movement**.

KEY HIGHLIGHTS OF THE DECLARATION

VISION & TIMELINE

- Aspires to forge a **Nasha Mukt Bharat by 2047**, with dedicated focus on **youth leadership** and cultural values.

- Lays out a **5-year roadmap** for grassroots mobilization across India.

STRATEGIC FRAMEWORK

- Urges a **multi-sectoral, whole-of-society response**—involving spiritual institutions, educational systems, ministries (Youth, Home Affairs, Social Justice, Culture), healthcare, and enforcement agencies like NCB.

- Proposes establishment of a **Joint National Committee** for inter-ministerial coordination, **annual progress reporting**, and a **digital support platform** for affected individuals to access rehabilitation services.

YOUTH & SPIRITUAL LEADERSHIP

- Positions **spiritual bodies** as grassroots drivers: ashrams, gurukuls, temples, and youth networks will lead awareness campaigns, pledges, and peer mentorship under the **MY Bharat** framework.

- Encourages **values-based, peer-led outreach** through cultural and moral education—not just punishment or law enforcement.

FOCUS THEMES

The Summit organized four plenary sessions, covering:

- **Psychological & social impact** of addiction

- **Disrupting trafficking networks**

- **Effective grassroots communication strategies**

- **Spiritual and cultural rehabilitation models**

SIGNIFICANCE & INSTITUTIONAL FOLLOW–UP

- Marks a **turning point in India's drug policy** by treating substance abuse as both a **public health issue** and a **moral challenge**, not merely a law-and-order problem.

- Aligns with existing government initiatives like **Nasha Mukt Bharat Abhiyan**, but brings a **unique spiritual, values-based approach**.

- Ensures **accountability**: Progress will be reviewed at the **Viksit Bharat Young Leaders Dialogue slated for 2026.**

29	NATIONAL COOPERATIVE POLICY 2025

Theme: "Sahakar se Samriddhi" (Prosperity through Cooperation)

To mark the **United Nations-designated International Year of Cooperatives (IYC) 2025,** India unveiled the **National Cooperation Policy 2025** to transform the cooperative sector **into a people-driven economic force**.

OVERVIEW

- Launched on **24 July 2025** by the Ministry of Cooperation under the leadership of **Amit Shah**.

- The policy envisions a **20-year roadmap (2025–2045)** to rejuvenate India's cooperative movement, aligned with the national goal of **Viksit Bharat @ 2047**.

- Anchored in the motto **"Sahakar se Samriddhi"**, it seeks to promote **inclusive growth**, **rural empowerment**, and **economic democratization** through cooperative institutions.

KEY OBJECTIVES

- **Triple the cooperative sector's GDP contribution by 2034**.

- **Establish one cooperative society in every village** within 5 years.

- **Create 2 lakh new Multi-Purpose PACS** (Primary Agricultural Credit Societies) by February 2026.

- **Activate participation of 50 crore citizens**, especially youth, women, and marginalized communities.

SIX PILLARS OF THE POLICY

STRENGTHENING INSTITUTIONAL INFRASTRUCTURE

- Revamp PACS, dairy, housing, fisheries, and credit cooperatives.

VIBRANCY AND INCLUSIVITY

- Ensure mass participation and gender/youth inclusivity.

DIGITAL & PROFESSIONAL GOVERNANCE

- Digitization of 65,000+ PACS, capacity building, and e-governance.

DIVERSIFICATION OF COOPERATIVE FUNCTIONS

- Expansion into tourism, taxi services, insurance, ethanol production, real estate, etc.

LEGAL AND FINANCIAL EMPOWERMENT

- Establish **National Cooperative Tribunal** and **National Cooperative Bank**.

STATE COOPERATION POLICIES

- All states to draft aligned cooperative policies by **January 31, 2026**.

SAHAKAR SE SAMRIDDHI – SIGNIFICANCE

This slogan embodies the vision of using the cooperative model to empower **rural and semi-urban economies**.

INCLUSIVE ECONOMIC GROWTH:

- Empowers **marginalized farmers**, artisans, and women through collective ownership.

- Ex: **Amul Dairy Cooperative**, a model of farmer-owned success, boosts rural income and self-reliance.

RURAL DEVELOPMENT:

- PACS are being modernized and made multipurpose (as part of 63,000 PACS digitization).

- Ex: Cooperative sugar factories in Maharashtra support not just farmers but also local employment.

BOOST TO AGRICULTURE AND ALLIED SECTORS:

- Helps in procurement, storage, and marketing, reducing farmers' dependency on middlemen.

- Ex: **IFFCO**, the world's largest fertilizer cooperative, benefits 5.5 crore Indian farmers.

SELF-RELIANCE (ATMANIRBHAR BHARAT):

- Enables community-based production and consumption.

- Supports **One District One Product (ODOP)** through cooperative enterprises.

DEMOCRATIC PARTICIPATION:

- Cooperatives are based on **democratic governance**, encouraging grassroots participation.
- Ex: Women Self-Help Groups (SHGs) under **DAY-NRLM** often evolve into cooperative federations.

CHALLENGES OF INDIA'S COOPERATIVE SECTOR

Despite the potential, the cooperative movement faces **systemic, structural, and governance-related challenges**.

POLITICAL INTERFERENCE:

- Local politicians often control cooperatives, leading to **corruption and favoritism**.

- Ex: Alleged scams in **sugar and credit cooperatives** in Maharashtra.

GOVERNANCE DEFICIT:

- Many cooperatives lack **transparency, audits, and elections**.

- Over 20,000 cooperatives are dormant due to mismanagement (Ministry of Cooperation data, 2023).

LACK OF PROFESSIONALISM:

- Cooperatives are often run by amateurs, lacking modern managerial skills and market orientation.

- Limited training opportunities for rural cooperative members.

LIMITED ACCESS TO TECHNOLOGY:

- Poor digital infrastructure, especially among PACS, leads to inefficient operations.

- Only 20% PACS are computerized as of early 2024.

CREDIT CONSTRAINTS:

- Cooperative banks suffer from **NPAs, dual regulation (RBI and State Registrar)**, and low capital adequacy.

- Ex: PMC Bank crisis showed vulnerabilities in cooperative banking.

INTER-STATE COORDINATION GAPS:

- Inconsistent cooperative laws across states hinder the growth of **Multi-State Cooperative Societies**.

URBAN NEGLECT:

- Cooperative movement remains **rural-centric** with limited models for urban employment or housing.

WAY FORWARD & REFORMS NEEDED

LEGAL REFORMS:

- Fast-track **amendments in MSCS Act**, PACS Model By-laws, and promote a Uniform Cooperative Code.

CAPACITY BUILDING:

- Establish dedicated training institutions in every state.
- Promote **young professionals in cooperative governance**.

COOPERATIVE STARTUPS:

- Encourage **youth-led cooperatives** in new sectors like clean energy, logistics, fintech, etc.

INTEGRATION WITH E-NAM & AGRI STACK:

- Digitally empower agri-cooperatives for better price discovery and direct marketing.

FINANCIAL INCLUSION:

- Expand the reach of cooperative credit to **underserved regions** like Northeast and tribal belts.

30	ART FORMS

The artists of Sohrai, Pattachitra and Patua art forms participated in the second edition of Kala Utsav 2025 at Rashtrapati Bhavan.

WHAT IS KALA UTSAV?

- An annual festival held at **school, district, state, and national levels**, showcasing students' skills in **music, dance, visual arts, theatre, storytelling, folk arts, and crafts**.

- Aligned with the **National Education Policy (NEP) 2020**, promoting **arts and cultural education** as essential for holistic learning and creative development.

