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JULY 2025

The

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1st July 2025

India's secular Constitution, even without the word-Indian Express Explained

Polity

Easy Explanation

The Indian Constitution originally did **not** include the words "secular" or "socialist" in its Preamble. These were added during the **Emergency in 1976** through the **42nd Amendment** under Prime Minister Indira Gandhi. The addition aimed to reflect her political agenda at the time. However, many legal experts argue that secularism and socialism were **already part of the Constitution** through various provisions like Articles 14, 15, and 16. The **Supreme Court has ruled multiple times** that secularism and socialism are **basic features** of the Constitution and cannot be removed. Despite recent political critiques, the **judiciary has upheld** these additions as constitutional and non-obstructive to governance

Key Takeaways

1. Historical context of the amendment

- The 42nd Amendment (1976) added the terms "Socialist" and "Secular" to the Preamble during the Emergency.
- The amendment was part of a broader package that included Fundamental Duties, new Directive Principles, and curtailed judicial review.
- It aligned the Constitution with Indira Gandhi's economic and political agenda (e.g., bank nationalisation, abolishing privy purses).

2. Original Constitution and secular values

- The 1950 Constitution already included secular ideals without using the word.
- Article 14: Ensures equality before law.
- Article 15: Prohibits discrimination based on religion, race, caste, sex, or place of birth.
- Article 16: Guarantees equal opportunity in public employment.
- These articles establish India's inherent secular character.

3. Political motives and criticism

- The amendment was introduced at a time when the Bharatiya Jana Sangh (predecessor of BJP) was gaining strength.
- Leaders like the current Vice President and others have criticised the move, calling it a deviation from the "Sanatan spirit" of the Constitution.

4. Integrity and national unity

- The word “integrity” was added to emphasize the indivisibility of India.

- It was politically motivated during the Emergency to justify actions taken in the name of national unity.

- Law Minister H. R. Gokhale explained it as ensuring both unity and indivisibility of the country.

5. Judicial standpoint

- **Kesavananda Bharati (1973)**: Declared secularism a basic feature even before it was added explicitly.

- **Minerva Mills (1980)**: Recognised socialism as an intended constitutional ideal based on Part IV (Directive Principles).

- **Bommai Case (1994)**: Reaffirmed secularism as foundational to the Indian state.

- **2024 Supreme Court Ruling**: Dismissed pleas to remove these words, stating they do not infringe on governance if fundamental rights are protected.

6. Symbolism vs substance

- The Supreme Court has stated that the Preamble is symbolic and does not itself create enforceable rights or powers.

- Nevertheless, the symbolic inclusion of “secular” and “socialist” reinforces India’s constitutional ethos.

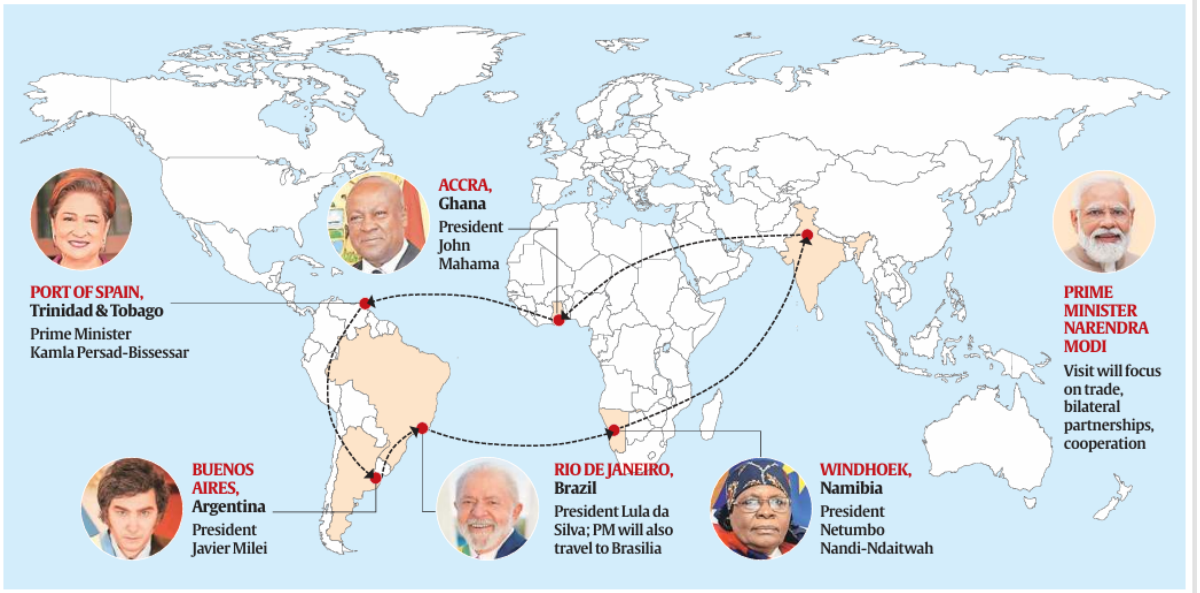
7. Ongoing relevance

- Despite political opposition, the legal and constitutional consensus is that secularism and socialism are deeply embedded in India’s framework.

- They remain part of the basic structure and continue to shape Indian law and policy.

India’s outreach to the Global South-Indian Express Explained

International relations



CREDIT:THE INDIAN EXPRESS

Easy Explanation

Prime Minister Narendra Modi is embarking on a **9-day, 5-nation visit** to countries across **Africa, South America, and the Caribbean**—his longest foreign trip in recent years. This includes first-ever bilateral visits by an Indian PM to **Ghana**, **Trinidad & Tobago**, and **Argentina** in decades, and also includes the **BRICS Summit in Brazil**. The trip highlights India's strategic push to engage the **Global South**, strengthen **economic, energy, diaspora, and defence ties**, and deepen partnerships in **critical sectors** like lithium, oil, agriculture, and climate action. It also reflects India's broader diplomatic aim of shaping **multipolar global governance**.

Key Takeaways

1. Strategic engagement with the Global South

- The tour signals India's renewed focus on strengthening ties with developing countries in **Africa, Latin America, and the Caribbean**.

- It emphasizes India's role as a bridge between the Global South and larger international platforms like **BRICS**.

2. Ghana (July 2–3)

- First Indian PM visit to Ghana in 30 years.

- Key areas of discussion: **economic, energy, defence**, and development cooperation.

- India is Ghana's **largest export destination**, with gold being over **70% of exports to India**.

3. Trinidad & Tobago (July 3–4)

- First bilateral PM-level visit since 1999.

- Celebrates **180 years of Indian diaspora** in T&T, home to a large population of Indian origin.

- Reflects India's growing focus on **diaspora diplomacy** and regional outreach in the Caribbean.

4. Argentina (July 4–5)

- First Indian PM visit in **57 years**; meeting with President **Javier Milei**.
- Key areas: **lithium, agriculture, mining, energy, defence**.
- Argentina is crucial for India's **green energy transition** and a major source of edible oils.
- India was Argentina's **5th-largest trading partner** in 2024.

5. Brazil (July 5–8)

- Participation in **BRICS Summit in Rio** and **state visit to Brasilia**.
- Focus areas: **global governance reform, AI regulation, climate change, peace and security**.
- Bilateral talks with President Lula to deepen the **strategic partnership** in trade, health, energy, defence, agriculture, and space.
- Brazil is India's **top trading partner in South America**.

6. Namibia (July 9)

- First PM-level visit to Namibia in recent years; third ever by an Indian PM.
- Highlights include **mining investments**, **diamond processing**, and the landmark **cheetah translocation project**.
- Trade has grown from **$3 million in 2000** to **$600 million today**.

7. Broader diplomatic significance

- The tour boosts India's visibility and influence in **regions often overlooked in global diplomacy**.
- It supports India's long-term aim to lead and represent **developing nations** on platforms like the **UN, G20, and BRICS**.
- Reflects India's balancing of **geopolitical ties** beyond the West and Indo-Pacific.

The thali index-Indian Express Editorial

Economy

Easy Explanation

The **Thali Index** is a new way to assess **India's standard of living**, based on the **cost of a basic meal** — a "thali" — instead of total spending. Though official poverty estimates by SBI and the World Bank show

poverty below 5%, a study using the Thali Index found that in **2023–24, up to 40% of rural Indians and 10% of urban Indians couldn't afford two thalis per day**. The thali — rice/roti, lentils, and vegetables — is treated as a **realistic benchmark** for food adequacy. This method emphasizes **actual food consumption** and questions the reliability of traditional poverty lines. It also argues for **rationalising subsidies** — cutting them for the better-off and expanding them for the truly needy — rather than ending them entirely.

Key Takeaways

1. What is the Thali Index?

- A new metric to measure **standard of living** by estimating how many **basic meals (thalis)** a person can afford.
- A thali includes **carbohydrates, protein, and vegetables** — a nutritionally balanced meal common across India.
- More **realistic** than calorie-count or total consumption expenditure-based poverty estimates.

2. Food affordability as a poverty lens

- In 2023–24, up to **40% of rural** and **10% of urban** populations could **not afford two thalis/day**.
- Shows **higher food deprivation** than what SBI and World Bank poverty estimates suggest.
- SBI: Rural poverty at 4.86%, urban at 4.09%; World Bank: rural at 2.8%, urban at 1.1%.
- These poverty figures **may underestimate** actual hardship.

3. Difference in methodology

- Traditional poverty line is based on **minimum calorie intake** — a **physiological approach**.
- Thali Index focuses on **actual food consumption patterns**, capturing **nutritional satisfaction and cultural relevance**.
- Uses **Crisil's data** to set a thali cost (~₹30), adjusted across regions.

4. Shift in measuring standard of living

- Proposes food consumption — rather than total spending — as the **core of consumption measurement**.
- Recognises **essential non-food expenditures** (housing, education, health, transport, telephony) as fixed costs.
- Food becomes the **variable** component reflecting real deprivation.

5. Implications for subsidy policy

- The Thali Index suggests the need to **restructure food subsidies**, not eliminate them.

- **Higher-income rural households** (70th percentile) receive **nearly the same subsidies** as the poorest, though they can afford more food even without help.

- **Rationalising subsidies**—reducing for the well-off and increasing for the needy—is more optimal.

6. Policy-level implications

- Calls into question the **reliance on narrow poverty lines** to shape welfare policies.

- Warns against **politically driven narratives** on competitive welfarism and blanket subsidy cuts.

- Offers a **grounded, goods-based measure** for evaluating food security and well-being.

7. Broader debate on democracy and welfare

- The article also situates the **poverty debate** within a larger political context — questioning claims about democratic integrity and legacy.

- Emphasizes that **economic justice and institutional trust** both require **evidence-based, nuanced policymaking**, not sweeping generalisations.

How do unsafe cancer drugs reach patients?-The Hindu Text and Context

Science

Easy Explanation

Unsafe cancer drugs can reach patients due to contamination during manufacturing, poor quality control, or lack of proper testing in importing countries. Drug safety is primarily the responsibility of **manufacturers**, but **governments and regulators** also play crucial roles. In countries like the **U.K.**, rigorous multi-level testing ensures safety. However, **low- and middle-income countries** often lack such systems, making them vulnerable to harmful or counterfeit medicines. Contaminated cancer drugs have led to multiple deaths globally. The **WHO** has several safety mechanisms, including prequalification programs and regulatory benchmarking, but these are not always sufficient to stop bad drugs from entering the supply chain.

Key Takeaways

1. How unsafe cancer drugs reach patients

- Cancer drugs undergo a long production and distribution process.

- Contamination risks arise at multiple stages: raw materials, manufacturing, packaging, or handling.

- Even small oversights—such as improper sterilisation, unfiltered water, or mishandling—can make drugs lethal.

2. Who is responsible for drug safety

- The **primary responsibility** lies with **manufacturers**, who must maintain sterile environments and strict quality checks.

- Every component—equipment, water, materials, and personnel—must be tightly controlled to avoid contamination.

3. How the U.K. ensures drug safety

- Dual-layer testing: once at manufacturing site, once upon entry into the U.K.

- 20+ quality markers are checked per batch.

- Only qualified experts validate drug quality.

- The **Medicines and Healthcare products Regulatory Agency (MHRA)** inspects facilities globally.

- This sets a **gold standard** in drug safety monitoring.

4. Gaps in low- and middle-income countries (LMICs)

- Many LMICs lack drug-testing facilities, regulatory experts, or tracking mechanisms.

- Weak oversight allows substandard or counterfeit drugs to enter healthcare systems.

- Corruption and porous borders worsen the issue.

5. Real-world consequences

- Multiple global incidents:

    - **Saudi Arabia (2019)**: one death, multiple high fevers.

    - **Colombia (2019)**: four deaths, 100+ ill children.

    - **Yemen (2022)**: 10 deaths from contaminated methotrexate.

    - **Brazil (2023)**: poor-quality childhood cancer drugs uncovered.

6. WHO's safety measures

- **Rapid alert system**: issues warnings after incidents occur.

- **Global Benchmarking Tool**: assesses maturity of national drug regulatory systems (70% of countries are at Level 1 or 2—limited capacity).

- **Essential Medicines List**: guides resource allocation to key drugs.
- **Prequalification programs**: certify safe drugs and labs.
- **GMP certification**: confirms manufacturing quality standards.
- **WHO Certification Scheme (CoPP)**: helps importing countries verify the quality of exported drugs.

7. Limitations of current global safeguards

- WHO systems help but are mostly **reactive**, not preventive.
- Without **robust national oversight**, these tools alone cannot stop unsafe drugs from reaching patients.
- Global disparities in regulatory infrastructure remain a critical challenge to patient safety.

Can a G.I. tag prevent cultural misappropriation?-The Hindu text and Context

Economy

Easy Explanation

A **Geographical Indication (GI)** is a legal tag that links a product to its **place of origin** because of unique qualities, traditional skills, or reputation. In India, **658 products** enjoy GI protection, including Kolhapuri chappals, Darjeeling tea, and Pashmina shawls. However, GI rights are **territorial**, meaning they are only enforceable in the country where they're registered—there is **no global GI protection**. A recent controversy arose when **Prada showcased footwear resembling GI-tagged Kolhapuri chappals**, raising concerns of **cultural misappropriation**. Past cases like those involving **Basmati rice, turmeric, and neem** show the need for **stronger international safeguards and better databases** to protect India's cultural heritage.