- Features the **Pratibha Samvardhan** residential camp—a transformative 10-day immersion for top winners involving workshops, mentorship, cultural visits, and peer exchange.

SIGNIFICANCE OF KALA UTSAV

PRESERVES AND PROMOTES CULTURAL HERITAGE

- Encourages students to perform regional art forms, fostering understanding of India's linguistic and cultural diversity.

EMPOWERS TRIBAL AND UNDERSERVED COMMUNITIES

- Tribal forms such as Sohrai gain mainstream recognition, helping bridge gaps in representation.

SUPPORTS NEP VISION OF HOLISTIC EDUCATION

- Integrates arts into school curriculum, developing creativity, cognitive abilities, and cultural values.

PLATFORM FOR YOUNG TALENT

- Pratibha Samvardhan offers national exposure, expert mentoring, and opportunities beyond academic achievements.

STRENGTHENS NATIONAL INTEGRATION

- Promotes *Ek Bharat, Shreshtha Bharat* by bringing students from diverse states together under a common artistic platform

PATTACHITRA PAINTINGS

The term Pattachitra (pata = cloth, chitra = picture in Sanskrit) refers to **ancient cloth-based scroll painting traditions** from **Odisha** and, in a distinct form, **West Bengal.**

In **Odisha**, the art flourished **around Puri** and is closely **associated with Jagannath culture**.

THEMES

It showcases narrative depictions of **Hindu gods, goddesses, and religious stories**, especially episodes from the life of **Jagannath, Krishna, and other deities**.

TECHNIQUE

- They are painted on **cloth** or sometimes on **palm leaves**.
- The cloth is treated with a **chalk-gum base**, polished, and then painted with natural **mineral and vegetable pigments.**

- Artists are called **Chitrakars**.

STYLE FEATURES

- The paintings are recognized with **bold, black outlines, rich colors** (mainly red, yellow, blue, green, and white), and elaborate **decorative borders**.

- Their figures are stylized like **almond-shaped eyes,** elaborate ornamentation, and compact composition.

ABOUT SOHRA PAINTINGS

It is a **traditional tribal mural art** form originating in **Jharkhand**, primarily among the **Santhal, Oraon, Munda, Sadan, and Ho tribes**.

It is mainly practiced in **Hazaribagh district** but also in parts of **Bihar, Odisha, and West Bengal**.

Traditionally, women of the household paint on the mud walls of their homes during the holiday of Sohrai, which falls just a day after the **Hindu celebration of Diwali**.

THEMES

- They are dominated by **natural and agricultural motifs**—animals (hens, buffaloes, horses, wild animals), birds, lotuses, trees, and scenes of village life. Fertility, nature, and harmony are central themes.

TECHNIQUE

- The art is traditionally **created by women** using their **fingers, twigs, or brushes**.
- **Colors** are naturally sourced—from **clay, charcoal, rice paste, and leaves**.
- Distinct **clay varieties** (kali matti, charak matti, dudhi matti, lal matti, pili matti) are used for hues.

STYLES

- Vibrant, lively designs with **bold red and black lines**.
- **Red** symbolizes **ancestral blood** while **black** denotes **death or Shiva**.
- The paintings are **often matriarchal**, with pregnant figures and animals depicted with their young.

PATUA PAINTING

- It is a traditional folk-art form from the state of **West Bengal**.
- It is also practiced in **Bihar, Jharkhand, Odisha, and parts of Bangladesh**.

STYLE

- They are primarily **created on fabric scrolls**, which are subsequently utilized by itinerant **storytellers** to convey stories from **Hindu mythology, folklore, and current events**.

THEMES

- They frequently **depict Hindu deities and mythical stories**.
- Some paintings depict **current events or social topics** as well.

TECHNIQUE USED

- Traditional Patua paintings are distinguished by their **vibrant colours, clean lines, and dynamic compositions.**
- The painters produce their paintings with **natural hues like turmeric, indigo, and red ochre.**
- The scrolls are often painted on **coarse cotton cloth**, then **reinforced on the back** with fabric from ancient saris.

PATUA ARTWORK IS CLASSIFIED INTO TWO TYPES:

SCROLL PAINTINGS:

- These are **traditional** Patua paintings used to **tell stories**.
- They are often **long and narrow**, reaching lengths of **several feet.**

PANEL PAINTINGS:

- These are **smaller**, more **individual** paintings that are usually **hung or framed**.

- They show **various subjects**, including deities, animals, and ordinary scenes.
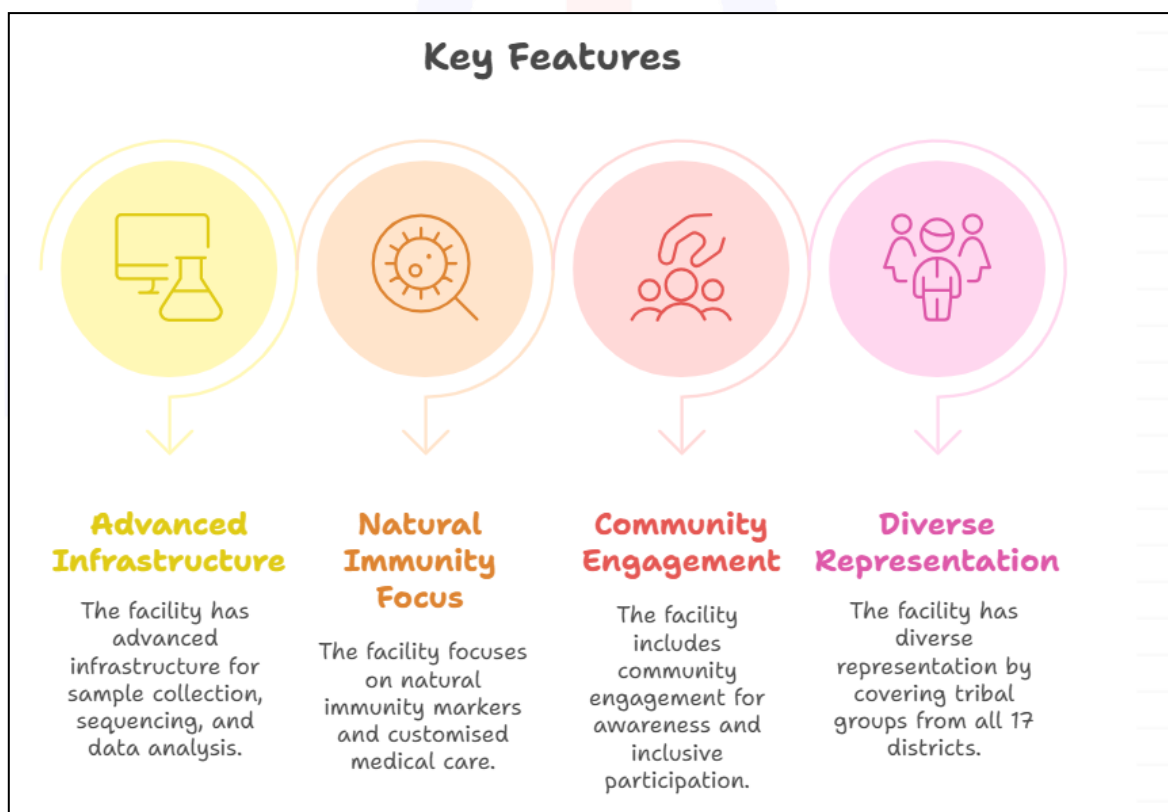
31	INDIA'S FIRST TRIBAL GENOME SEQUENCING PROJECT

Gujarat has launched **India's first Tribal Genome Sequencing Project** to map the **genetic profile of tribal populations**.

GUJARAT'S TRIBAL GENOME SEQUENCING PROJECT

- It aims to identify genetic health risks like **Sickle Cell Disease**, **Thalassemia** and provide precision healthcare tailored to the needs of tribal populations.

- It seeks to bridge the gap between scientific advancements and tribal traditions, fostering a healthier future for these communities.

- Managed by the Gujarat **Biotechnology Research Centre (GBRC).**

- The genomes of **2,000 individuals** from tribal communities across **17 districts will be sequenced.**

Key Features

Advanced Infrastructure

The facility has advanced infrastructure for sample collection, sequencing, and data analysis.

Natural Immunity Focus

The facility focuses on natural immunity markers and customised medical care.

Community Engagement

The facility includes community engagement for awareness and inclusive participation.

Diverse Representation

The facility has diverse representation by covering tribal groups from all 17 districts.

GENOME SEQUENCING

- **It is the process of** determining the exact order of **nucleotide** bases (A, C, G, T) **in an individual's DNA.**

- **It reveals a person's genetic makeup, providing insights into traits, health risks, and potential disorders.**

TYPES:

- **Whole Genome Sequencing (WGS)** maps the entire DNA sequence for comprehensive genetic information.

- **Partial Genome Sequencing** focuses on specific genome parts.

- **Targeted Gene Sequencing** sequences specific genes.

APPLICATIONS:

- Helps identify **disease-causing mutations**, understand the **genetic basis of diseases**, and discover **new drug targets**.

- Enables **personalized medicine** by predicting individual responses to drugs, allowing for **optimized drug selection**.

- Used in crop improvement to identify genes linked to **disease resistance, high yield**, and **better nutrition**, aiding the development of **improved crop varieties**.

DIFFERENCE BETWEEN GENOME SEQUENCING AND GENOME EDITING

Aspect	Genome Sequencing	Genome Editing
Definition	Reading or decoding the complete DNA sequence of an organism.	Making specific, targeted changes (insert, delete, modify) to DNA.
Purpose	To understand genetic makeup, mutations, and variations.	To correct, alter or enhance traits or genes for therapeutic or agricultural use.
Technology Used	Next Generation Sequencing (NGS), Sanger Sequencing.	CRISPR-Cas9, TALENs, ZFNs.
Type of Intervention	Non-interventional (only analysis).	Interventional (direct manipulation of genes).
Outcome	Genetic profile, ancestry mapping, disease prediction.	Gene correction, modified crops, gene therapies.
Application Examples	Human Genome Project, diagnosing cancer mutations, tracing COVID-19 variants.	Treating sickle cell disease, developing pest-resistant crops like BT cotton.
Ethical Concerns	Privacy of genetic data, misuse of personal health info.	Germline editing concerns, designer babies, ecological risks in agriculture.

32   HENLEY PASSPORT INDEX

India ranks 77th in the Henley Passport Index 2025 (Q2), up from 85th in January 2025 (Q1), showing a modest but notable improvement in global mobility for Indian citizens.

WHAT IS HENELEY PASSPORT?

The Henley Passport Index **ranks 199 global passports** (covers 227 travel destinations) based on the **number of destinations their holders can travel to without a visa**, with data sourced from the **International Air Transport Association (IATA).**

- It is compiled and published by **Henley & Partners**, a global citizenship and residence advisory firm.
- The Henley Passport Index ranks 199 passports based on visa-free access to 227 destinations, using International Air Transport Association (IATA**)** data and updated quarterly.
- IATA is the trade body for 300 airlines, covering 83% of global air traffic. Its headquarters is in **Montreal, Canada.**

HENLEY PASSPORT INDEX 2025: INDIA AT A GLANCE

- According to the **July 2025 edition** of the Henley Passport Index, Indian passport holders now enjoy visa-free **or visa-on-arrival access to 59 countries and territories**.
- Consequently, **India's passport has climbed eight places**, ascending from **85th in early 2025** to **77th**, marking the **most significant leap among all passports** in this edition.
- Indian passport holders now enjoy **visa-free or visa-on-arrival access to 59 destinations**, up from 57 in 2024. **The Philippines and Sri Lanka** are the two newly added visa-free destinations for Indians.
- Singapore ranks first with access to 193 destinations, followed by Japan and South Korea with 190.

AS PER UK-BASED ONLINE PLATFORM "COMPARE THE MARKET," 2024 DATA:

- **Most Expensive Passports**: **Mexico**, **Australia**, and the **USA**
- **Cheapest Passports**: **UAE**, **India**, and **Hungary**.
- **India's passport** stands out for offering the best "**cost per year" value,** making it highly economical compared to other countries.

| 33 | **INDIA–MALDIVES RELATIONS** |

During Prime Minister of India official visit to the Maldives, 8 key bilateral agreements were signed, covering digital payments (UPI), debt relief, fisheries, infrastructure, and a ₹4,850 crore Line of Credit, marking a renewed phase in India-Maldives relations.

INDIA–MALDIVES RELATIONS:

India and Maldives share deep-rooted **ethnic, linguistic, cultural, and commercial ties**, reinforced by proximity in the Indian Ocean. Maldives is a critical part of India's **"Neighborhood"** and **SAGAR (Security and Growth for All in the Region)** policy frameworks.

RECENT OUTCOMES:

8 KEY AGREEMENTS:

- **Debt Relief:** India agreed to **reduce Maldives' annual repayment burden by 40%**.

- **₹4,850 Cr Line of Credit:** For infrastructure aligned with Maldives' development goals.

- **UPI and Ru-Pay Integration:** To expand **digital connectivity** and promote **local currency trade**.

- **Fisheries Cooperation:** Strengthened ties in livelihood and marine economy.

- **3,300 Housing Units:** Handover of Indian-financed social housing in Hulhumalé.

- **Security Assistance:** India gifted **72 vehicles and defence equipment**.

- **Climate & Disaster Partnership:** Joint cooperation on **resilience and green energy**.

- **FTA and Investment Talks:** Agreed to advance discussions on **Bilateral Investment Treaty** and **Free Trade Agreement**.

HISTORICAL BACKGROUND

ANCIENT CULTURAL LINKS:

- Maldives was **a Buddhist nation for over 1,400 years**, from around the **3rd century BCE to 12th century CE**.

- **Buddhism was introduced from India**, especially during the **Mauryan period under Ashoka**, who promoted Buddhism across the Indian Ocean.

ARCHAEOLOGICAL EVIDENCE:

- Ruins of **Buddhist stupas, monasteries**, and **statues** (e.g., in **Fua Mulaku**, **Thoddoo**, **Gan Island**) show Indian influence.

- **Sanskrit inscriptions** and **palm-leaf manuscripts** suggest ancient Indo-Maldivian intellectual exchanges.

ISLAMIC CONVERSION (12TH CENTURY):

- Maldives converted to Islam around **1153 CE**, but the **Buddhist past remains foundational** to its early cultural development.

KEY MILESTONES & AGREEMENTS

Year	Event / Agreement
1965	India recognized Maldives' independence; diplomatic ties established.
1976	**Maritime Boundary Agreement** signed.
1981	**Trade Agreement** signed; India became Maldives' largest trade partner.
1988	**Operation Cactus** – India averted a coup.
2006	**Education and Cultural Cooperation Agreement** signed.

2009	India gifted patrol boats and radars.
2011	**Comprehensive Security Dialogue** began.
2018	Solih reaffirms **"India First"** policy.
2020	India funds **Greater Malé Connectivity Project (GMCP)**.
2023	Coastal surveillance radars, Dornier aircraft handed over.
2024–25	New President **Mohamed Muizzu** demands **Indian troop withdrawal**.
2025	India to **replace troops with civilian technical personnel** by May 2025 (as per recent agreement).