Key Takeaways

1. What is a GI tag?

- A **Geographical Indication (GI)** is a form of **intellectual property** that identifies goods as originating from a **specific location**.
- The product must have **distinctive qualities** or **reputation** linked to that place (e.g., Darjeeling tea, Chanderi sarees).
- GI tags **preserve cultural heritage**, **boost rural economies**, and **promote exports**.

2. India's GI landscape

- India has **658 registered GI-tagged goods**.

- GIs are **public property**, owned by producer communities—not private entities.

- GIs cannot be **assigned or sold** like trademarks.

3. Legal protection of GIs

- India enacted the **Geographical Indications of Goods (Registration and Protection) Act, 1999** (in force since 2003).

- India is also a signatory to **TRIPS (1995)**, which provides a global legal basis for GI protection.

- GI holders can sue for infringement, **misrepresentation**, or **unfair competition**.

4. GI rights are territorial, not global

- GI protection **only applies within the country** of registration.

- There is **no automatic international GI right**.

- To protect a GI abroad, one must **register in each target country**.

5. Prada controversy and cultural misappropriation

- **Prada's 2026 Milan show** featured footwear resembling **Kolhapuri chappals**, a GI-tagged Indian product.

- This has been labelled as **cultural misappropriation**—using traditional designs without credit or benefit to local artisans.

- Highlights the **global vulnerability** of traditional Indian products.

6. Past instances of GI exploitation

- **Basmati rice (1997):** US firm Ricetec tried to patent it; India successfully challenged the claim.

- **Turmeric (1995):** US patent for wound healing was revoked after CSIR intervention.

- **Neem (2000):** European patent for antifungal use was revoked due to its prior use in Indian knowledge systems.

7. What more can be done?

- Strengthen the **Traditional Knowledge Digital Library (TKDL)** to include more grassroots cultural expressions.

- Develop a **searchable GI database** to help global brands verify ownership and collaborate fairly.

- Enhance **cross-border cooperation** and **educate global markets** about GI ownership and respect.

8. Conclusion

- GI tags are useful for **preserving heritage and deterring misuse** domestically.

- But without **international registration**, they offer **limited protection globally**.

- India must focus on **awareness, stronger global engagement**, and **digital tools** to safeguard its cultural products.

Kombucha can 'rebalance the gut ecosystem in people with obesity' -The Hindu Science

Science

Easy Explanation

Kombucha, a fermented tea drink rich in probiotics and polyphenols, is widely promoted for its digestive and metabolic health benefits. However, scientific evidence has been limited. A new study from *The Journal of Nutrition* tested kombucha on humans—specifically 46 adults in Brazil, both obese and normal-weight. After 8 weeks of daily consumption, certain **gut bacteria associated with better health increased** in obese individuals, while harmful ones declined. However, **no major changes were observed in blood sugar or inflammation markers**, and the sample size was small. Experts say kombucha might support gut health, but effects **vary by diet, genetics, and location**, so claims of universal benefit are premature—especially for diverse populations like India's.

Key Takeaways

1. Why the study matters

- One of the **first human studies** to test kombucha's effect on the **gut microbiome**.

- Previous research mostly limited to **animals or biochemical analysis**.

- Adds evidence to kombucha's growing health claims.

2. Study design and setup

- Conducted in Brazil on **46 healthy adults** (23 obese, 23 normal-weight).

- Participants drank **200 ml of lab-prepared kombucha** daily for 8 weeks.

- Gut bacteria and blood markers were tracked through stool samples and lab tests.

3. Microbial changes in obese individuals

- **Akkermansiaceae** increased—linked with improved **insulin sensitivity**.

- **Prevotellaceae** levels rose—associated with **better glucose control** and reduced inflammation.

- Harmful bacteria like **Ruminococcus gnavus** and **Dorea** (linked to obesity and cholesterol) declined.

4. Changes in normal-weight participants

- **Parabacteroides** increased—known for reducing **tissue inflammation**.

- Fungi like **Exophiala** and **Rhodotorula**, tied to obesity and cystic fibrosis, decreased.

5. What didn't change

- No significant improvement in **blood glucose, insulin**, or **inflammation proteins**.

- Changes were limited to **gut microbial composition**, not immediate metabolic outcomes.

6. Role of kombucha's polyphenols

- Rich in **flavonoids and phenolic acids**, which feed beneficial gut bacteria.

- These compounds help create a **healthier gut environment** by encouraging mucus secretion and bacterial balance.

7. Limited generalisability, especially to India

- India's **gut microbiome is very diverse** across regions and diets.

- Indian guts have more **Prevotella**, especially in traditional plant-based diets—so kombucha may not shift microbiota as much.

- **South Indians** have more **Bacteroides** and **Ruminococcus**, while **North Indians** show different patterns.

8. Expert caution on overgeneralising

- Effects depend on **individual diet, genetics, region, and health condition**.

- The study was **short-term with a small sample size**, so findings are **proof-of-concept**, not conclusive.

9. Final takeaway

- Kombucha may help **rebalance gut microbes**, especially in obesity.

- It could support **gut health**, but **long-term metabolic benefits are still unclear**, and results may not apply equally across populations.

Japan launches climate satellite on last Flight for main rocket-The Hindu Science

Science

Easy Explanation

Japan has successfully launched a **climate-monitoring satellite** named **GOSAT-GW** on **June 29, 2025**, aboard its **H-2A rocket**, which made its **final flight** after over two decades of service. The satellite will monitor **greenhouse gases**, **sea temperatures**, and **rainfall** to support climate action globally. This launch marks the **50th and last mission** for H-2A, which had a **98% success rate**. Japan will now shift fully to

the **H3 rocket**, its new flagship launcher that is more **cost-efficient** and can carry **heavier payloads**, as it aims to strengthen its position in the global space market.

Key Takeaways

1. Final flight of H-2A rocket

- The H-2A rocket completed its **50th and final launch**.
- In service since 2001, it maintained a **98% success rate**, with only one failure in 2003.
- Operated by **Mitsubishi Heavy Industries** in collaboration with the **Japan Aerospace Exploration Agency (JAXA)**.

2. Launch of GOSAT-GW satellite

- The payload, **GOSAT-GW** (Global Observing Satellite for Greenhouse Gases and Water Cycle), is the **third in Japan's GOSAT series**.
- It will monitor **carbon dioxide, methane**, and other **greenhouse gases**, as well as **sea surface temperatures** and **precipitation**.
- Data will be shared globally, including with the **U.S. National Oceanic and Atmospheric Administration (NOAA)**.

3. Importance of the satellite mission

- Aims to **support climate monitoring** and **global climate policy**.
- Offers **higher resolution data** for improved environmental tracking.
- Will help detect trends and changes in Earth's climate system more accurately.

4. Shift to new H3 rocket

- The H-2A is being replaced by the **H3 rocket**, which is more **cost-effective** and capable of carrying **larger payloads**.
- H3 is key to making Japan **globally competitive** in the satellite launch market.
- Despite an initial failed flight in 2023, it has now had **four successful launches**.

5. Broader space program strategy

- Japan is also developing the **Epsilon** rocket system (a smaller launcher) to meet **diverse customer demands**.
- A stable and commercial space launch capability is crucial for **Japan's national security and global market presence**.

- Japan has previously launched major missions like the **Hayabusa2 asteroid mission** and the **SLIM moon lander**.

6. Commercial and strategic implications

- The move to H3 represents Japan's intent to **lower launch costs**, meet **global demand**, and **secure strategic autonomy** in space transport.

- Cost competitiveness remains a challenge, but ongoing efforts aim to enhance Japan's role in the **international satellite launch market**.

Roll crunch-The Hindu Editorial

Polity

Easy Explanation

The Election Commission of India (ECI) is conducting a special revision of electoral rolls in Bihar ahead of the Assembly elections. The aim is to ensure that only eligible voters are on the list. However, around **4.74 crore people** may need to submit documents within just a month. This is difficult in a state like Bihar, where many people lack formal documents such as birth or matriculation certificates. Widely held IDs like **Aadhaar and ration cards are not accepted**, raising the risk of excluding genuine voters, especially the **poor and marginalised**. Experts suggest the process should be **slowed down and expanded nationwide**, ensuring no one is wrongly excluded from voting.

Key Takeaways

1. Purpose of the electoral roll revision

- ECI launched a **"Special Intensive Revision"** in Bihar to ensure voter lists are accurate.

- It aims to add **eligible citizens** and remove **ineligible ones** (dead, migrated, non-citizens).

- This effort is part of **electoral integrity and constitutional obligation**.

2. The scale of the verification exercise

- Bihar's draft electoral roll as of January 1, 2025, includes **7.96 crore electors**.

- Out of these, **4.96 crore names are carried forward from 2003**.

- After adjusting for deaths and migration (around 1.8 crore), **3.16 crore are eligible** for simplified verification.

- Thus, **about 4.74 crore voters** may have to provide new documents.

3. Documentation burden and risk of exclusion

- Individuals must submit proof of eligibility **within a month** of draft roll publication.

- Verification period is **too short**, increasing the risk of excluding genuine voters.

- ECI's **restrictive list of 11 accepted documents** excludes widely held ones like **Aadhaar and ration cards**.

- **Bihar's poor birth registration** and low formal documentation rates **worsen the challenge**.

4. Impact on the marginalised

- Bihar's **poor, less-educated, and marginalised** citizens are most likely to lack acceptable documents.

- Without adequate time or accessible verification methods, many risk being **left off the rolls**.

5. Critique of the timeline and approach

- The **tight schedule** for verification and filing objections is impractical given Bihar's context.

- The current approach seems **rushed to meet the 2025 Assembly election** timeline.

6. Recommendation for reform

- Revision should be a **long-term nationwide effort**, completed before the **2029 general election**.

- The ECI should adopt **inclusive documentation policies** and ensure sufficient time for all.

7. Importance of voter inclusion

- Elections in India are a **critical democratic outlet** for the poor and marginalised.

- Any process that **risks disenfranchising citizens** undermines the **fundamental right to vote** and democratic legitimacy.

2nd July 2025

The Dalai Lama,his successor,and China-Indian Express Explained

History

Easy Explanation

The 14th Dalai Lama, who turns 90 on July 6, may soon announce his decision on whether the tradition of finding his reincarnation (the 15th Dalai Lama) should continue. The Dalai Lama is the spiritual leader of Tibetan Buddhism and is believed to be reborn after death. However, he has said that any future reincarnation should be found in a free country and not under Chinese control.

China, on the other hand, insists that it has the sole authority to approve the next Dalai Lama and has set rules that any reincarnation must be approved using their own method (called the Golden Urn). This has raised fears that China may appoint a Dalai Lama for political reasons. The current Dalai Lama wants to ensure that the decision is made by Tibetan Buddhists according to their tradition—not by a political regime.

Key Takeaways

1. Why This Birthday Matters

- The Dalai Lama had earlier said he would decide at age 90 whether his reincarnation should continue.

- A message is expected on July 6, possibly confirming the future of the institution.

2. Tibetan Tradition of Reincarnation

- The Dalai Lama is considered a reincarnation of Avalokiteshvara, the Bodhisattva of compassion.

- Reincarnations are identified by spiritual signs, visions, and consultations with high monks.

3. Political vs. Spiritual Authority

- Until 2011, the Dalai Lama held both spiritual and political power.

- He stepped back from political duties and handed them to the democratically elected Sikyong of the Central Tibetan Administration (CTA).

4. China's Claims and Controls

- China claims the right to approve all Tibetan Buddhist reincarnations.

- It institutionalized the "Golden Urn method" and requires government approval before recognizing any successor.

5. Dalai Lama's Rebuttal

- He has made it clear that no successor chosen by China will be legitimate.

- He insists any reincarnation must happen in a free country, following Tibetan religious traditions.

6. Role of the Gaden Phodrang Trust

- If the institution continues, the responsibility to find the 15th Dalai Lama will rest with the Dalai Lama's personal trust and senior religious leaders.

7. Tibetan Concerns

- There is fear that China will use a state-appointed successor to suppress Tibetan identity and religion.

- The Dalai Lama's guidance aims to prevent political misuse of religious leadership.

Tiger's long walk east,looking for its own patch with prey,partner-Indian Express Explained

Environment

Easy Explanation

A male tiger recently walked into a house in Silli, Jharkhand, after wandering long distances in search of territory, prey, and a mate. The tiger was rescued and released back into Palamu Tiger Reserve. It is part of a broader trend: male tigers from source areas like Madhya Pradesh and Maharashtra are migrating east into less populated forests of Jharkhand, Odisha, and West Bengal. These journeys are often risky and unsuccessful due to degraded habitats, lack of female tigers, and poor prey availability.

The reason behind these movements lies in how tiger populations work: some forests (source areas) have surplus tigers that must disperse, while others (sink areas) cannot sustain populations on their own. Many of these sink areas have no female tigers left. Hence, male tigers keep moving but often end up in conflict zones or die. Conservationists suggest flying in females to rebuild populations in such forests.

Key Takeaways

1. Tiger Rescue in Jharkhand Highlights Larger Trend

- A male tiger entered a human dwelling in Silli, Ranchi district, and was later released into Palamu Tiger Reserve.
- This tiger had previously been spotted in multiple forest areas, indicating a long-range exploratory journey.

2. Eastward Movement of Male Tigers

- Tigers from core source populations in Madhya Pradesh and Maharashtra are migrating eastward through Chhattisgarh into Jharkhand, Odisha, and West Bengal.
- Camera traps have recorded several such journeys, showing repeated patterns of long-distance movement.

3. Why Tigers Keep Moving

- Male tigers must find a territory with sufficient prey and access to females.
- Overcrowding in tiger-rich areas pushes them to explore new habitats, often into degraded forests lacking basic resources.

4. Source vs. Sink Populations

- Source forests like Kanha, Bandhavgarh, and Tadoba produce surplus tigers.
- Sink forests like Palamu or Simlipal lose more tigers than they gain and rely on migrants from source areas to maintain their population.

5. Challenges in Eastern Forests

- Many eastern forests lack wild prey due to bushmeat hunting and degradation.
- There is a severe shortage of female tigers; females tend to remain near their birth areas, unlike males who disperse widely.
- This results in male-dominated transient populations that often fail to establish new breeding territories.

6. Human-Wildlife Conflict Risks

- Tigers moving through or settling in degraded forests often prey on livestock, increasing the risk of human-animal conflict.
- The rescued tiger was likely moving between Palamu and Dalma for lack of suitable habitat.