POLITICAL & DIPLOMATIC RELATIONS

INDIA FIRST VS. CHINA TILT:

- Former President **Ibrahim Solih (2018–2023)** promoted strong India ties.

- **Mohamed Muizzu (2023–present)** leans toward **China**; criticized for **"India Out" campaign**.

TROOP CONTROVERSY:

- Around **75 Indian military personnel** were stationed for humanitarian and maritime operations.

- Muizzu administration demanded withdrawal → **India agreed to replace troops with civilians by May 2025**.

CHINA FACTOR:

- Maldives joined China's **Belt and Road Initiative (BRI)**.

- However, debt concerns have led Maldives to maintain **strategic balance** between India and China.

ECONOMIC RELATIONS

TRADE & INVESTMENT:

- India is Maldives' **4th largest trade partner** (after UAE, China, Singapore).

- Exports: Drugs, rice, construction materials.

- India's investments in tourism, housing, and infrastructure.

CURRENCY SWAP AGREEMENT (2019):

- India extended **$400 million currency swap** under SAARC framework.

LINE OF CREDIT:

- India offered over **$1.4 billion assistance** in 2018.

- **Greater Malé Connectivity Project (GMCP):**

    o India-funded ($500M), 6.7 km bridge linking capital to Villingli, Gulhifalhu and Thilafushi (industrial island).

    o Largest infrastructure project in Maldives.

STRATEGIC & DEFENCE RELATIONS

OPERATION CACTUS (1988):

- India intervened within **16 hours** to thwart a coup by mercenaries.

DEFENCE ASSETS & EXERCISES:

- Gifts: **2 Dhruv helicopters**, **Fast Attack Craft**, **Dornier aircraft**.

- **Coastal Surveillance Radar Systems** installed by India.

- Joint exercises:

    o **Ekuverin** (Army)

    o **Dosti** (Coast Guard + Maldives + Sri Lanka)

    o **Ekatha** (joint capacity-building)

SECURITY INFRASTRUCTURE:

- India has helped build the **Maldivian National Defence Force (MNDF) HQ**, Coastal Police Academy, and training centres.

PEOPLE–TO–PEOPLE, HEALTH & CULTURE

EDUCATION & HEALTH:

- Scholarships to Maldivian students under **ICCR** and **SAARC fellowship schemes**.

- India is a preferred **medical tourism destination** for Maldivians.

- India's **Covid-19 Vaccine Maitri** provided **100,000 Covishield doses** to Maldives.

CULTURAL DIPLOMACY:

- **Indian Cultural Centre in Malé** promotes yoga, Hindi, classical music.

- India celebrates **International Yoga Day** in Maldives annually.

RECENT DEVELOPMENTS (2023–2025)

Year	Event
2023	Mohamed Muizzu elected; begins **"India Out"** campaign.
2024	India agrees to **troop withdrawal** (to be completed by May 2025).
2024	Chinese survey ships dock in Maldives, raising Indian security concerns.
2025	GMCP construction underway with Indian grant.
2025	Ongoing debate in Maldives about **balancing India and China** relations.

CHALLENGES IN BILATERAL RELATIONS

CHINA'S INFLUENCE:

- Maldives' **strategic location** makes it a **key node in China's String of Pearls**.

- Debt diplomacy and infrastructure investments by China.

INTERNAL POLITICS:

- Maldivian politics oscillates between **India-friendly** and **India-skeptical** regimes.

"INDIA OUT" CAMPAIGN:

- A politically motivated movement alleging Indian military interference.

- India emphasized **non-interference and development partnership**.

VKEY FACTS FOR UPSC

- **Maldives: 99% water and 1% land** – crucial to India's maritime security.

- **Operation Cactus (1988)** – model case of rapid Indian military deployment.

- Maldives is part of India's **Neighborhood First** and **SAGAR (Security and Growth for All in the Region)** strategy.

- India is the **largest development partner** of Maldives.

- **Strategic location**: Near India's Lakshadweep islands, close to major sea lanes in the Indian Ocean.

CONCLUSION

India–Maldives relations are a blend of **deep historical ties (Buddhism, trade)**, **strategic imperatives**, and **current geopolitical challenges**. While cultural and civilizational bonds remain strong, India must **maintain a balance between strategic assertiveness and diplomatic sensitivity** in its Indian Ocean policy.

| 34 | **INDIA MARKS 1,000 YEARS OF RAJENDRA CHOLA I'S NAVAL EXPEDITION (2025)** |

CONTEXT (2025 NEWS):

- The **Government of India is commemorating 1,000 years** of **Rajendra Chola I's successful naval expedition** to Southeast Asia (c.1025 CE).

- **Celebrations include:**

  o Cultural events in **Tamil Nadu and Southeast Asia**.

  o **Restoration of Chola-era inscriptions**, temples, and maritime heritage projects.

  o **India–ASEAN cultural dialogues** and maritime diplomacy exhibitions.

HISTORICAL BACKGROUND: RAJENDRA CHOLA I'S SOUTHEAST ASIA EXPEDITION

WHO WAS RAJENDRA CHOLA I?

- Son of **Rajaraja Chola I**.

- Reign: **1014–1044 CE**.

- Capital: **Gangaikonda Cholapuram**.

- Title: **"Gangaikonda Chola"** – for conquering up to the Ganges.

THE 1025 CE NAVAL EXPEDITION:

- Rajendra launched a massive **naval campaign across the Bay of Bengal**.

- Target: **Srivijaya Empire** (present-day **Indonesia, Malaysia, and southern Thailand**).

- Objective: Control maritime trade routes and assert Tamil naval supremacy.

KEY OUTCOMES:

- Conquered key Srivijayan ports such as **Kadaram (modern Kedah, Malaysia)**.

- Brought back symbolic waters of the Ganga and established **Gangaikonda Cholapuram**.

- Demonstrated Indian naval strength in the pre-modern world.

- Strengthened **India–Southeast Asia cultural and trade ties**.

## KEY CULTURAL & HISTORICAL SIGNIFICANCE

MARITIME DIPLOMACY:

- A rare example of a successful ancient **Indian blue-water naval expedition**.

- Asserted India's influence across the **Bay of Bengal and Southeast Asia**.

CULTURAL EXCHANGE:

- Spread of **Tamil culture, temple architecture, scripts**, and **Saivism** in Southeast Asia.

- Influence visible in **Angkor Wat (Cambodia)**, **Bali temples (Indonesia)**, and **Thai royal traditions**.

ARCHITECTURE & INSCRIPTIONS:

- Temples like **Brihadisvara (Tanjore)** and **Gangaikonda Cholapuram** celebrate these victories.

- Inscriptions found in **Tamil Nadu, Indonesia, and Thailand**.
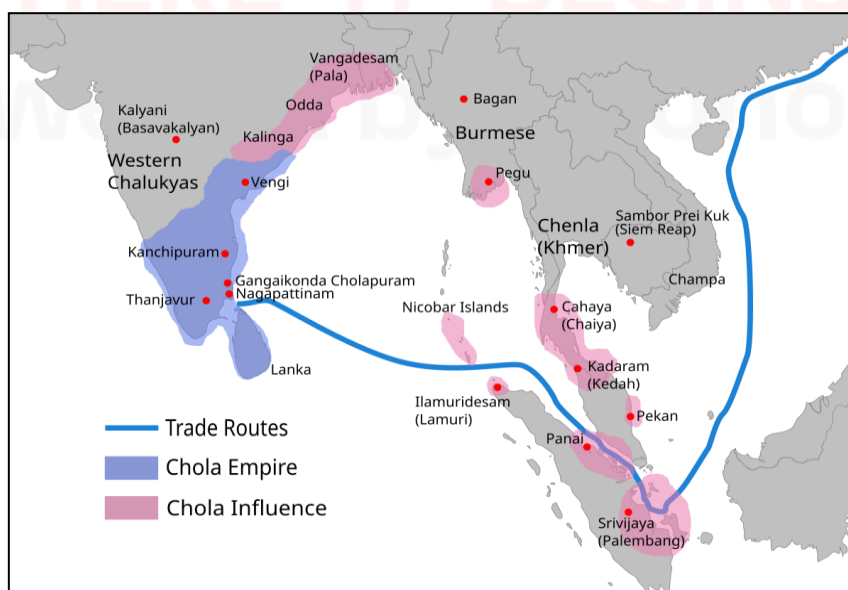
2025 COMMEMORATIVE ACTIVITIES BY INDIAN GOVERNMENT

UNESCO HERITAGE PUSH:

- Advocacy to recognize **Chola naval heritage** under UNESCO's "Maritime Silk Routes" initiative.

INDIA–ASEAN CULTURAL FESTIVAL:

- Events in **Thailand, Malaysia, Indonesia, Cambodia, and Vietnam**.
- Joint cultural programs showcasing Chola-Southeast Asia connections.

DIGITAL ARCHIVES & EXHIBITIONS:

- **Virtual museum** on Chola maritime power.
- Restoration of **Chola inscriptions and artifacts**.

HERITAGE CIRCUITS:

- Launch of **"Chola Maritime Trail"** linking ports from Tamil Nadu to Southeast Asia.
- Tourism boost through **maritime heritage circuits**.

ACADEMIC COLLABORATIONS:

- Joint research with **ASEAN universities** on Chola naval history.
- Workshops on **Chola inscriptions, bronze art, maritime archaeology**.

INDIA–SOUTHEAST ASIA (ASEAN) CONNECTION

- This celebration is part of India's **Act East Policy** and **India–ASEAN strategic partnership**.
- Focus on:
  - **Cultural diplomacy**.
  - **Maritime security cooperation**.
  - Enhancing **people-to-people ties**.

GANGAIKONDA CHOLAPURAM TEMPLE

LOCATION:

- Situated in **Ariyalur district**, **Tamil Nadu**.
- The temple is part of the town **Gangaikonda Cholapuram**, which was the **capital of the Chola Empire** for over 250 years after 1025 CE.

HISTORICAL BACKGROUND:

Feature	Description
Built by	**Rajendra Chola I** (son of Rajaraja Chola I)
Year of Completion	Around **1035 CE**
Purpose	To commemorate **Chola victory in the Ganges region** and Southeast Asia naval expedition
Symbolism	Named "Gangaikonda" = "The one who brought the Ganga"
Capital shift	From **Thanjavur** to **Gangaikonda Cholapuram**

ARCHITECTURAL FEATURES:

STYLE:

- **Dravidian style** temple, following the **Chola architectural tradition** but **refined and more ornate** than the Brihadisvara Temple at Thanjavur.

VIMANA (TOWER):

- 55 meters tall – slightly shorter but more **graceful and curvilinear** than the one at Thanjavur.
- Made of **granite**.

SCULPTURAL EXCELLENCE:

- Features **intricate carvings** and **bronze-like stone sculptures**.
- Images of **Siva, Parvati, Ardhanarishvara, Nataraja**, and various **Shaivite deities**.

LINGAM:

- Houses a **massive Shiva Lingam**, one of the **largest in South India** (13 feet tall).

LION WELL:

- A **well-guarded by a lion statue**, symbolizing **Chola strength** and **ritual purity**.

TEMPLE TANK (CHOLAGANGA):

- Built using water brought from the **Ganges**, symbolizing **spiritual unification**.

POLITICAL AND SYMBOLIC IMPORTANCE:

- **Legitimacy and conquest:** Built to **celebrate military victories** including the **Ganga expedition** and **Southeast Asian naval campaign** (Kadaram).

- **Imperial capital:** Temple was part of the **new Chola capital city**, reflecting imperial ambition and state-building.

UNESCO WORLD HERITAGE TAG:

- Part of the **"Great Living Chola Temples"** (along with **Brihadisvara Temple, Thanjavur** and **Airavatesvara Temple, Darasuram**).

- Declared as **UNESCO World Heritage Site in 1987**.

RELIGIOUS AND CULTURAL SIGNIFICANCE:

- Dedicated to **Lord Shiva** – deity worshipped as **Gangaikondacholeeswarar**.

- Temple represents:

  - Fusion of **spirituality and sovereignty**.
  - **Chola patronage of Shaivism**.
  - Integration of **Vedic and Tamil cultures**.

KEY FACTS:

Topic	Fact
Dynasty	Chola
Builder	Rajendra Chola I
Year	~1035 CE
Style	Dravidian
Deity	Shiva (Gangaikondacholeeswarar)
Capital shift	From Thanjavur to Gangaikonda Cholapuram
UNESCO Tag	1987
Vimana Height	~55 meters
Temple Complex	Sculptures, tank (Cholaganga), lion well, Nandi mandapam

ELECTION SYSTEM UNDER RAJENDRA CHOLA I (C. 1014–1044 CE)

CONTEXT: THE CHOLA ADMINISTRATIVE STRUCTURE

- The **Chola Empire** had a highly **centralized monarchy** at the top but encouraged **decentralized local self-governance** at the village level.

- The **Uttaramerur inscriptions** (originally from earlier Chola rulers, continued under Rajendra Chola I) give a detailed account of the **village-level democratic institutions**.

THREE-TIER ADMINISTRATIVE SYSTEM

- **Central Administration** – King and his ministers.

- **Provincial Administration** – **Mandalam** and **Valanadu** units.

- **Local Self-Government** – **Village assemblies** (known as *Sabhas* or *Ur*), particularly developed in **Brahmadeya villages**.

LOCAL SELF-GOVERNANCE: THE HEART OF THE SYSTEM

TYPES OF VILLAGE ASSEMBLIES:

Assembly	Composition	Description
Ur	Common people	Assembly of all adult male members in non-Brahmin villages
Sabha (or Mahasabha)	Brahmins	Brahmin-dominated villages (Brahmadeya)
Nagaram	Merchants	Urban commercial settlements

ELECTIONS UNDER THE CHOLAS

KUDAVOLAI SYSTEM (PALM-LEAF BALLOT SYSTEM)

- **"Kudam" = pot, "Olai" = palm leaf.**

- A **ballot system using pots and palm leaves** was followed to select local representatives.

- Palm-leaf slips with names were **drawn from a pot (lottery method)** by a neutral priest or elder in public view.

ELIGIBILITY CRITERIA FOR CANDIDATES (FROM UTTARAMERUR INSCRIPTION):

Criteria	Description
Age	35–70 years
Education	Must know Vedas and administrative rules
Property	Must own **land worth tax of 1/4 veli (~1.5 acres)**
Morality	Must be of **good character**, **not guilty of sins**, **no past punishments**
Disqualification	Gambling, drinking, incest, thieving, or supporting criminals
Experience	Must have knowledge of **manuscripts (Granthas)** and **past administration**

COMMITTEES (VARIYAMS) – FUNCTIONAL GOVERNANCE UNITS:

Name	Function
Garden Committee (Tottavariyam)	Maintenance of village gardens
Tank Committee (Eri Variyam)	Maintenance of water tanks and irrigation
Panchavaraiyam	Local judicial committee
Dharmavariyam	Religious and charitable duties
Annual Committee (Samvatsara Variyam)	General administrative and revenue duties
Gold Committee	Handling temple jewelry and donations

Each committee member held office for **1 year** and could not be **re-elected for 3 years** thereafter.