7. Possible Solutions for Sink Forests

- Reintroducing tigresses from healthy populations may help restore local populations and improve genetic diversity.
- An example is "Zeenat," a tigress flown from Tadoba to Simlipal in 2023 to address genetic bottlenecks.
- Improved protection and prey restoration are essential to make these areas viable habitats again.

Low pressure systems & MJO:Behind monsoon's early national coverage-Indian Express Explained

Geography

Easy Explanation

This year, the southwest monsoon covered the entire country by June 29—nine days earlier than usual. It also arrived early in Kerala, on May 24. Several factors contributed to this fast and early coverage: five low-pressure systems developed during June; the Madden-Julian Oscillation (MJO) remained active, boosting rainfall; and the monsoon trough stayed south of its normal position, enhancing moisture inflow.

In addition, both the El Niño-Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD) were in neutral phases, which do not hinder monsoon performance. As a result, June recorded 9% above-normal rainfall overall, especially in central India. However, eastern and northeastern states continued to see rainfall deficiency. While many key agricultural zones received sufficient rain, several states still ended the month with below-normal rainfall.

Key Takeaways

1. Unusually Early Monsoon Coverage

- The southwest monsoon covered all of India by **June 29**, ahead of the normal date of **July 8**.
- Only the **10th time since 1960** that national coverage occurred in June.

2. Early Onset in Kerala

- The monsoon began in **Kerala on May 24**, 8 days earlier than the average date (June 1).
- This early onset helped keep overall monsoon progress ahead of schedule.

3. Role of Low-Pressure Systems

- **Five low-pressure systems** formed in June.
- These systems act like magnets, pulling moisture-laden winds inland and triggering rainfall.

4. Madden-Julian Oscillation (MJO) Influence

- The **active phase of the MJO** in May and June enhanced cloud formation over southern India.
- These clouds were carried northward by monsoon winds, strengthening rainfall.

5. Favorable Position of the Monsoon Trough

- The **monsoon trough** stayed **south of its usual position**, which drew in more moisture and helped early monsoon spread.

6. Neutral ENSO and IOD Phases

- **ENSO** was in a **neutral phase** (neither El Niño nor La Niña), allowing normal rainfall.

- **IOD** was also **neutral**, meaning minimal interference with monsoon conditions.

7. June Rainfall Performance

- **All-India average rainfall** in June was **180 mm**, or **9% above normal**.

- **Central India** saw a **24.8% surplus**, a reversal of dry trends seen since 2022.

- **East and Northeast India** faced a **16.9% deficit**, continuing a three-year trend.

- More than **80% of meteorological subdivisions** recorded **normal or above-normal rainfall**, aiding **kharif sowing**.

Nuts and bolts diplomacy-Indian Express Editorial

International relations

Easy Explanation:

Prime Minister Modi is visiting several countries—mainly for the BRICS summit in Brazil, but also Argentina, Ghana, Namibia, and Trinidad & Tobago. The visit is part of India's effort to strengthen ties with different countries in an increasingly uncertain world. Earlier, India saw BRICS (with China, Russia, etc.) as a platform to counter Western dominance, but tensions with China have weakened its potential. At the same time, India is more invested in the Quad group (with the US, Japan, and Australia), but even that is facing uncertainty due to changing US policies under Donald Trump. Meanwhile, China is building strong partnerships with India's neighbours and others, increasing regional pressure on India. In this situation, India is focusing more on practical results—like trade and technology—rather than grand ideas. Strengthening domestic economy, regional leadership, and ties with the Global South is now India's top foreign policy priority.

Key Takeaways:

1. Shift from Idealism to Pragmatism

- India is no longer relying on big global ideas or ideological coalitions.

- It is prioritising **economic, technological, and political gains** through realistic bilateral engagements.

2. BRICS Is Losing Relevance

- Internal contradictions, especially **India-China tensions**, have limited BRICS' utility.

- **Argentina refused to join**, and BRICS members did not support Iran recently—showing weak unity.

3. Quad Holds Promise but Faces US Uncertainty

- India sees Quad as a way to balance China's power in Asia.

- However, **Trump's "America First" approach** and his trade talks with China cast doubt on US commitment to Quad.

4. China's Growing Regional Footprint

- China is **increasing ties with Pakistan, Bangladesh, and the Indian Ocean region**, attempting to isolate India.

- China is also expanding influence in **Argentina, Brazil, Ghana, and Namibia**—the same countries Modi is visiting.

5. Rethinking Relations with Major Powers

- India once hoped to balance good relations with **Russia, China, and the US** simultaneously.

- Now, **trust in China has eroded** and **Russia leans more toward Beijing**, making the US a more reliable partner—though still complex.

6. Focus on Global South Engagement

- India is using this tour to deepen ties with **developing nations**, especially in **Africa and Latin America**, focusing on **mutual interests** like trade and defence.

7. Need for Stronger Domestic Foundations

- India must:
    - Push **economic reforms**
    - Restore **domestic political unity**
    - Reclaim **leadership in South Asia**
    - Build **resilience at home** to face global shifts

PASSING THE TEST-Indian Express Editorial

Economy

Easy Explanation:

India's banking system is in a healthy position, as confirmed by the RBI's latest *Financial Stability Report (FSR)*. Bad loans (NPAs) are at their lowest in years, and banks have strong capital reserves. But one area of concern is the rise in **household debt**, especially **non-housing, unsecured loans** taken for consumption, not investment. Private banks and microfinance lenders are seeing signs of stress in these segments. However, RBI stress tests show that banks are resilient even in worst-case global economic scenarios. The system is stable, but certain risk areas need closer monitoring.

Key Takeaways:

1. Improved Financial Health of Banks

- **Gross NPAs** declined to **2.3%** (March 2025) from **2.8%** the previous year — lowest in years.

- **Capital to risk-weighted assets ratio (CRAR)** improved to a high **17.3%**.

- **Provision coverage ratio** (buffer for future bad loans) also remains strong.

2. Rising Household Debt a Concern

- **Household debt** rose from **36.6% of GDP (2021)** to **41.9% (Dec 2024)**.

- This increase is higher than the 2015–2019 average (33%), though still below some emerging economies.

- Worryingly, debt is largely **for consumption**, not **productive investment**.

3. Unsecured and Non-Housing Loans Driving Risk

- **Non-housing retail loans** make up **54.9% of household debt** and **25.7% of disposable income**.

- **Unsecured loans** (like personal loans, credit cards) form a **quarter of retail credit** and are showing **higher defaults**.

- **Private banks** face more stress in these areas than public banks.

4. Microfinance Sector Stress Worsens

- Loans overdue by **31–180 days** in the microfinance sector rose to **6.2%**, indicating rising risk in rural/small borrowers.

5. Stress Testing Results Reassuring

- RBI conducted **stress tests** under scenarios like geopolitical tensions and global recession.

- Result: **No bank** is expected to breach **minimum capital norms**, showing robust system-wide resilience.

6. Conclusion: Vigilance Needed Despite Stability

- Indian banks are in a **solid position**, but **retail credit stress**, especially from unsecured loans and microfinance, must be monitored.

- The RBI's ongoing surveillance and stress testing are essential for **pre-emptive action** against emerging financial risks.

A look at India's sports policy journey-The Hindu text and Context

Governance

Easy Explanation

India's sports policy has evolved slowly since independence. Initially, sports were not a national priority as the country focused on development issues like poverty, health, and education. While India hosted the 1951 Asian Games and created the All-India Council of Sports, funding and infrastructure remained poor.

A turning point came with the 1982 Asian Games, which led to the creation of a Department of Sports and the first National Sports Policy (NSP) in 1984. However, the following decades saw slow progress due to weak implementation, low budgets, and poor governance. Post-1991 liberalisation and exposure to global sports through television created interest and aspiration. Yet, serious reforms came only after 2000 with the formation of the Sports Ministry and schemes like TOPS and Khelo India.

Now, with India aiming to host the 2036 Olympics and releasing NSP 2025, there's renewed momentum. But to succeed, India must focus on governance, scientific coaching, fitness, and strong implementation.

Key Takeaways

1. Early History & Post-Independence Period

- Sports in India originated from survival skills like archery and wrestling.
- Post-1947, national focus was on rebuilding the economy, not sports.
- Hosted the **1951 Asian Games** and set up the **All-India Council of Sports (1954)**, but with limited funding and support.

2. Turning Point: 1982 Asian Games

- Sparked creation of a **dedicated Department of Sports** under HRD Ministry.
- **National Sports Policy 1984** launched with goals of infrastructure, mass participation, and elite sports development.
- **SAI (Sports Authority of India)** was established in 1986.

3. Slow Progress (1980s–1990s)

- Sports remained a **State subject**; Centre had limited involvement and budgets.
- Lack of private and societal engagement.
- A **Draft NSP (1997)** was proposed but never finalized.
- Liberalisation in 1991 increased media visibility, sports aspiration, and interest in elite achievement.

4. Reforms Post-2000

- **Ministry of Youth Affairs and Sports (MYAS)** created in 2000.
- **Revised NSP (2001)** emphasized mass participation and excellence.

- Olympic successes: **Rathore (2004)**, **Bindra (2008)**, **Vijender & Mary Kom (2008, 2012)**.

5. Recent Policy and Schemes

- **National Sports Development Code (2011)** introduced reforms on governance, doping, and athlete protection.
- Key schemes:
    - **TOPS (2014)** – Elite athlete support.
    - **Khelo India (2017)** – Youth talent spotting and infrastructure.
    - **Fit India Movement (2019)** – Public fitness campaign.

6. Olympic Bid & New Initiatives

- India is actively bidding for the **2036 Olympics**.
- **Draft National Sports Policy and Governance Bill (2024)** released for feedback.
- **NSP 2025 ("Khelo Bharat Niti")** announced, aligning with Olympic ambitions.

7. Challenges & Way Forward

- Governance remains a hurdle — codes from 2011 and 2017 await full implementation.
- India topped **WADA's global doping list**—urgent need for reforms.
- **Focus Areas:**
    - Scientific coaching
    - Physical literacy
    - Sports integration in education
    - Transparency and accountability in sports governance

How does a telephone intercom function in an office setting?-The Hindu Text and Context

Science

Easy Explanation

In an office, telephone intercom systems function using EPABX (Electronic Private Automatic Branch Exchange) technology. It helps connect internal extensions (like calling a colleague in another room) and external calls (like reaching someone outside the office). When a call is made, the EPABX acts like a switchboard, connecting the caller to the right line. It does this through a system of switches and relays that have evolved from mechanical to digital technology.

Originally, these systems used physical switches. Today, EPABX systems use digital technology, allowing multiple users to communicate simultaneously through features like voicemail, call forwarding, automated menus, and even internet-based voice calls (VoIP). This makes communication within and outside the office faster, smarter, and more efficient.

Key Takeaways

1. What is EPABX?

- **EPABX** = *Electronic Private Automatic Branch Exchange*.
- It's a private telephone network used in offices for internal and external communication.
- Facilitates **call transfers**, **intercom**, **voicemail**, and **automated responses**.

2. How Internal Calls Work

- When a person dials another extension (e.g., Arun calls Bharathi at 104), EPABX:
  - Detects the off-hook signal.
  - Sends a dial tone.
  - Matches the extension and connects via internal switching.

3. How External Calls Work

- Caller dials an access code (often '0') + external number.
- EPABX routes the call to a free **trunk line** connected to **PSTN** (public telephone network).
- If all trunk lines are busy, a **busy tone** is played.

4. Handling Incoming Calls

- PSTN routes the call to the EPABX system.
- Based on system type:
  - Manual transfer via receptionist (older systems).
  - Auto-routing using IVR and extension menus (modern systems).

5. Core Mechanism: Switching

- EPABX switching is like a **railway yard**:
    - Incoming “trains” (calls) are routed to the right “platform” (extension).
- Uses combinations of switches:
    - **Single pole/single throw** – simple on/off.
    - **Double pole/double throw** – more complex routing.
- Older systems used **electromechanical relays**, newer ones use **digital switching**.

6. Modern Technologies Used

- **Digital EPABX** uses:
    - **Pulse Code Modulation (PCM)** – digitizes voice signals.
    - **Time Division Multiplexing (TDM)** – assigns time slots for multiple users.
- **VoIP-based PBX** uses internet protocols to route calls, just like emails.

7. Key Modern Features

- **Voicemail**, **call recording**, **automated menus**, and **multimedia support**.
- Seamless integration with internet and office communication tools.
- Ensures **simultaneous multi-user** functionality with better speed and clarity.

Groundwater crisis deepens in Karnataka’s hard rock terrain-The Hindu Science

Geography

Easy Explanation

Karnataka, like much of the Deccan Plateau, depends heavily on underground water stored in hard rocks like granite and basalt. However, these rocks don’t store water well. To grow water-intensive crops, farmers drill deep borewells, which accidentally allow rainwater to sink too deep, missing the shallow layers where it’s needed most. This causes the groundwater level to fall every year.

Many borewells now fail within a decade. Panchayats are burdened with huge electricity debts from running deep pumps, and many farmers go bankrupt. Despite government efforts, poor groundwater management and over-extraction continue. Without urgent action—like changing crop practices, restoring water bodies, and supporting farmers financially—groundwater may run out in just a few years.

Key Takeaways

1. Karnataka's Groundwater Dependence

- About **99% of Karnataka** depends on **hard rock aquifers** (granite, basalt) with low porosity.
- Unlike sedimentary aquifers, these **store little water**, relying on **fractures and weathered zones**.

2. Disruptive Impact of Borewells

- Farmers drill borewells deep into granite, **creating microfractures**.
- This allows **rainwater to bypass shallow aquifers**, reducing groundwater recharge.
- Result: **water tables are declining rapidly** every year.

3. Key Study Findings (Upper Arkavathy Watershed)

- Conducted in **Aralumallige & Doddathumakuru** near Bengaluru.
- Borewell depth rose from **183m (2001–2011)** to **321m (2011–2021)**.
- **70% of drinking water borewells failed** within 10 years.
- **Water quality** issues (nitrates, fluoride) are present but **not the main reason** for borewell abandonment.

4. Economic and Infrastructure Crisis

- **Free electricity** for farmers leads to **huge power bills** for gram panchayats.
- Many villages are **redirecting development funds** to pay electricity dues.
- Borewell drilling costs ₹4–5 lakh, forcing many small farmers into **debt or migration**.

5. Ignored Warnings and Misguided Practices

- Despite awareness of water stress, **cropping patterns remain unchanged**.
- **Greywater reuse is limited**, and youth migration reduces sustainability efforts.
- Banned **eucalyptus** farming still affects groundwater.

6. Policy Gaps and Risk of Collapse

- Lack of **local groundwater data** hinders planning.

- Programmes like **Sujala** and **Jal Jeevan Mission** help but **don't address root causes**.

- Until farming techniques change, **groundwater recharge won't be effective**.

7. Urgent Recommendations

- **Compensate farmers** for using less water and electricity.

- Restore traditional recharge systems like **lakes and tanks**.

- Promote **sustainable crops** and **educate farmers** on water conservation.

- Combine **recharge, regulation, and economic support** in a coordinated policy approach.

Costly lapses-The Hindu Editorial

Economy

Easy Explanation

Microcrystalline Cellulose (MCC) is a safe chemical used in medicines, food, and cosmetics. It helps tablets hold shape and size but isn't absorbed by the body. Though the substance itself is harmless, making it involves risky processes that need strict safety measures. On July 1, a major explosion at Sigachi Industries in Hyderabad — a plant manufacturing MCC — killed 36 workers, mostly poor migrant laborers.

The accident was likely caused by poor equipment maintenance, which caused overheating. Sadly, such accidents are common in India's pharma industry. Safety protocols like hazard analysis, real-time monitoring, and trained staff are often ignored. Despite India being a global pharma leader, frequent industrial accidents risk damaging the sector's reputation and export value.

Key Takeaways

1. What is MCC (Microcrystalline Cellulose)?

- A **chemically inert** substance used widely in **pharmaceuticals, food, and cosmetics**.

- Acts as a **binder, texturiser, and bulking agent** in drug formulation.

- **Safe for human use**, but its **manufacturing process involves risks**.

2. The Hyderabad Tragedy

- **36 people died** in a **blast** at Sigachi Industries, a unit that produces MCC.

- Most victims were **young migrant workers** from northern and eastern India.

- Telangana government has announced an **ex gratia of ₹1 crore** for victims' families.

3. Probable Cause

- Suspected **equipment malfunction** led to **abnormal temperature build-up**, causing the explosion.

- Indicates **poor maintenance and lack of safety checks**.

4. Recurring Pattern of Negligence

- Similar **pharma accidents** occurred recently:
    - **August 2023**: Major blast at Anakapalli (near Visakhapatnam).
    - **April 2023**: Accident in Hyderabad.
- Reveals a **systemic issue of lax safety culture** in India's pharma industry.

5. Gaps in Safety Protocols

- Safety measures like **HAZOP (Hazard and Operability Study)** are often not properly implemented.
- Lack of **real-time monitoring** and **trained, competent staff**.
- **Data from plant operations** isn't used effectively to prevent hazards.

6. Urgent Need for Safety Culture

- Plants must foster a **strong safety culture** at all levels — operators, managers, and workers.
- Safety protocols must be **regularly updated and strictly enforced**.
- Workers need **continuous safety training and hazard awareness**.

7. Implications for India's Pharma Sector

- The **global spotlight on industrial safety** is increasing.
- Frequent accidents may **damage India's reputation** as a reliable pharma exporter.
- Conformance with **international safety standards** is now critical for the industry's survival and growth.

A triangular dynamic in South Asia's power politics-The Hindu Editorial

International relations

Easy Explanation:

The power dynamics between the US, India, and Pakistan are evolving rapidly. US President Donald Trump's outreach to Pakistan's military leadership reflects a renewed transactional approach, potentially

reversing the post-9/11 tilt toward India. This shift unsettles India, which has traditionally opposed third-party involvement in Kashmir. Meanwhile, India is asserting a tougher doctrine with military responses to terror, while Pakistan uses its strategic geography and diplomatic skills to maintain relevance in US strategy. As both India and Pakistan seek to influence Washington, the US finds itself navigating a complex balance between idealism, strategy, and economic self-interest.

Key Takeaways:

1. US's Transactional Shift Toward Pakistan

- Trump's high-profile meeting with Pakistan Army Chief Asim Munir signals a return to Cold War-style realpolitik.
- $397 million in US assistance for Pakistan's F-16s and praise from US officials point to revived military cooperation.
- Pakistan is being positioned as a useful partner for US interests in Iran, Afghanistan, and counterterrorism.

2. Concerns in India Over US Recalibration

- India fears erosion of strategic trust built with the US post-2000s, especially on counterterrorism and China.
- Trump's attempts to portray himself as a mediator in Indo-Pak conflicts, especially over Kashmir, are rejected by India.
- The recalibration risks undermining India's vision of a US partnership rooted in shared liberal and democratic values.

3. India's Assertive New Security Doctrine

- The Pahalgam terror attack triggered 'Operation Sindoor', marking a departure from India's past strategic restraint.
- Modi's declaration of a "new normal" suggests readiness for kinetic and diplomatic retaliation to terror attacks.
- India aims to globally isolate Pakistan for sponsoring terrorism while resisting any third-party mediation.

4. Pakistan's Dual Strategy

- Pakistan combines military strength with US outreach to revive focus on Kashmir and secure strategic relevance.

- Asim Munir's promotion to field marshal reflects military dominance in policymaking.

- Islamabad offers rare earth trade deals and geopolitical access to the US, despite internal instability.

5. The US as a Balancer With Conflicted Priorities

- America's current diplomacy is marked by **ambivalence**, focused more on trade than long-term security goals.

- While the Quad continues, South Asia—especially India—feels sidelined as Pakistan gains ground in US ties.

- US policies fluctuate between **idealism (liberal order)** and **realism (strategic advantage)**, complicating trust.

6. The Geography Factor in Pakistan's Leverage

- Pakistan's location—bordering Iran, Afghanistan, and China—remains central to US regional strategy.

- This geography, combined with strong military diplomacy, gives Pakistan lasting influence in Washington.

7. India's Strategic Dilemma

- India wants to be seen as an autonomous global power, not clubbed with Pakistan.

- Any US "hyphenation" (India-Pakistan parity) undermines India's international positioning and domestic consensus on US ties.

- India continues rejecting external mediation in Kashmir, pushing for bilateral and hard-power approaches.

8. Outlook: A Fragile Triangle

- All three nations are trying to use the US to serve their interests.

- US policy is swinging between **partnership with India** and **tactical engagement with Pakistan**.

- Washington must walk a **tightrope**, balancing relationships in a region increasingly defined by militarised diplomacy and power competition.

Using tech to empower women and children-The Hindu Editorial

Sociology

Easy Explanation:

The Ministry of Women and Child Development in India has adopted digital tools to ensure that welfare programs for women and children are more accessible, transparent, and efficient. Key initiatives like Saksham Anganwadi, Poshan Tracker, and Mission Shakti have digitized service delivery in nutrition, health, education, safety, and welfare. This has improved real-time monitoring, reduced leakages, and enhanced support mechanisms. Programs like PMMVY and CARINGS are promoting maternal health and child adoption with digital-first approaches. Overall, tech is now central to India's strategy for social justice and empowerment.

Key Takeaways:

1. Digital Public Infrastructure for Inclusive Access

- The Ministry uses real-time data systems and paperless governance to extend entitlements to women and children efficiently.

- The **Poshan Tracker** has registered over **10.14 crore beneficiaries** and supports **evidence-based policymaking**.

2. Saksham Anganwadi: Smart Centres for Nutrition & Education

- Over **2 lakh Anganwadis** are being digitally upgraded with smartphones, learning tools, and performance tracking systems.

- Integrated with **Poshan Bhi, Padhai Bhi** for digital early education training of Anganwadi workers.

3. Technology for Safety and Justice

- **SHe-Box portal** allows women to lodge and track complaints under workplace harassment laws.

- **Mission Shakti** mobile app connects women in distress to nearby one-stop support centres.

4. Maternal Support through PMMVY

- **PMMVY 2022 Rules** offer ₹5,000 for the first child and ₹6,000 for a second girl child, reinforcing daughter-positive welfare.

- Program is **fully digital**, using Aadhaar, DBT, and real-time dashboards; over **₹19,000 crore disbursed** to **4 crore women**.

5. Tangible Welfare Outcomes

- **Sex Ratio at Birth** improved from **918 (2014-15)** to **930 (2023-24)**.

- **Maternal Mortality Rate** fell from **130 to 97 per 1,000 live births** between 2014 and 2020.

6. Child Protection & Adoption Made Transparent

- **CARINGS portal** streamlines the adoption process and tracks violations of child rights.

- **Mission Vatsalya dashboard** enhances coordination among child welfare institutions and support systems.

7. Accountability and Grievance Redressal

- All programs feature citizen-facing dashboards and grievance modules to **enhance transparency and trust**.

8. Vision for Amrit Kaal and Viksit Bharat@2047

- The overarching goal is to build a confident, healthy, and empowered next generation through **tech-enabled last-mile delivery**.

- The Ministry reflects the **New India vision**, where policy, purpose, and digital innovation converge.

3rd July 2025

GADEN PHODRANG TRUST-Indian Express Explained

Governance

Easy Explanation

The *Gaden Phodrang Trust*, registered in 2011 in Dharamshala, has been declared by the 14th Dalai Lama as the sole authority to identify his reincarnation, affirming that the institution of the Dalai Lama will continue. Historically, "Gaden Phodrang" referred to the Dalai Lama's residence at Drepung Monastery, later shifting to the Potala Palace and Norbulingka. The trust is one of three institutions tied to the Dalai Lama, alongside the *Dalai Lama Trust* (based in New Delhi) and *Gaden Phodrang Foundation* (Zurich). The Gaden Phodrang Trust is led by senior Tibetan monks including Prof. Samdhong Rinpoche and is focused on preserving Tibetan culture, education, and Buddhist traditions. This move preempts China's attempts to control the reincarnation process, asserting Tibetan religious autonomy.

Key Takeaways:

1. Sole Authority for Reincarnation

- The 14th Dalai Lama declared that only the Gaden Phodrang Trust will have the authority to recognize his reincarnation.

- This is a move to prevent Chinese political interference in Tibetan spiritual matters.

2. Historical Origins of Gaden Phodrang

- Originally the residential quarters of the Dalai Lamas at Drepung Monastery.

- Later associated with the Potala Palace and Norbulingka before the 14th Dalai Lama fled to India in 1959.

3. Trust's Institutional Role

- Registered in India, the Gaden Phodrang Trust operates from the Dalai Lama's office in Dharamshala.

- It is one of three institutions associated with the Dalai Lama's legacy.

4. Other Affiliated Institutions

- *Dalai Lama Trust* (New Delhi): Promotes welfare, peace, and interfaith harmony.

- *Gaden Phodrang Foundation* (Zurich): Swiss-based nonprofit promoting Tibetan values and global ethical initiatives.

5. Leadership and Structure

- Headed by the Dalai Lama himself with close aides like Samdhong Rinpoche involved.

- It represents both a spiritual and administrative continuation of the Dalai Lama's institution.

6. Mandate and Activities

- Focuses on Tibetan education, culture, secular ethics, and compassion globally.

- Funds schools, scholarships, translations, and initiatives to preserve Tibetan heritage.

7. Geopolitical Significance

- Reinforces Tibetan autonomy in spiritual affairs amid China's efforts to nominate its own Dalai Lama.

- Highlights the strategic use of institutional continuity to protect religious sovereignty.

AI and copyright law-Indian Express Explained

Science

Easy Explanation

Two courts in the US recently ruled in favor of AI companies (*Anthropic* and *Meta*) in cases where **writers and artists sued them** for using copyrighted content (like books and articles) to **train their AI models**.

The companies argued that they weren't copying the content but using it to teach their AI to create **something new and different**. The courts agreed, saying this kind of use is allowed under **"fair use"** in US law — which lets content be reused in limited ways for learning, reviews, or innovation.

But the judges also said that **AI companies should find ways to pay creators**, even if it's not currently required by law.

In India, **OpenAI is now being sued** by news agencies for similar reasons — using Indian content to train ChatGPT

Key Takeaways

1. **US courts ruled in favor of AI companies** — Saying their use of content is "fair use" because it helps build new technology.

2. **AI training is like learning, not copying** — Judges compared it to a student reading books to write their own story.

3. **No strong evidence of harm** — In Meta's case, authors couldn't prove that AI was hurting their book sales.

4. **Fair use allows innovation** — US law supports using copyrighted work for creating something new.

5. **But compensation is still important** — Courts said tech firms should **find ways to pay original creators**.

6. **OpenAI faces legal action in India** — News agencies like ANI and others say their copyrighted material was used without consent.

7. **Bigger questions still remain** — As AI gets smarter, how will it affect **jobs, creativity, and original work**? Laws are still catching up.

SC to decide: Are guidelines for obtaining caste certificates discriminatory?-Indian Express Explained

Polity

Easy Explanation

The **Supreme Court of India** is going to decide whether the **current rules for giving OBC certificates** (especially in Delhi) are **discriminatory**.

Right now, to get an OBC certificate, applicants must show **their father's or his relatives' caste certificate**. This becomes a problem for children of **single mothers**, especially if:

- The mother belongs to a backward caste (OBC/SC/ST)
- The father is absent, unknown, or from a different caste
- The child is raised only by the mother

Petitioners argue that this system violates the child's **right to equality and liberty**, and that the child should be allowed to **inherit the mother's caste** if she's the only caregiver.

The Supreme Court's past judgments have said that while children usually inherit the father's caste, this is **not a fixed rule**, especially if they are raised solely by the mother and face the same social disadvantages.

Key Takeaways

1. **Current rule requires father's caste certificate**
   Children must prove their father's caste to get an OBC certificate, even if raised by a single mother.

2. **Petitioners say it's unfair**
   This rule **hurts children of single mothers**, denying them access to caste-based benefits and reservations.

3. **SC's 2012 ruling (Naika case) allows flexibility**
   It said **a child can inherit the mother's caste** if they're raised by her and face caste-related disadvantages — it's not always based on the father.

4. **Delhi High Court gave strict interpretation**
   It denied SC certificates to children raised by an SC mother, saying they didn't face social hardships and that giving certificates would reduce chances for *genuinely disadvantaged* SC people.

5. **Gauhati High Court took a more inclusive view**
   It **allowed caste certificate from the mother**, as the child was shown to have grown up in her community and suffered the same disadvantages.

6. **Different courts, different views**
   This inconsistency has created **confusion**, and the Supreme Court now needs to set clear rules.

7. **SC will decide on July 22**
   The Supreme Court will hear the matter in detail to decide if current guidelines **violate constitutional rights** and how they should be updated for **fairness and inclusion**.