ACCOUNTABILITY AND TRANSPARENCY

ANNUAL AUDIT:

- Committees were **subject to audits**; if found guilty of mismanagement, members were **removed or penalized**.

PUBLIC PARTICIPATION:

- Assembly decisions were made in **open meetings**.

- **Written records (inscriptions)** were maintained and displayed on temple walls or stone slabs.

ROLE OF RAJENDRA CHOLA I

- Though the **system was institutionalized under Rajaraja Chola I**, **Rajendra Chola I continued and expanded** this tradition.

- He **strengthened village autonomy** even as he built a vast empire through military expeditions.

- Encouraged **temple-centric administration** — temples served as both **economic hubs and record-keepers**.

SIGNIFICANCE OF THE CHOLA ELECTION SYSTEM

Aspect	Significance
Historical	One of the **earliest documented election systems** in the world
Governance	High degree of **decentralization** with strong **accountability mechanisms**
Cultural	**Temples as public institutions** for administration, education, and welfare
Democratic Roots	Proto-democratic system with **ballot-based voting** and eligibility screening

35   ATAL PENSION YOJANA (APY)

The Atal Pension Yojana (APY) has crossed 8 crore enrolments as it celebrates its 10th anniversary, with 39 lakh new subscribers added in the current financial year.

ATAL PENSION YOJANA (APY):

It is a government-backed pension scheme aimed at providing old-age income security to workers in the unorganized sector.

It ensures a guaranteed monthly pension post-retirement and is administered by the Pension Fund Regulatory and Development Authority (PFRDA).

SCHEME OVERVIEW:

- **Launched On**: 9th May 2015
- **Administered By:** PFRDA
- **Target Group:** Workers in the unorganized sector.
- **Nature:** Voluntary and contributory.
- **Pension Range:** ₹1,000 to ₹5,000/month after age 60.
- **Guarantee:** Central Government guarantees the minimum pension.

OBJECTIVE OF APY:

- To build a **universal social security system**.
- To provide **financial stability during old age**.
- To encourage **long-term savings** among informal sector workers.

ELIGIBILITY CRITERIA:

- **Indian citizen**, aged between **18–40 years**.

- Must hold a **savings or post office bank account**.

- Aadhaar and mobile number optional but recommended for updates.

- Government co-contribution only for non-taxpayers and those not under other statutory social security schemes.

Achievements So Far

Over 8 crore enrolments since 2015

39 lakh new subscribers added in FY 2024-25 alone

Extensive coverage of informal workers, including daily-wage labourers, drivers, domestic helpers, and small traders.

KEY FEATURES OF APY:

- **Guaranteed Minimum Pension:** Assured pension of ₹1,000–₹5,000 based on contribution and entry age.

- **Flexible Contribution Mode:** Contributions can be made **monthly, quarterly, or half-yearly** via **auto-debit** from a savings account.

- **Government Co-Contribution (2015–2020):** GoI contributed **50% of subscriber's input** (up to ₹1,000/year) for eligible early joiners.

- **Return Assurance:** If actual returns fall short of the guaranteed pension, the **shortfall is covered by GoI**.

- **Spouse and Nominee Benefits:** Pension continues to **spouse after subscriber's death** and corpus is transferred to **nominee** on death of both.

- **Exit Rules:**
    o Full pension starts at **age 60** and early exit allowed with limited refund.
    o In case of death before 60, **spouse can continue or withdraw corpus**.

36   PM VIKSIT BHARAT ROZGAR YOJANA (PM–VBRY)

The PM Viksit Bharat Rozgar Yojana (PM-VBRY) will come into effect from 1st August 2025 to incentivize large-scale job creation, replacing the Employment Linked Incentive (ELI) Scheme.

- **A national employment-linked incentive scheme** to promote **job creation** in formal sectors, especially **manufacturing**, as part of the **Viksit Bharat initiative**.

- **Launch Date:** Effective from **1st August 2025**

- **Administered By:** Ministry of Labor and Employment

- **Total Outlay:** ₹99,446 crore

- **Implementation Period:** 2025–2027

- **Target:** Over **3.5 crore new jobs**, including **1.92 crore first-time workers**

OBJECTIVE:

- To promote **inclusive and sustainable job creation**.

- To incentivize employers for hiring new workers, especially in **manufacturing**.

- To support **first-time employees** entering the formal workforce.

KEY FEATURES OF PM–VBRY:

PART A: INCENTIVE FOR FIRST-TIME EMPLOYEES

Eligibility: New EPFO-registered employees with monthly salaries up to ₹1 lakh.

- **Incentive:** One-month EPF wage (up to ₹15,000), paid in **two instalments**:

- **1st instalment:** After 6 months of service

- **2nd instalment:** After 12 months and completion of financial literacy training

- **Saving Habit Promotion**: Part of the incentive will be **locked in a deposit account** for future withdrawal.

PART B: INCENTIVE FOR EMPLOYERS

Focus Sector: All sectors, with **special focus on manufacturing**

EMPLOYER ELIGIBILITY:

- EPFO-registered entities hiring:

- **2 or more** additional employees (if existing staff <50)

- **5 or more** (if staff ≥50)

WAGE-BASED INCENTIVE (PER EMPLOYEE PER MONTH):

- ₹1,000 for wages ≤ ₹10,000

- ₹2,000 for ₹10,001–₹20,000

- ₹3,000 for ₹20,001–₹1,00,000

- **Tenure:** 2 years for all sectors; extended to **4 years for manufacturing**

PAYMENT MECHANISM:

- **First-Time Employees:** Paid via DBT using Aadhar Bridge Payment System (ABPS).

- **Employers:** Direct payment to PAN-linked bank accounts.

37	FRANCE RECOGNISE PALESTINE STATEHOOD

France has formally announced its decision to recognize Palestinian statehood, becoming the first G7 country to do so amid escalating humanitarian concerns in Gaza.

CONCEPT AND MEANING

- Recognition of Palestine means diplomatic acknowledgment of Palestine as a sovereign state with rights under international law.

- It affirms Palestine's right to self-determination, independence, and membership in global institutions like the UN.

COUNTRIES RECOGNISING PALESTINE:

- As of now, 144 of 193 UN member states recognise Palestine, including India, Russia, China, and most of the Global South.

- Recent recognitions include Spain, Ireland, Norway, and now France, who seek to revive the two-state solution framework.

- Sweden, Cyprus, and several former Eastern Bloc EU nations also extend recognition.

WHY IS FRANCE RECOGNISING?

- **Humanitarian Crisis in Gaza:** Over 2 million Gazans face man-made starvation, prompting calls for justice and statehood recognition.

- **Two-State Solution Revival:** France aims to keep the peace process alive, especially before hosting a UN conference with Saudi Arabia.

- **Strategic Timing:** The decision precedes France's presentation at the upcoming UN General Assembly, adding multilateral weight.

ABOUT PALESTINE:

- **Region:** Middle East.

- **Territories:** West Bank, Gaza Strip, East Jerusalem (disputed).

- **Neighbors:** Israel (east and west), Egypt (southwest), Jordan (east), Mediterranean Sea.

HISTORICAL BACKGROUND:

- **Pre-1947:** Under British Mandate since WWI and Balfour Declaration (1917) supported a Jewish homeland.

- **1947 Partition Plan:** UN proposed two states — one Jewish, one Arab and only Israel was realized.

- **1948–67 Wars:** Led to Israel occupying large areas including the West Bank and Gaza.

- **1988:** Palestine declared independence in Algiers and later gained UN observer status in 2012.

- **2024–25 Developments:** ICJ deemed Israeli occupation unlawful and Palestine granted expanded rights at the UN.