Punjab's land pooling policy & its criticism-Indian Express Explained

Governance

Easy Explanation

The **Punjab government** has introduced a **Land Pooling Policy** to acquire **40,000+ acres of farmland** across 27 cities for **urban development and housing**.

- **Instead of compulsory land acquisition**, the policy encourages **voluntary pooling** — landowners give land and get a share of developed plots in return.

- It aims to prevent **illegal colonies** and **unplanned urban growth**, while also boosting government revenue and infrastructure.

However, the policy has **sparked protests**, especially from opposition parties and farmer groups, who claim it's a **land grab in disguise** and risks harming **fertile agricultural land** and **food security**.

Key Takeaways

1. **What is Land Pooling?**
   Landowners give up their land *voluntarily* to the government. In return, they receive a smaller share of **developed land** (residential & commercial plots).

2. **What's the goal?**
   The policy aims to **urbanize in a planned way**, stop **unauthorized colonies**, and **generate ₹20,000–₹25,000 crore** in revenue for Punjab.

3. **What landowners get:**
    - For every 1 acre: **1,000 sq yd residential + 200 sq yd commercial plot**
    - For larger pooling (9+ acres): Up to **60% of the land** returned as **developed plots**
4. **Where is it being implemented?**
   Major cities like **Ludhiana, Mohali, Amritsar, Jalandhar, Patiala, Bathinda, Sangrur**, etc.
5. **Why is it being criticized?**
    - **Loss of fertile farmland**: Experts warn Punjab may lose up to **1.5 lakh tons of paddy production**
    - **No protection like the 2013 Land Act**: Critics say the policy skips **compensation/resettlement safeguards** provided in the **Central Land Acquisition Act**
    - **Political motives**: Critics claim it's a **fundraising scheme** to finance AAP's **₹1,000/month women scheme** before the 2027 elections
6. **Opposition backlash:**
    - **BJP** called it a "**Ponzi scheme**"
    - **SAD** called it "**land grabbing for private gain**" and launched protests
7. **Core issue:**
   The policy balances **urban growth vs. agricultural loss**, **state revenue vs. farmer trust**, and **legal shortcuts vs. long-term sustainability**.

Are gig workers a part of India's labour data?-The Hindu Text and Context

Economy

Easy Explanation

Gig workers like food delivery agents, ride-hailing drivers, and freelancers **are technically counted** in India's main employment survey, the **Periodic Labour Force Survey (PLFS)**.
BUT — they are **not counted separately** or **clearly identified**.

Instead, they're lumped into broad categories like "self-employed" or "casual workers," which **hides their actual job conditions** — like working on apps, no fixed contracts, unstable income, or being controlled by algorithms.

Even though the government has legally recognized gig workers under the **Code on Social Security, 2020** and made some welfare promises in the **2025 Union Budget**, the lack of clear data means many workers may **miss out on benefits**.

Key Takeaways

1. **Gig workers are included but not classified**
   PLFS doesn't have a separate category for gig workers, so their challenges remain invisible.

2. **Their work is different from regular jobs**
   They often work on multiple apps, don't have contracts, and depend on algorithms — which PLFS doesn't capture.

3. **Legal recognition exists**
   The Code on Social Security, 2020 defines gig and platform workers and promises social welfare.

4. **Lack of data = exclusion from schemes**
   Without proper classification, it's hard to identify who qualifies for benefits like insurance or pensions.

5. **Government admits no PLFS update yet**
   The Ministry confirmed that PLFS hasn't changed its methods to track gig workers.

6. **2025 PLFS improvements missed gig focus**
   Though the latest survey improved sample size and rural tracking, it still doesn't address gig work properly.

7. **Recognition without representation**
   Gig workers are being noticed in policy, but without data, they're still **missing from the big picture**.

How did Indian universities fare on the QS ranking list?-The Hindu text and Context

Sociology

Easy Explanation

In the **2026 QS World University Rankings**, **54 Indian universities** made it to the **top 1,500** list — a big jump from **11 in 2015**.

IIT Delhi was the highest ranked at **123**, followed by other IITs and IISc Bengaluru. New private universities like **Ashoka University** and **Shiv Nadar Institute of Eminence** were included for the first time.

This shows that Indian universities are **catching up with global standards**, but there's still room for improvement, especially in **research**, **international diversity**, and **employment outcomes**.

Key Takeaways

1. **Performance Growth**
    - 54 Indian institutions in QS Top 1,500 (vs. 11 in 2015)
    - Top-ranked: IIT Delhi (123), then IIT Bombay, IIT Madras, IIT Kharagpur, IISc Bengaluru
    - First-time entries: Ashoka University, Shiv Nadar University, others
2. **Ranking Criteria**
    - Academic reputation: 30%
    - Research impact (citations): 20%
    - International research network: 5%
    - Employer reputation: 15%
    - Graduate employment outcomes: 5%
    - International diversity (students & faculty): 10%
    - Sustainability (eco-friendly campuses): 5%
    - Learning environment (faculty-student ratio): 10%
3. **Drivers of Improvement**
    - Adoption of global best practices
    - Stronger placement cells and industry linkages

- Growing emphasis on original research in both public and private institutions

4. **Remaining Challenges**

   - Low numbers of international students and faculty
   - Historically limited in-house research culture
   - Inconsistent sustainability initiatives on campus

5. **Paths to Higher Ranks**

   - Recruit and retain international faculty; attract global students
   - Invest in impactful, original research and global collaborations
   - Strengthen placement services and industry partnerships
   - Enhance campus sustainability and green infrastructure

Sinhalese migrated from Southern India, mixed with Adivasis: study-The Hindu Science

Science

Easy Explanation

A new genetic study has revealed that the **Sinhalese people of Sri Lanka are genetically closest to South Indians**—especially those with Dravidian roots—and to the **indigenous Adivasi people** of Sri Lanka. By analyzing the **whole genomes** of Sinhalese, Adivasi, and Sri Lankan Tamils, researchers found that:

- The **Sinhalese likely migrated from South India around 3,000 years ago**.
- They **intermixed heavily with the native Adivasi**, contributing to the present-day genetic makeup.
- Although the **Sinhalese speak an Indo-European language (Sinhala)**, their genes resemble **Dravidian-speaking South Indians**, not North Indians.
- This means **cultural traits like language and biological ancestry can differ**.

- The **Adivasi clans (Interior & Coastal)** have genetic similarities with the Sinhalese but are **distinct from each other**, shaped by geography and endogamy (marrying within the community).

- Despite small sample sizes, the study successfully **traced deep population histories** of these groups.

Key Takeaways

1. **Origins of Sinhalese**
    - Sinhalese likely **migrated from South India** ~3,000 years ago, not North India as earlier believed.
    - Their genes show strong **Dravidian ancestry (ASI)**, rather than Indo-European (Steppe-related) ancestry.
2. **Genetic Link with Adivasi**
    - Sinhalese and **Adivasi are genetically close**, showing historical intermixing.
    - Despite this, the **Adivasi retain unique traits** and are more endogamous and genetically distinct.
3. **Language vs Genes**
    - Sinhalese language is Indo-European, but **genes reflect South Indian roots**.
    - Language can spread through **elite migration or cultural transmission**, not always by genetics.
4. **Distinct Adivasi Clans**
    - Two groups: **Interior and Coastal Adivasi** show subtle genetic differences due to **geographic isolation and smaller population sizes**.
    - Interior Adivasi show greater loss of diversity due to stronger isolation.

5. **Population History and Methodology**

    - Whole-genome sequencing of **urban Sinhalese, Sri Lankan Tamils, and Adivasi clans** was used.

    - Despite small samples, results were reliable due to **high-quality data and shared ancestry signals**.

6. **Health Implications**

    - **Lower genetic diversity in Adivasi** could affect their health and disease resistance.

    - Highlights the need for **targeted healthcare and social support**.

7. **Regional Implications**

    - Study underlines **strong genetic and cultural ties between India and Sri Lanka** through history.

    - It enhances our understanding of **human migration and social evolution** in South Asia.

Moondust is less harmful than earth's dust — but don't take a deep breath-The Hindu Science

Science

Easy Explanation:

Moondust is less harmful than Earth's dust — but it's still not safe to breathe.

When we breathe polluted air on Earth, especially the tiny **PM2.5 particles**, they can damage our lungs and shorten our lifespan. A new study tested **moondust**, using lab-made versions (LMS-1 and LHS-1) that mimic lunar soil. It found:

- **Moondust is less toxic to certain lung cells** than Earth's PM2.5 particles.

- But both **moondust and Earth dust can damage alveolar cells** — the part of the lungs that exchanges oxygen.

So, **even if you're on the moon, breathing in moondust is dangerous**. This research helps **NASA and other space agencies** plan safer moon habitats, especially with future missions like **NASA's Artemis II** coming up in 2026.

Key Takeaways:

1. **Moondust is less toxic than Earth's PM2.5** for bronchial cells (which move air into the lungs), but **still harmful**.

2. **Tiny moondust particles** can reach deep into the lungs — and **damage alveolar cells**, which handle oxygen exchange.

3. During the Apollo missions, **astronauts experienced eye and lung irritation** due to moondust sticking to their suits.

4. Moondust behaves differently because it's **electrostatically charged** — it sticks like a rubbed balloon sticks to a wall.

5. The study used **two types of simulated moondust** (LMS-1 from lunar mares and LHS-1 from highlands) to study effects on lung cells.

6. **Even on the moon, breathing in unfiltered air is risky**, especially as plans for long-term human presence advance.

7. The findings will help **design safer lunar habitats** and guide **medical protocols for astronauts** in future missions like **NASA's Artemis II (2026)**.

Rephasing global development finance-The Hindu Editorial

International relations

Easy Explanation:

India has steadily increased its **development support to countries in the Global South**, nearly doubling the financial aid from **$3 billion in 2010-11 to $7 billion in 2023-24**. This support includes **training, technology sharing, market access, and concessional loans** (low-interest credit), mainly through the **IDEAS scheme**.

However, with rising debt in many Global South countries and a shrinking flow of global aid (especially from traditional donors like the U.S. and U.K.), India is reconsidering its strategy. **Concessional loans are becoming less sustainable**, and there's a need for a **better balance between grants, capacity building, and market access.**

To adapt, India is exploring **Triangular Cooperation (TrC)** — where a country from the Global South (like India or Brazil), teams up with a traditional donor (like Germany or Japan), to jointly support another developing country. India has already partnered with **Germany to implement such projects in Africa and Latin America.**

This model is more inclusive, cost-effective, and better aligned to the needs of recipient countries — and offers a path to **rethink global development finance** at a time of global uncertainty and shrinking aid.

Key Takeaways:

1. **India has increased its development assistance to the Global South**, especially through concessional loans (LoCs), but the global economic environment is making such support harder to sustain.

2. The **Ministry of Finance has raised concerns** about relying too heavily on credit-based assistance, as many developing countries are now **struggling with rising debt and poor repayment capacity.**

3. Traditional aid (ODA) from developed countries is **shrinking significantly** — projected to drop by **45% from $214 billion in 2023 to $97 billion**, affecting crucial development programmes globally.

4. Achieving the **UN's Sustainable Development Goals (SDGs) by 2030 now requires over $4 trillion**, nearly double the estimated cost in 2015 — making it essential to **find new funding models**.

5. **Triangular Cooperation (TrC)** is emerging as a promising approach: it brings together a donor country, a Global South nation like India, and a recipient country to deliver **locally relevant, shared solutions.**

6. India has already signed TrC agreements with **Germany**, and projects are underway in **Africa and Latin America**. These partnerships boost not just infrastructure, but also **social services like health and education**.

7. Under India's **G20 presidency**, such **multi-partner, collaborative development projects** were strongly promoted — showing how pooled financial, technical, and human resources can deliver real, on-ground results.

4th July 2025

Tamal, the last imported warship-Indian Express Explained

Science

Easy Explanation

What is INS Tamal?

INS Tamal is a new warship (frigate) commissioned into the Indian Navy. It was built in Russia and is equipped to handle threats from air, surface, underwater, and electronic warfare. It is fast, powerful, and can operate in deep-sea missions.

This is likely the **last foreign-built warship** for India. From now on, the Indian Navy plans to use only **Indian-built warships**, showing how far the country has come in becoming self-reliant in defence.

Why is it important?

- It marks a major step in India's journey towards **self-reliance (Aatmanirbharta)** in defence.

- It shows how India has gradually developed the capacity to **design and build modern warships** at home.

- Earlier, India had to buy warships from countries like the UK and the USSR, but now it builds most of them on its own.

Key Takeaways

1. INS Tamal's Features

- Class: Talwar-class (Project 1135.6)
- Built in Russia; commissioned in July 2024
- Speed: 30 knots (56 km/h), Range: 4,850 nautical miles
- Equipped with BrahMos missiles, anti-air and anti-submarine weapons, and electronic warfare systems
- Can carry helicopters like Kamov-28 and Kamov-31

2. Role in Navy

- A multi-role frigate that can fight in all dimensions: air, surface, underwater, and electronic
- Described by the Navy as a "moving sea fortress"

3. End of Foreign Ship Imports

- INS Tamal is expected to be the **last warship India buys from abroad**
- Even though built in Russia, it includes 26% Indian-made components

4. India's Progress in Warship Building

- First indigenously built ship: INS Ajay (1960)
- Indigenous content:
    - Leander-class (1970s): 15%
    - Kolkata-class (2000s): 59%
    - Newer ships: Over 75%
- India now builds almost all of its Navy ships, with many public and private shipyards involved

5. Institutions Behind This Growth

- Directorate of Naval Design (established in 1970)
- Directorate of Indigenisation (set up in 2005)
- Local development units in Mumbai and Visakhapatnam

6. What's Next

- Two more Talwar-class ships (Triput and Tavasya) are being built in Goa using Russian design help
- Triput will be India's **first fully Indian-built Talwar-class ship**
- 9–10 new warships will be commissioned in 2024 — all built in India

Why same cab ride costs more at times:How dynamic,surge pricing work-Indian Express Explained

Economy

Easy Explanation

Why does the same cab ride sometimes cost more?

Cab services like Uber, Ola, and Rapido use **dynamic pricing**, which means the price changes based on demand and supply. If there are more people looking for cabs than the number of cabs available (for example, during rush hour or rain), the prices go up. When demand is low, prices can drop.

This system is based on basic **economic rules** — when demand goes up and supply is limited, prices rise. It encourages more drivers to come online and serve the demand.

What has the government done?

The **Motor Vehicle Aggregator Guidelines, 2025** now allow cab companies to:

- Charge up to **twice the base fare** during high demand (earlier, it was 1.5 times).
- Offer discounts up to **50% below the base fare** during low demand.

Each state decides its own base fares, but the central government has asked states to adopt these new rules within three months.

What is surge pricing?

Surge pricing is a part of dynamic pricing. It is a temporary price increase during **peak hours**, bad weather, or special events. It gives passengers the choice to either wait or pay more and also encourages more drivers to move into high-demand areas.

Key Takeaways

1. What is dynamic pricing?

- A pricing method where the cost changes based on demand and supply.

- Used across industries like cabs, airlines, trains, electricity, and even e-commerce (e.g., Amazon's automatic pricing tools).

2. Government's new policy

- As per the 2025 guidelines, cab apps can now:
    - **Charge up to 2x the base fare** during high demand.
    - **Offer up to 50% off** during low demand.
- States must adopt the policy within 3 months.

3. Why cab prices change suddenly

- **High demand** (like during office hours, rain, or events) leads to **higher fares**.
- **Low demand** can lead to discounts.

4. Surge pricing: a closer look

- A **temporary price hike** during peak hours or low cab availability.
- Shown on apps through color codes (e.g., dark red = high demand and high surge).
- Helps bring more drivers to that area and balances the market.

5. Criticism and benefits

- **Criticism**: Sometimes seen as price gouging or unfair to customers.
- **Benefit**: Research (Wharton, 2016) shows it helps:
    - Serve more customers even during bad weather or shortages.
    - Keep ride prices lower during non-peak hours.
    - Let drivers choose when and where to work.

WHY THE U.S. CELEBRATES ITS INDEPENDENCE DAY ON JULY4-Indian Express Explained

History

Easy Explanation

What happened on July 4?

The **United States celebrates Independence Day on July 4** because that's the day in **1776** when the country's leaders officially **adopted the Declaration of Independence**, saying they were no longer under British rule.

Why did the colonies want independence?

For over 150 years, Britain ruled over American colonies. But the colonies had **no say in British decisions**. The British government passed laws that:

- **Increased taxes** (like the Sugar Act and Tea Act),
- **Reduced freedoms**, and
- Made people feel **they were being treated unfairly**.

People in the colonies started to protest. A major protest was the **Boston Tea Party** in 1773, where colonists threw British tea into the harbor to oppose the tax.

When peaceful talks with Britain failed, the **13 colonies started a war** in 1775 to fight for independence.

What is the Declaration of Independence?

On **July 4, 1776**, leaders from the colonies signed a formal document that declared:

- The colonies are **free and independent states**
- **All people are created equal** and have the right to **life, liberty, and the pursuit of happiness**

This document marked the **official break from British rule** and is why July 4 is celebrated.

Key Takeaways

1. **Independence Day** in the U.S. is celebrated on **July 4**, the day the **Declaration of Independence** was signed in 1776.
2. The **colonies were angry** because they had **no representation** in the British Parliament but were heavily taxed.
3. Protests like the **Boston Tea Party** showed growing resistance to British control.
4. A **war for independence** began in 1775 and ended in 1783, with help from France, Spain, and the Dutch.
5. The **Declaration of Independence** stated important ideas:

- All people are **equal**
- Everyone has the right to **life, liberty, and happiness**

6. Although the decision was made on **July 2**, the document was signed on **July 4**, which became the official holiday.

HOW TO MOVE MOUNTAINS-Indian Express Editorial

Sociology

Easy Explanation

Mizoram has become **India's first fully literate state**, meaning almost everyone above the age of seven can read and write. With **98.2% literacy**, it has even surpassed **Kerala**, long seen as the gold standard in human development.

What makes this achievement remarkable is:

- It wasn't just a government effort.
- It was **community-led**, with volunteers going to remote areas to teach people, driven by a local cultural value called **"tlawmngaihna"** — the idea of selfless service.

Unlike most Indian states, **Mizoram shows almost no rural-urban literacy gap**, and also performs well in:

- **Female workforce participation**
- **Sex ratio at birth**
- **Infant mortality**
- **School attendance**

This proves that **size and wealth aren't everything**. Even a small, less wealthy state can achieve a lot if its policies are **inclusive, accountable, and people-centered**.

Key Takeaways

1. Mizoram: First Fully Literate State in India

- **98.2% literacy** among population aged 7+.
- Higher than **national average** (80.9%) and **Kerala**.
- **Very small urban-rural literacy gap** (only 0.2%).

2. Community-Led Development

- Literacy success was not just due to government schemes.
- **Volunteers worked in tough terrains**, guided by *tlawmngaihna* (selfless help to others).
- Focus on **adult and functional literacy** — where India has struggled for decades.

3. Strong Performance in Other Social Indicators

- **Female workforce participation**: 3rd highest in India.
- **Sex ratio at birth**: 975 females/1000 males (better than national average of 929).
- **Infant mortality**: Lowest in Northeast.
- **School attendance**: Among highest in India (both primary & secondary).

4. Lesson for Bigger States

- Mizoram shows that **policy success isn't about money or size**, but about:
    - Intent
    - Accountability
    - Trust in local communities
- Development should be **inclusive**, focus on **human dignity**, and **empower the marginalized**.

CLOSING IN ON TB-Indian Express Editorial

Science

Easy Explanation

Prime Minister Narendra Modi recently reviewed India's fight against **tuberculosis (TB)**. Under the **National Tuberculosis Elimination Programme (NTEP)**, India has made strong progress, reducing TB cases faster than the global average. But a major challenge remains: **millions of TB patients are still not diagnosed or reported**, especially those who have **no symptoms** (subclinical TB).

To tackle this, India is using **new technologies** like AI-based chest X-rays and simpler testing tools like **tongue/nasal swabs**. These methods help identify hidden TB cases early and at lower cost.

India is also **investing in TB vaccine development**, learning from its COVID vaccine experience. Alongside, the government is supporting patients through better nutrition and customized care based on how severe their illness is.

Key Takeaways

1. India's TB Progress

- Global TB incidence fell by **8.3% (2015–2023)**; India achieved a **17.7% reduction**.

- Reflects success of the **NTEP** and intensified awareness campaigns.

2. Diagnostic Gap

- In 2023, **2.7 million people** worldwide with TB were undiagnosed or unreported.

- **Subclinical TB** (no visible symptoms) may account for **~50% of TB cases** in high-burden countries like India.

3. New Screening Approaches

- **100-day TB Mukt Bharat campaign** screened people without symptoms.

- Found **2.85 lakh asymptomatic TB cases** out of 7.19 lakh detected — a huge number that would have been missed otherwise.

- Use of **portable chest X-rays** with **AI assistance** has shown promising results.

4. Innovative Testing Tools

- **Non-invasive tests** (e.g., tongue/nasal swabs) and **open PCR platforms** make testing easier and cheaper.

- Being piloted in India with support from **ICMR**.

5. TB Vaccines in Development

- India is using its **COVID vaccine success model** (fast trials, global collaboration).

- **mRNA TB vaccine** in early stage; others in clinical trials.

- India has the **capacity to lead TB vaccine production** globally.

6. Better Support for Patients

- **Nutrition support doubled** under **Nikshay Poshan Yojana**.

- **Tailored treatment plans** based on severity (differentiated care models).

- Aim: **Bring TB deaths as close to zero as possible**.

7. Global Impact & Leadership

- India is seen as a leader in TB elimination.

- With continued **political will, innovation, and public participation**, India could become a **model country** in ending TB.

THE SCAMMER'S TRAIL-Indian Express Editorial

Economy

Easy Explanation

India is witnessing a **rapid rise in digital scams**, especially a new type called **"digital arrest" scams**. In these frauds, scammers **pretend to be officials** from the police, CBI, or Income Tax and **intimidate victims over video calls**, tricking them into transferring money.

These scams have affected **ordinary citizens and professionals alike**, with **huge financial losses**. Money is often quickly moved between **multiple fake bank accounts**, sometimes even used to **buy cryptocurrency**. Victims rarely get their money back.

Despite **some awareness efforts** by banks, RBI, and even PM Modi, more **urgent and systemic actions** are needed to fight this growing threat. These include **better KYC checks**, **flagging suspicious transactions**, and **faster investigations**.

Key Takeaways

1. Sharp Rise in Cases

- Digital arrest scams **tripled**:
    - From **39,925 cases in 2022**
    - To **1.23 lakh in 2024**
- Losses rose from **₹91 crore to ₹1,935 crore**

2. Modus Operandi (How It Works)

- Scammers **pose as law enforcement** officers.

- Victims are **intimidated over fake video interrogations**.

- Victims are **tricked into transferring money** to fake or "mule" bank accounts.

3. Money Trail & Difficulty of Recovery

- Funds are **rapidly transferred** across multiple accounts.
- In some cases, stolen money is **converted into cryptocurrency**.
- **Recoveries are minimal**:
    - A retired IAF officer lost ₹1.59 crore — recovered only ₹16.1 lakh.
    - A nurse lost ₹83 lakh — **no recovery** yet.

4. Warnings & Official Response

- PM Modi warned about such scams on **Mann Ki Baat (Oct 2024)**.
- RBI and banks have **issued alerts and run awareness campaigns**.
- Still, awareness is **not enough** — more needs to be done.

5. Recommendations for Authorities & Banks

- **Speed up investigations** and flag suspicious activity quickly.
- **Tighten KYC norms** — many mule accounts had **fake addresses**.
- Example: **1,960 transactions in a single account in one day** — must be flagged.
- Strengthen **monitoring systems** to trace and stop fraud in real-time.

T.N.'s health sector: feats and challenges-The Hindu text and Context

Sociology

Easy Explanation

Tamil Nadu's Public Health Success

Tamil Nadu has long been one of India's best-performing states in healthcare. It has over **11,000 government health institutions**, and many **flagship schemes** that focus on:

- Maternal and child health
- Control of infectious diseases

- Management of non-communicable diseases like diabetes and hypertension

A key programme, **Makkalai Thedi Maruthuvam (MTM)**, brings medical care, including medicine delivery and health checkups, **directly to people's homes**.

Other important schemes include:

- **Dr. Muthulakshmi Reddy Maternity Benefit Scheme** – financial and nutrition support for pregnant women
- **Chief Minister's Comprehensive Health Insurance Scheme** – covers major treatments for the poor
- **Transplant Authority** – manages organ donation and allocation
- **Medical Services Corporation** – ensures steady supply of medicines to hospitals

Improvements Seen

- **Maternal deaths** dropped from 45.5 to 39.4 per 1 lakh live births
- **Infant mortality** dropped from 8.2 to 7.7 per 1,000 live births
- **Under-five mortality** also fell
- MTM scheme helped control **blood pressure and sugar levels** among patients

Current Challenges

Despite this success, the system is under stress:

- **Many health worker posts are vacant** — e.g., over 2,000 Village Health Nurse posts and 1,200 Auxiliary Nurse Midwife posts.
- **Each nurse is handling work for 2–3 villages** instead of one, affecting quality of care.
- **Shortage of specialists** in key areas like heart and vascular surgery.
- **Existing doctors and nurses are overburdened**, and some oppose new public-private partnerships.

- There's been **no major increase in staff** despite a rise in patient load at government hospitals.

Key Takeaways

1. Strong Points

- Tamil Nadu has a **well-established public health system**.
- Successful schemes like **MTM** take health services to people's homes.
- Focused efforts have **reduced maternal and infant deaths**.
- Health insurance and maternity benefit schemes improve access for poor and vulnerable groups.

2. MTM Scheme Achievements

- Blood pressure control in patients rose from **7.3% to 17%**.
- Blood sugar control improved from **10.8% to 16.7%**.

3. Workforce Crisis

- **Major staff shortages** across levels.
- **Nurses and doctors are overworked**.
- **Specialist shortage** especially in super-speciality areas.
- **Vacancies delayed** due to legal and policy issues.
- Proposals like **contract-based hiring** and **private partnerships** face pushback.

4. The Way Ahead

- Addressing **human resource gaps** is urgent.
- Without enough trained staff, even a strong system can **struggle with quality care and trust**.

Can the Supreme Court halt an Act passed by a State?-The Hindu Text and Context

Polity

Easy Explanation

What was the issue?

In **2011**, the **Supreme Court (SC)** ordered the **Chhattisgarh government** to stop using **Special Police Officers (SPOs)** in anti-Maoist operations.

The Court said:

- SPOs were **not trained or paid enough**

- Their use violated **Article 14** (right to equality) and **Article 21** (right to life)

What did the state do after the SC order?

Chhattisgarh later passed a law called the **Chhattisgarh Auxiliary Armed Police Forces Act, 2011**.

- It allowed a new **auxiliary police force** to support regular police against Maoist violence.

- It said these recruits would be **better trained** and **not sent to the frontlines**.

- A **screening process** and **minimum 6 months of training** were made mandatory.

Why was a contempt case filed?

Some people argued that passing this new law was a way to **ignore the SC's 2011 order**, and accused the state of **contempt of court**.

What did the Supreme Court decide?

In **2024**, the SC **rejected the contempt petition**, saying:

- The state had **followed the earlier order** and submitted compliance reports.

- A **legislature has full authority to pass laws** unless they are **unconstitutional**.

- Passing a law—even after a court ruling—is **not contempt** unless the law **violates the Constitution**.

Key Takeaways

1. **SC's 2011 order** stopped Chhattisgarh from using poorly trained SPOs in anti-Maoist actions.

2. Chhattisgarh later passed a new law to create a **better-trained auxiliary force**, trying to meet the Court's concerns.

3. Petitioners claimed the law went against the SC's ruling and filed a **contempt case**.

4. The SC **dismissed the contempt case** in 2024, stating:

- Passing a law is **not contempt** of court.

- **Courts cannot strike down a law** unless it violates:

  - The Constitution (e.g. fundamental rights)

  - The division of powers between Centre and State (legislative competence)

5. This case reinforces the **doctrine of separation of powers** — **courts interpret laws**, but **legislatures can make new ones**, even after a court ruling.

[Endocrine disruptors in plastic waste: a new public health threat-The Hindu Science]

Science

Easy Explanation

Plastic has become a major part of modern life, but it's now causing serious **health risks**. Tiny plastic particles (microplastics) and chemicals in plastics called **endocrine-disrupting chemicals (EDCs)** are entering the human body through air, food, and water.

What are EDCs?