KEY FEATURES:

- Governed by the Palestinian Authority (West Bank) and Hamas (Gaza).

- Frequent hostilities with Israel over land, resources, and governance.

- Supports self-determination, inalienable rights, and peace under Resolution 242 (1967).

| 38 | GOLDEN JACKAL |

Recently, an extensive citizen science study has estimated that Kerala is home to a population of 20,000 to 30,000 Golden Jackals.

GOLDEN JACKAL

- **It is also known as the common jackal, is a medium-sized wolf-like canid.**

- It is strictly nocturnal in areas inhabited by humans, but may be partly diurnal elsewhere.

- **They dig caverns for shelter, or use crevices in rocks, or caverns that were dug by other animals.**

  - They live in mated pairs and are strictly monogamous.

  - They are omnivores.

- These animals are abundant in valleys and along rivers and their tributaries, canals, lakes, and seashores, but are rare in foothills and low mountains.

- Found in North and East Africa, Southeastern Europe and South Asia to Burma.

  - **They are quite widespread across India. Right from the Himalayan foothills, down to the Western Ghats, the Golden Jackal has a wide distribution.**
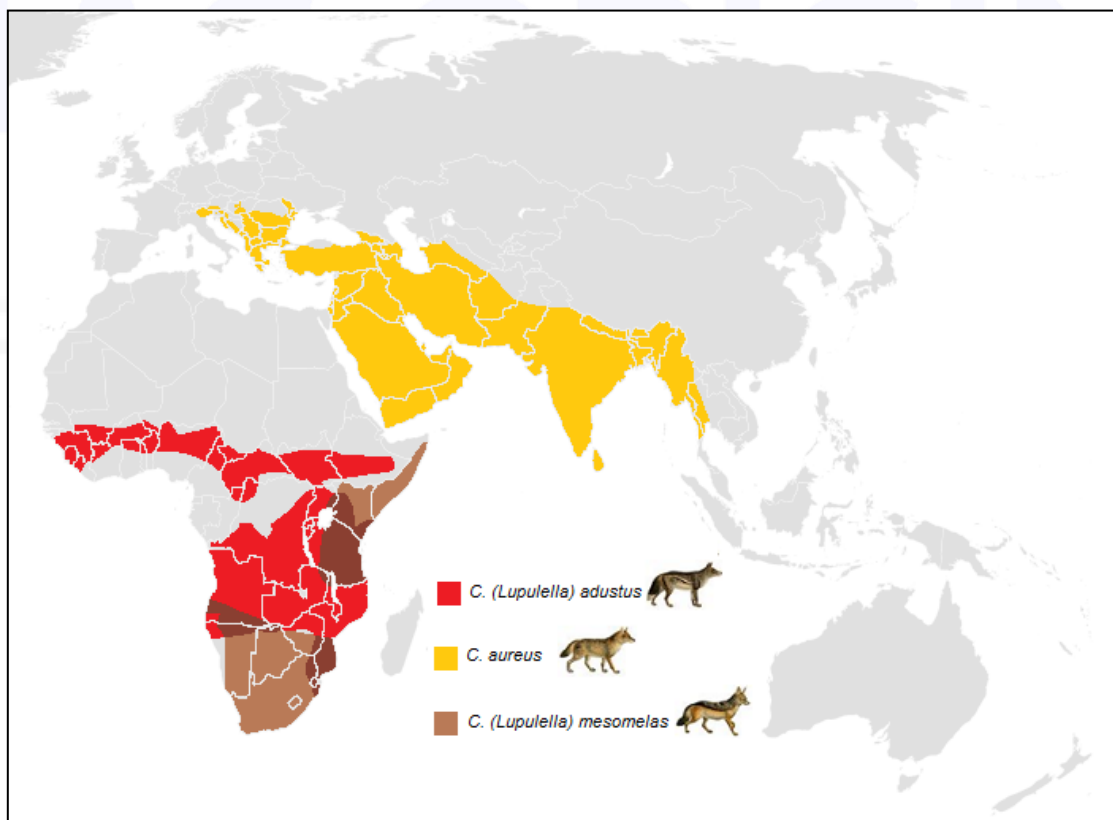
CONSERVATION STATUS

- IUCN: Least Concern

- CITES: Appendix III

- Wildlife Protection Act, 1972: Schedule I

39	GAVRI FESTIVAL

Every year, the Bhil community of Mewar embarks on a 40-day ritual called Gavri.

LOCATION AND COMMUNITIES:

- Celebrated mainly in the **Mewar region** of **southern Rajasthan**: **Udaipur, Rajsamand, Chittorgarh**, and nearby districts.

- Organized by the **Bhil tribal community**, one of the oldest indigenous tribes of India.

TIME OF CELEBRATION:

- Begins just after **Raksha Bandhan** (August–September).

- Lasts for about **40 days**.

RELIGIOUS AND MYTHOLOGICAL BACKGROUND:

- **Goddess Gavri (a form of Parvati/Durga)** is the central deity.

- The festival is a **folk re-enactment of stories from Shiva Purana, Ramayana**, and **local legends**.

- Involves **worship of Lord Shiva and Goddess Parvati** for **protection, prosperity, and rain**.

- Reflects **nature worship** and tribal connection with forests, water, and fertility.

RITUALS AND FOLK PERFORMANCES:

DANCE DRAMA:

- Travelling troupes perform **open-air street theatre** in villages, often in the evenings.
- Plays are based on **folk mythology, historical legends**, and **social themes**.
- Common characters include:
    - **Bhomiaji** (local deity),
    - **Bhil warriors**,
    - **Demons**, **Brahmins**, and **royalty**.

ALL-MALE PERFORMERS:

- Even **female characters are played by men**.
- Performers wear **traditional wooden masks**, **colorful costumes**, and body paint.

RITUAL ABSTINENCE:

- Participants follow strict rules: **no alcohol, no meat, celibacy**, and **barefoot travel**.
- They live an **austere and spiritual life** during the 40-day period.

NO STAGE, NO SCRIPT:

- Performances are **improvised**, using **folk memory and oral traditions**.
- Drums, flutes, and chants accompany performances.

THEMES AND SYMBOLISM:

Theme	Description
Nature Worship	Devotion to forest deities, rivers, and ecological harmony
Social Critique	Satirical takes on greed, corruption, patriarchy, and injustice
Spiritual Renewal	Cleansing of body and soul through rituals and community bonding
Cultural Preservation	Passing of oral folklore and tribal traditions to next generations

40   BRIHADISVARA TEMPLE

Recently, the Prime Minister of India prayed at the Brihadisvara Temple, Gangaikonda Cholapuram in Tamil Nadu and described it as a "deeply spiritual experience."

BRIHADISVARA TEMPLE

- It is also known as **Peruvudaiyar Kovil is located in Thanjavur, Tamil Nadu.**

- It is dedicated to Lord Shiva represented as a huge 'Lingam'.

- The **temple was built around 1010 AD by the Chola king Rajaraja Chola I.**

- It is revered as one of the three 'Great Living Chola Temples,' alongside the Gangaikondacholeeswaram Temple and Airavatesvara Temple, and is a proud UNESCO World Heritage Site.

- **It has been regarded as a 'landmark in the evolution of building art in south India' and its vimana as a 'touchstone of Indian architecture as a whole'.**

BKEY FEATURES OF BRIHADISVARA TEMPLE

- It is a Dravidian architecture styled temple.

- The temple's pyramidal vimana stands more than 200 feet (60 meters) high and represents Mount Meru, the mythical mountain at the center of the universe in Hindu cosmology.