EDCs are chemicals in plastics that **disrupt hormones** in the body, like estrogen, testosterone, and thyroid hormones. They are found in:

- Water bottles (Bisphenol A/BPA, BPS)

- Food packaging, cosmetics (Phthalates)

- Non-stick cookware (PFAS)

How do they affect us?

- They **mimic or block natural hormones**, disrupting reproduction, growth, and metabolism.

- Studies show links to:

  - Low sperm count, reduced egg quality, and miscarriages

  - Early puberty, PCOS, endometriosis

- Cancers (breast, prostate, uterine, testicular)
- Obesity, diabetes, and thyroid disease

What's the situation in India?

- India is the **world's largest generator of plastic waste**.
- Microplastics have been found in **blood, semen, breast milk, placentas, and lungs**.
- In cities like Mumbai and Nagpur, people are exposed daily through **air, food, and water**.
- A decline in **sperm count** and rise in **childhood health issues** (early puberty, learning disorders) is being observed.
- Despite policies like the **Plastic Waste Management Rules**, **enforcement is weak**.

Key Takeaways

1. **Microplastics are now in human bodies** — in blood, organs, and reproductive fluids.
2. **EDCs in plastics** (like BPA, phthalates, PFAS) **disrupt hormone systems** and are linked to infertility, miscarriages, early puberty, and cancers.
3. **India is at high risk** due to massive plastic waste generation and poor waste management.
4. **Children and the poor are most vulnerable**, especially those near dumping sites or working in informal waste recycling.
5. Health costs of plastic pollution in India are estimated at **₹25,000 crore/year**; globally, it's over **$250 billion**.
6. **Solutions needed:**
    - Better regulation and enforcement of plastic policies

- **Biomonitoring** (testing EDC levels in blood, urine)
- Public education on **safe alternatives** (glass, stainless steel)
- **Segregation and proper disposal** of plastic waste
- Investment in **non-toxic biodegradable materials**

Opening new doors for Parliament's library service-The Hindu Editorial

Polity

Easy Explanation

Parliament in India is not just a space for political debate; it's where **laws are made**, **government is questioned**, and **policies are discussed**. For MPs (Members of Parliament) to make well-informed decisions, they need **high-quality research and data**.

India's **Parliament Library** and its associated service **LARRDIS** (Library and Reference, Research, Documentation and Information Service) is a strong support system. It offers access to speeches, data, reports, and more. However, **most MPs don't use it effectively**, either due to lack of awareness or dependence on political aides or external advisors.

In contrast, other countries have **advanced parliamentary research systems** that collaborate with universities, think tanks, and experts to provide **in-depth policy research and forecasting**. These models could inspire India to **upgrade LARRDIS** into a **modern, proactive research hub**.

Key Takeaways

1. What is LARRDIS?

- It is Parliament's research and library service.
- Helps MPs with **data, reports, speeches, and past records**.
- Service is **digitised** and quick—but largely **reactive**, not proactive.

2. What's the Problem?

- Only a small number of MPs (40–50 out of 800) have **LAMP Fellows** (research assistants).
- Many MPs depend on **party-provided talking points** or aides, leading to **low-quality debates**.
- LARRDIS works in a **silo**—with few external partnerships or advanced research inputs.
- It is underutilised, especially for **policy forecasting and complex analysis**.

3. What Should Be Done?

- LARRDIS must evolve into a **forward-looking research unit**.
- Needs to partner with **top universities, think tanks, and global institutions**.
- Should offer **technical papers, policy briefs, and trend analysis** proactively.
- Should define clear **mandates, timelines, and user protocols**.

4. Global Models to Learn From:

- **European Union (EPRS):** Tracks global trends, publishes cost-benefit reports.
- **Argentina (OCAL):** Connects Parliament with scientists and citizens.
- **France, Mexico, Egypt, Sweden:** All have research teams, scholars, and collaboration systems inside Parliament.

5. Why It Matters?

- Strong research helps MPs make **informed laws**.
- Prevents **misguided or poorly planned policies**.
- Enhances **citizen trust** in Parliament.
- Bridges the **information gap** between the legislature and the executive.

Is U.S. imperialism a threat to the world?-The Hindu Editorial

International relations

Easy Explanation

The article is a debate on whether **U.S. foreign policy — especially under Donald Trump — is imperialist** and harmful to global peace. It points to incidents like **attacks on Iran's nuclear sites**, past invasions (Iraq, Afghanistan), and rising tension with **China**, calling into question the U.S.'s role as a global power.

Two perspectives are explored:

- **Prakash Karat** (Left political leader): strongly critical of U.S. imperialism and warns about India aligning too closely with it.

- **Happymon Jacob** (foreign policy expert): more nuanced, acknowledging U.S. excesses but also emphasizing realpolitik (practical needs of national security).

They both agree:

- U.S. dominance is **declining**.
- **China's rise** is challenging U.S. hegemony.
- India's role in a **multipolar world** is getting complicated due to growing alignment with the U.S.

Key Takeaways

1. U.S. Actions Are Increasingly Imperialistic

- **Airstrikes on Iran** and past invasions (Iraq, Afghanistan) show **disregard for international law**.
- U.S. uses its power unilaterally to serve its interests.
- Trump's "**America First**" policy squeezes even U.S. allies.

2. U.S. vs China – The New Cold War

- The U.S. sees **China's economic and technological rise** as a major threat.
- Trade wars and military focus in the **Indo-Pacific** show this rivalry.
- Both Karat and Jacob believe this bipolar tension will intensify.

3. Impact on Regional Powers like India

- Bipolarity (U.S. vs China) leaves **less room for middle powers** (India, Brazil, South Africa) to act independently.
- India's close ties with U.S. (e.g., through **Quad**) may limit its role in **Global South** or **BRICS**.
- India didn't condemn U.S./Israel strikes on Iran — seen as drifting from **strategic autonomy**.

4. Risks for India

- **Aligning too much with the U.S.** can harm India's independent foreign policy.
- **In case of conflict (like with China or Pakistan)**, it's unclear who will support India.

- Despite close ties, U.S. still treats India like it did Pakistan — helpful but not trustworthy in crisis.

5. Global South Needs to Unite

- Multilateral institutions (like UN) are failing; **Global South** should form **stronger coalitions**.
- Issues like **trade, debt, climate, security** must be addressed together.
- India should lead or at least **participate more assertively** in these platforms.

5th July 2025

[Delhi's fuel ban for old vehicles: What does the law say?-Indian Express Explained]

Environment

Easy Explanation:

Delhi has started **banning petrol and diesel for old vehicles** to fight air pollution. As of **July 1, 2025**:

- Diesel vehicles **over 10 years old**
- Petrol vehicles **over 15 years old**
  can't get fuel in Delhi.

This rule is based on court orders and environmental laws. Cameras at petrol pumps scan number plates to identify old vehicles and **stop them from getting fuel**. The idea is to slowly remove these polluting vehicles from the roads.

However, Delhi's government says there are **technical problems** in enforcing this rule — cameras aren't working properly, and some old vehicles aren't getting detected. People might also go to nearby areas to buy fuel, bypassing the rule.

Key Takeaways:

1. **What is the Rule?**
    - From **July 1**, Delhi bans fuel for:
        - Diesel vehicles older than 10 years
        - Petrol vehicles older than 15 years
2. **Why the Ban?**

- Old vehicles cause **high pollution**
- Newer BS-VI vehicles are **much cleaner**

3. **How is it Enforced?**
   - Cameras at 498 fuel stations scan number plates
   - Vehicles over the age limit are denied fuel and may be seized
4. **Legal Support**
   - Backed by 2015 NGT and 2018 Supreme Court rulings
   - Rules say such vehicles must be **scrapped within 180 days**
5. **Challenges in Implementation**
   - **Camera issues**, faulty sensors, and **database mismatch**
   - Owners may get fuel from nearby NCR districts
6. **How Many Vehicles Affected?**
   - Delhi: ~62 lakh old vehicles
   - NCR states: ~46 lakh more
7. **Will This Fix Pollution?**
   - Not alone. Experts say we also need:

- Better emission norms
- Strict PUC checks
- Improved public transport

How astronauts feast on ISS-Indian Express Explained

Science and technology

Easy Explanation:

Indian astronaut **Shubhanshu Shukla** shared Indian treats like *gajar ka halwa* and *aamras* with fellow astronauts on the **International Space Station (ISS)**. But eating in space isn't easy — **zero gravity** means food floats, crumbs can be dangerous, and everything has to be tightly sealed and carefully managed.

Astronauts eat **dehydrated food** that they mix with hot water, and they strap themselves in while eating so they don't float away. Meals are tasty and planned months in advance with the help of nutritionists.

Even waste (like urine and faeces) is managed with special toilets and **recycling systems**. In fact, astronauts drink water that's purified from recycled urine!

Scientists are also working on **growing food in space**, since long missions to places like the Moon or Mars will need **sustainable food sources**.

Key Takeaways:

1. Eating in Space

- Astronauts eat **packaged, dehydrated food**, not fresh meals.
- Food is rehydrated by injecting hot water into the pouch.
- Shukla carried Indian dishes made by **ISRO and DRDO**.

2. Challenges of Zero Gravity

- Food floats, so it must be tightly sealed.
- Crumbs can harm equipment or cause breathing issues.
- Astronauts secure themselves while eating, and use Velcro to hold trays and utensils.

3. Meal Planning and Nutrition

- Menus are chosen months in advance.
- Nutritionists ensure proper intake of calcium, and lower sodium and vitamin D to maintain bone health.
- Salt and pepper are provided in liquid form to avoid floating particles.

4. Waste Management in Space

- Urine is collected via suction and **recycled into drinking water**.
- Defecation uses special suction toilets; astronauts must strap in.
- Solid waste is returned to Earth in cargo vehicles or burned during re-entry.

5. Growing Food in Space

- Scientists are experimenting with **growing crops in space**.
- Crops like potatoes, wheat, spinach, and tomatoes show promise.
- ISRO is conducting plant and **microalgae** experiments during Shukla's mission.
- Microalgae could serve as food, fuel, or for life support systems.

How Ramleela is an enduring representation of'Indianness'inTrinidad-Indian Express Explained

Art and Culture

Easy Explanation:

In Trinidad and Tobago, **Ramleela** (the dramatic retelling of Lord Ram's story from the *Ramcharitmanas*) is more than a religious performance — it is a **deep cultural connection to India** for people of Indian origin.

In the 19th century, many Indians were taken to Trinidad as **indentured labourers** by British colonial rulers. Though they left their homeland, they carried their **language, customs, and especially Ramleela** with them. Over the decades, Ramleela became a **symbol of Indian identity** in Trinidad.

While the tradition declined for a while due to urbanisation and Western influence, it has since been **revived with innovations** — performances are now often in English, and are more inclusive and youth-friendly. Yet, at its core, Ramleela in Trinidad still revolves around the **values and stories of the Ramcharitmanas**.

Key Takeaways:

1. Historical Background

- Between the mid-1800s and early 1900s, many Indians (mainly from Bihar and eastern UP) were taken to **Trinidad as indentured labourers**.
- They faced harsh working conditions but kept their **religion and cultural traditions** alive.

2. Cultural Legacy

- **Ramleela**, based on Tulsidas's *Ramcharitmanas*, was brought by these workers and became a major cultural event.
- It became a **community tradition**, involving acting, stage-building, and cooking, deeply rooted in **Bhojpuri-speaking village life**.

3. Challenges and Decline

- By the late 19th century, interest in Ramleela declined:
    - Due to **spread of English education**
    - Influence of **Western culture**
    - Shift from rural to **urban life**

4. Revival and Innovation

- In recent decades, Ramleela has been **revived with changes**:
    - Dialogue in **English** to reach younger people
    - **More inclusive** participation across castes and genders
    - Use of **modern stage techniques**
- It enjoys strong **support from Indian-origin leaders**, such as former PM Kamla Persad-Bissessar.

5. Symbol of Identity

- Ramleela continues to be the **strongest symbol of Indian roots** in Trinidad.
- Even if people don't understand Hindi, the **moral teachings** of Ram's story are still absorbed.

HAM RADIO-Indian Express Explained

Science

Easy Explanation:

Indian astronaut **Shubhanshu Shukla**, currently on the **International Space Station (ISS)**, recently spoke with students in India using **ham radio** — a special type of radio communication system. The interaction was organized by **ISRO's UR Rao Satellite Centre** in Bengaluru.

Ham radio, also called **amateur radio**, uses radio waves for **personal, recreational, and emergency communication**. It's reliable even in tough situations, like during natural disasters, and it's been used in space since the 1980s.

This type of radio lets astronauts on the ISS connect with people on Earth, often to **inspire students and promote science education**.

Key Takeaways:

1. What is Ham Radio?

- A licensed, two-way radio communication system used for:

- **Personal interest**
- **Learning and experimentation**
- **Emergency communication**

- Anyone **above age 12 in India** can apply for a license.
- Requires: **Transceiver**, **antenna**, and **specific frequency**.
- Licensed by India's **Ministry of Electronics and IT**.

2. Why is it Called "Ham"?

- Originally used as an insult for clumsy operators.
- The amateur radio community eventually **adopted the term**, and it lost its negative meaning.

3. Ham Radio in Space

- First used in **1983** on NASA's **space shuttle Columbia**.
- Since 2000, the ISS has had a dedicated ham radio system, called **ARISS (Amateur Radio on the International Space Station)**.
- Astronauts use it to:
  - Make **radio calls** worldwide
  - Interact with **students and educators**
  - Support **STEM learning**

4. How Does It Work from ISS?

- The ISS orbits Earth quickly — so there's usually a **9-minute window** to establish contact with ham radio on the ground.

5. Why Is Ham Radio Still Useful Today?

- Despite modern tech, it remains **highly reliable**, especially:

- During **wars**
- In **natural disasters** (earthquakes, floods, tsunamis)

- In India, ham radio helped during:
  - **Bhuj earthquake (2001)**
  - **Tsunami (2004)**
  - **Uttarakhand floods (2013)**

It will take a city-Indian Express Editorial

sociology

Easy Explanation:

India's future as a **$30+ trillion economy by 2047** depends heavily on **urban growth**, especially from **15 key cities** like Mumbai, Delhi, Bengaluru, and Chennai. These cities already produce **30% of the nation's GDP**. However, they are struggling with **pollution, poor planning, slums, traffic, and bad internet**.