- The sikhara, a cupolic dome, is octagonal and rests on a single block of granite, a square of 7.8 m weighing 80 tons.
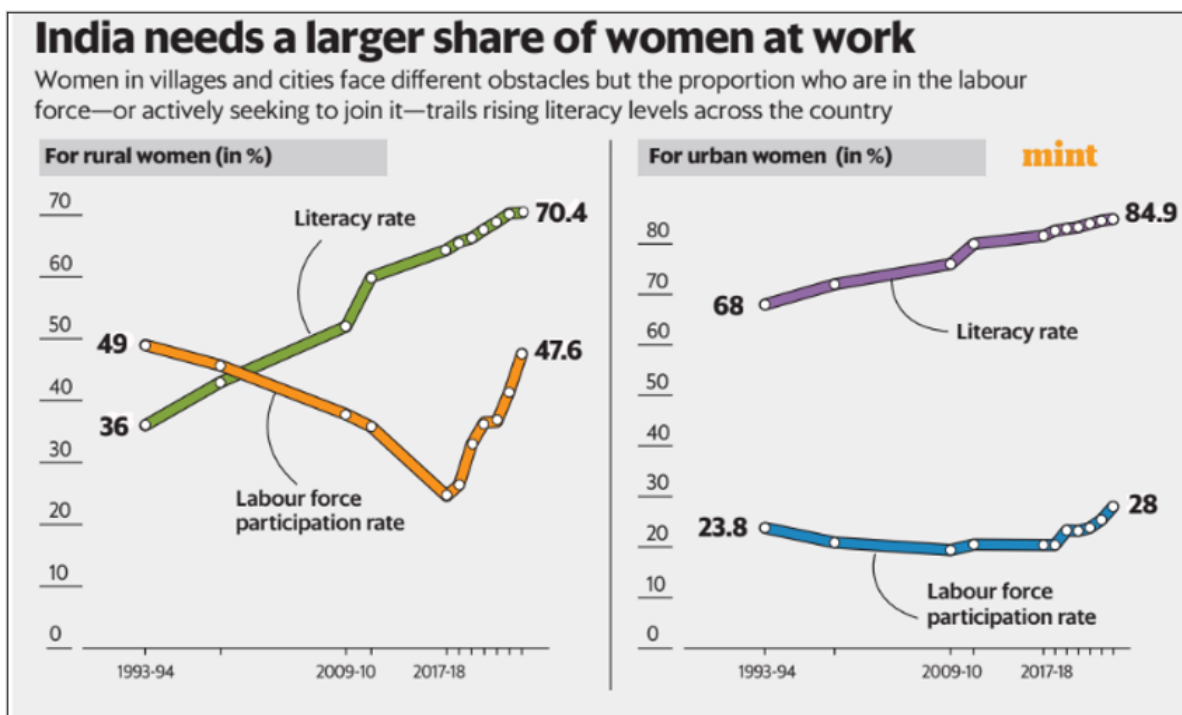
- One of the temple's most captivating features is the grand statue of Nandi, the sacred bull of Lord Shiva.

- Its inscriptions and frescoes narrate the tale of the rise and decline of the city's fortunes.

41   FEMALE LABOUR FORCE PARTICIPATION PARADOX IN INDIA

Despite India's high female literacy especially in urban areas labor force participation among women remains low. PLFS 2023–24 highlights a stark rural-urban disconnect and a widening literacy–employment gap, raising concerns over inclusive economic growth.

India needs a larger share of women at work
Women in villages and cities face different obstacles but the proportion who are in the labour force—or actively seeking to join it—trails rising literacy levels across the country

KEY TRENDS (PLFS 2023–24 & WORLD BANK 2024)

- **Urban female literacy:** 84.9%, yet FLFPR: 28%
- **Rural literacy–FLFPR gap:** ~22%, Urban gap: ~57%
- **National female literacy:** 74.6%, with a 33-point employment gap
- India lies between developed (40-point gap) and developing (25-point gap) nations

CAUSES:

- **Urban Job Inflexibility:** Most urban jobs, especially in services, lack flexibility for family responsibilities, deterring women's sustained participation.
- **Mobility and Safety Concerns:** Unsafe public spaces and lack of reliable transport limit women's access to formal work environments in cities.
- **Informality and Job Insecurity:** A majority of urban women work in informal sectors with low pay and no benefits, leading to job exit during life events.

- <u>Childcare Deficit</u> **in Cities:** With 61.3% urban households being nuclear (NFHS-5), lack of crèches forces women to prioritize caregiving over employment.

- **Post-Maternity Workforce Dropout:** Absence of re-entry programs or part-time opportunities leads to permanent dropout post-childbirth, creating a "care penalty."

WHY RURAL FLFPR IS HIGHER THAN URBAN?

- **Flexible Work Options in Agriculture:** Agriculture and self-employment offer women work close to home with adaptable hours, improving participation.

- **Community-Based Childcare:** Extended families and rural kinship networks help women manage both work and caregiving responsibilities.

- **Work Out of Necessity:** Rural women work due to economic compulsion, not autonomy, contributing to higher, though less empowered, FLFPR.

- **Gender Norms Around Shared Labour:** In rural settings, work by women—even if unpaid or low-paid is more culturally normalized and expected.

- **Crisis-Driven Employment:** Post-COVID <u>rural employment</u> saw a temporary rise due to loss of urban jobs and return migration, not durable inclusion.

SHOCKING TREND: DECLINING FLFPR DESPITE PROGRESS

2005–2019 PARADOX

- Fertility rates dropped, education rose but FLFPR fell.

- Higher incomes reinforced gendered roles man as earner, woman as homemaker.

POST–COVID SPIKE IN RURAL FLFPR

- Driven by distress employment and fallback strategies, not systemic support.

- Urban FLFPR still stagnant despite digitization and economic revival.
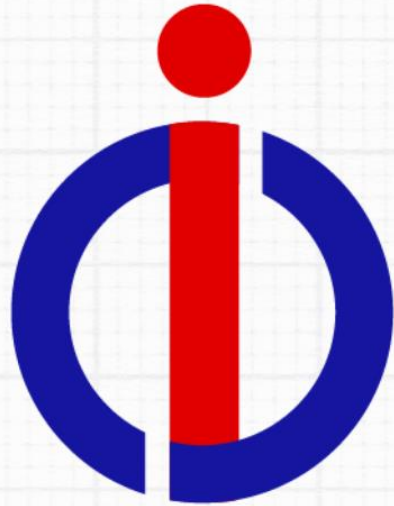
IMPLICATIONS FOR ECONOMY AND EQUITY:

- **Loss of Demographic Dividend:** Underutilization of half the population weakens India's long-term productivity and growth potential.

- **Stunted Social Development:** Low female employment slows gains in child health, nutrition, education, and gender equity.

- **Urban Middle-Class Retreat:** Higher incomes reinforce traditional norms, causing women to withdraw from jobs when money isn't essential.

- **Global Competitiveness Hit:** India's low FLFPR limits its ability to compete with economies like Bangladesh or Vietnam on inclusive growth.

- **Equity and Justice Crisis:** Economic exclusion reinforces patriarchal structures and denies women equal access to opportunity and dignity.

WAY FORWARD:

- **Public Childcare Infrastructure**: Expand anganwadis and urban crèches to support working mothers in both urban and peri-urban areas.

- **Flexible Employment Models:** Promote part-time work, gig platforms, and remote work to align with women's time and caregiving constraints.

- **Legislative Reform for Dignity at Work:** Ensure strong implementation of POSH Act and equal pay laws to create safe, respectful workplaces.

- **Norms Transformation Campaigns:** Launch nationwide efforts to normalize shared caregiving roles and women's right to work.

- **Urban Infrastructure for Inclusion:** Invest in safe transport, women-only toilets, and creche-linked workplaces to make cities gender-inclusive.

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