If India wants to unlock its urban potential, it must **transform these cities** — by improving air and water quality, waste management, transport, housing, and digital connectivity. Cities like **Indore** have already shown successful models. What's needed is **decentralised planning**, more investment, and better governance to make these urban hubs **livable, efficient, and globally competitive**.

Key Takeaways:

1. 15 Cities as Economic Engines

- Cities like Mumbai, Delhi, Bengaluru, etc., contribute **30% of India's GDP**.
- They can **add 1.5% extra annual growth** if empowered properly.

2. Air Pollution Needs Urgent Fix

- **42 of the 50 most polluted cities** are in India.
- Causes: vehicles, dust from construction, and burning biomass.
- **Solutions**: Electrify public transport, enforce dust control, city-level competition for clean air via Urban Challenge Fund.

3. Solid Waste Crisis

- Cities produce **1.5 lakh tonnes/day**; only **25% is processed properly**.

- Need for: Strong infrastructure, trained staff, performance-based accountability.

- Potential value: A circular waste system could unlock **$73.5 trillion/year by 2030**.

4. Water Scarcity

- **40% of population may face water shortage by 2030**.

- Cities lose 40–50% of piped water due to leakage.

- Indore has emerged as **India's first "water-plus" city** through smart solutions like rainwater harvesting and wastewater reuse.

5. Affordable Housing Shortage

- India needs **31 million homes by 2030**.

- Informal settlements are growing.

- Need for: Increased Floor Space Index (FSI), vertical development, and density incentives.

6. Traffic & Congestion

- Average city resident spends **1.5–2 hours/day in traffic**.

- Need for: Better public transport, **AI-based traffic control**, and congestion pricing.

7. Digital Infrastructure Lag

- India's **internet speed is ~100 Mbps** vs. **1 Gbps in global cities**.

- Solution: Lower spectrum prices, expand 4G/5G and fiber optic networks.

8. Urban Planning & Finance

- India has **1 planner per 1,00,000 people** (vs. 1 per 5,000–10,000 in developed countries).

- Many cities have **no masterplans**.

- Reforms needed:

    - Implement **74th Constitutional Amendment** for decentralisation.

    - Increase **property tax collection** (currently <0.2% of GDP).

- Use **land value capture**, digitise land records, improve governance.

9. Heritage and Innovation

- Cities must combine **economic dynamism** with **walkable heritage zones** and **urban culture**.
- Government and private sector must work together to deliver seamless urban experiences.

LIKE SALT TO WOUND-Indian Express Editorial

Science

Easy Explanation:

The US is pushing India to **open its market** to genetically modified (GM) **soyabean and maize**. These crops are **big business** for the US, and **politically important** for Donald Trump, especially with elections approaching. Many American farmers who grow these crops are his key supporters.

For India, the issue is **not just about trade**. The problem is that **American farmers use GM technology** to get **much higher crop yields**, making their produce **cheaper and more competitive**. Indian farmers, on the other hand, are **not allowed to use the same GM technology** because of domestic political resistance.

As a result, Indian farmers are being **forced to compete with superior foreign produce** without having access to the tools to level the playing field. The editorial argues that denying technology in the name of self-reliance (*Swadeshi*) is **hurting Indian agriculture**, just like it did with **cotton** in the past.

Key Takeaways:

1. What's Happening?

- The **Trump administration** is pressuring India to allow imports of **GM soyabean and maize**.
- These crops are a **major export sector** for the US.

2. Why It Matters to the US?

- US exports:
  - Soyabean (raw): $24.5 billion
  - Maize: $13.7 billion
  - Soy meal, ethanol, and by-products add more value.
- Trump wants to **please voters in the US "cornbelt"**, where these crops are grown.

3. India's Dilemma

- **Indian soyabean yields are 3.5x lower** than US yields due to lack of GM tech.
- India imports ~**5 million tonnes of soyabean oil** yearly.

- It would be **more efficient to import soyabean** (whole) and process it in India, but that would hit local farmers hard.

4. GM Technology Gap

- **US farmers use GM crops** that resist insects and herbicides, leading to **better pest control and higher yields**.
- **Indian farmers don't have access to this tech**, putting them at a **disadvantage**.
- **Government policies block GM crops** in the name of "Swadeshi" (self-reliance).

5. Policy Failure

- India used to be a **net exporter of cotton**, but blocking GM tech led it to become an **importer**.
- A similar fate may occur with soyabean and maize if **policy doesn't adapt**.

6. The Bigger Picture

- Demand for **animal feed and biofuels** is growing in India.
- Imports of **maize and soy meal** will be necessary, but **without supporting local farmers**, India risks hurting its own agriculture base.

6th July 2025

What are the pros and cons of the ELI scheme?: TH FAQ

Economy

EASY EXPLANATION

The Indian government has announced a new scheme called the **Employment-Linked Incentive (ELI)** with a big budget of ₹99,446 crore. The goal is to **create jobs**, especially in **manufacturing**, and help first-time job seekers. This scheme is part of a larger package that also includes internships and skill-building initiatives for youth.

How does the scheme work?

- It will run from **August 1, 2025 to July 31, 2027**.
- It aims to **create over 3.5 crore jobs**.
- **New employees** earning up to ₹1 lakh/month are eligible.
- They will receive **EPF (Provident Fund) support**: up to ₹15,000 split in two parts — one after 6 months of service, another after 12 months. This money will be **directly transferred to their bank accounts**.
- Some of this money will also be kept in a savings account, which they can withdraw later.
- **Companies registered with EPFO** will receive up to ₹3,000/month per new employee if they keep them for at least 6 months.
- For the **manufacturing sector**, this support may continue for 4 years.

What do employers think?

Most industry leaders are happy with the scheme. They believe it will:

- Encourage hiring.

- Help small and medium companies if properly implemented.
  But they also ask for **simple rules**, **support for very small companies**, and **regular payments** linked to actual salaries.

What do trade unions say?

Most unions, except for the RSS-backed Bharatiya Mazdoor Sangh, are critical. They fear:

- Workers' savings may be used to benefit employers.
- There's no guarantee that jobs will be secure or high-quality.
- A similar past scheme (Production Linked Incentive 2020) was **misused**, with money going to big companies.
- EPFO's role is also being questioned. It is meant to **safeguard workers' savings**, not **run job schemes**.

Main concern: The government must **ensure transparency**, **guard workers' funds**, and not repeat past mistakes. Also, rather than just giving incentives, many experts say the government should focus on **boosting the economy** so that natural job creation improves.

KEY TAKEAWAYS

About the ELI Scheme

- Announced by: **Union Cabinet**
- Budget: **₹99,446 crore**
- Timeline: **Aug 1, 2025 – July 31, 2027**
- Target: **Create 3.5 crore jobs**, especially in manufacturing

Benefits to Employees

- New employees earning up to ₹1 lakh/month eligible
- EPF wage benefit of **up to ₹15,000**, paid in two parts (after 6 & 12 months)
- Part of the incentive is **kept in savings**, accessible later

Benefits to Employers

- EPFO-registered firms get **₹3,000/month per new employee** (for 2 years)
- In **manufacturing**, incentive may extend to 4 years

Employer Reactions

- Welcomed the move, but asked for:
  - Simple structure
  - Inclusion of **small firms (under 20 workers)**
  - Direct monthly subsidies linked to payroll

Trade Union Reactions

- **BMS (RSS-linked)** supported it with caution
- Other trade unions criticized:
  - Fear misuse like earlier PLI scheme
  - Concerned EPFO funds will be misused
  - Want **new, dedicated agency** to run the scheme

Concerns Raised

- **EPFO's role**: It's a savings manager, not a job-creating agency
- **Transparency** needed in fund flow to employers/employees
- **Need to fix economic slowdown** and boost **workers' purchasing power** for real employment growth

Bottom Line

- The scheme has **potential** but must avoid past mistakes, be **inclusive**, and **strengthen job quality**, not just numbers.

Why is Maharashtra debating over Hindi?:TH FAQ

Sociology

EASY EXPLANATION

Recently, the Maharashtra government tried to make **Hindi compulsory as a third language** in all **Marathi and English medium State Board schools** from **Class 1 to 5**. This was part of implementing the **New Education Policy (NEP) 2020**.

Earlier, students in these schools were taught only two languages till Class 4. Hindi used to be added as a third language **only in Class 5**. The new rule changed this and made Hindi mandatory from Class 1 itself. However, this decision **faced massive protests**.

People opposed it for two main reasons:

1. **Children should not be burdened** with learning three languages so early.

2. **Hindi should not be forced** on non-Hindi-speaking states like Maharashtra.

Writers, teachers, activists, and political leaders said this was not just about education, but about **pushing Hindi at the cost of Marathi**. Many saw it as an attack on **Maharashtra's language and cultural identity**.

Due to the strong reaction, the government **revised the rule** and said:

- Hindi would no longer be mandatory.

- Students could choose another Indian language, but only if **at least 20 students** in a school opt for it.

- A teacher or online course would be arranged for that language.

But this revised rule also faced criticism. People said it was still a way to **indirectly push Hindi**, as the 20-student condition made it harder to choose other languages.

This issue has also affected **politics** in the state:

- Raj Thackeray and Uddhav Thackeray came together after 20 years to **oppose the Hindi imposition**.

- Deputy CM Ajit Pawar also spoke against it.

- The ruling alliance is now facing **internal tension** as state elections approach.

Finally, the government **scrapped both orders** and formed a committee under economist **Dr. Narendra Jadhav** to study the three-language policy. But critics say he has **no expertise in school education**, and many want the whole policy to be dropped completely.

KEY TAKEAWAYS

Background

- Maharashtra government made **Hindi mandatory** as the **third language** from Class 1 to 5.
- Earlier, students in English and Marathi medium schools learned a third language **only from Class 5**.

Reason Behind the Move

- Cited provisions of the **National Education Policy (NEP) 2020**.
- Introduced through a government resolution (GR) on **April 16, 2025**.

Opposition and Criticism

- **Two main objections**:
  - Burden of three languages on young students.
  - **Forced imposition of Hindi**, threatening **Marathi identity**.
- Opposition from:
  - Writers, teachers, civil society, academics, and political leaders.
  - Even the **state's language committee** opposed the decision.
- Seen as a move toward **"cultural hegemony"** and centralisation.

Government's Revised GR (June 17)

- Hindi made **optional** instead of mandatory.
- Students can choose another Indian language if **20 students opt together**.
- Government will arrange a teacher or online facility.
- Still faced backlash for **pushing Hindi indirectly**.

Political Impact

- Boosted Raj Thackeray's **Marathi identity-based politics**.
- Led to **reunion of Raj and Uddhav Thackeray** for a joint protest.
- **Ajit Pawar** also expressed displeasure.
- Caused internal tensions in the ruling **Mahayuti alliance** ahead of local elections.

Current Status

- **Both orders (April 16 & June 17)** have been withdrawn.
- New **committee formed under Dr. Narendra Jadhav** to review the policy.
- Critics question his **lack of expertise** in school education.
- Opposition parties demand complete **scrapping of the three-language policy** in primary education.

Larger Issues at Play

- Debate reflects deeper concerns about **language politics**, **regional identity**, and **cultural federalism** in India.
- Highlights tensions between **central policy goals** and **state-level autonomy** in education.

On early earth, a little heat could have led to complex life: TH Science

Science

EASY EXPLANATION

Before life as we know it began, Earth only had basic molecules like amino acids, RNA, and DNA floating in water. These molecules needed to come together in one place to start doing complex things — like making proteins. But the big question is: **How did life actually start without a cell membrane or complex setup?**

A new study gives us a clue: **heat alone could have helped.** Scientists say that in early Earth, simple sources of heat — like warm volcanic rocks or hydrothermal cracks — may have acted like a **natural lab** for early life.

Here's how it worked in their experiment:

- They made a small, flat chamber between two sapphire plates.
- One plate was kept warm (40°C), the other cooler (27°C).
- This created a **temperature difference**, which made water move gently inside — warm water going up and cool water going down.

This slow water flow **pulled and trapped molecules** like DNA, RNA, and proteins toward the **bottom of the chamber**, concentrating them there — like a natural "cell" without a membrane.

They used a special mixture called **PURExpress**, which includes all the tools from bacteria needed to make proteins — but they diluted it so it wouldn't work normally. Then, they added a small piece of DNA that produces **green fluorescent protein (GFP)** — a protein that glows green under a microscope.

Here's what they found:

- In the warm-cool chamber, the ingredients got pulled to the bottom.
- Protein-making started only in that chamber — **not in the one without heat flow**.
- Molecules like magnesium, potassium, and phosphate also collected at the bottom.
- The glowing green GFP was found mostly at the bottom — **25 times more than the top**.

This showed that even without a real cell membrane, the setup worked like one — **letting useful stuff stay in and pushing waste out**.

Over time, such setups could have **helped form the first true cells**, with actual membranes and machinery. The study suggests that **life might have started with simple physics and heat**, not complex processes.

Experts say we may never know for sure how life began, but this shows that the origin **might not have been as complicated** as we think. Similar effects are even seen near underwater hydrothermal vents today.

KEY TAKEAWAYS

Context: The Beginning of Life

- Before real cells existed, organic molecules like RNA and proteins floated freely in water.
- A big mystery: How did these molecules come together to form life-like systems?

Main Discovery

- Scientists found that **simple heat**, like from volcanic rocks, could bring molecules together.
- A **temperature gradient** (hot on one side, cool on the other) causes:
    - Warm water to rise, cool water to sink — creating a loop.
    - Molecules to drift from warm to cool areas and gather at the bottom.

Experiment Setup

- A chamber 170 micrometres thick was made between two sapphire plates.
- Top plate: 40°C, Bottom plate: 27°C — creating a heat gradient.
- They added a diluted **PURExpress kit** (a bacterial protein-making system) and **GFP DNA** (glows green when active).

Findings

- In the heat-gradient chamber:
    - Protein synthesis (GFP) occurred — **not in the other chamber**.
    - Molecules like DNA, RNA building blocks, and amino acids **concentrated at the bottom**.
    - Key ions like:

        - Magnesium: 30× higher
        - Potassium: 7× higher
        - Phosphate: 70× higher
    - Over 95% of GFP stayed trapped — waste diffused out — **acting like a membrane**.

Significance

- The setup worked like a **proto-cell**, even without a real membrane.
- Suggests that **natural rock cracks with heat** might have helped spark the first life forms.

Expert Reactions

- Dr. Shashi Thutupalli: Interested but cautious — wants to check if such steady gradients exist in nature.
- Believes we may **never know exactly how life began**, but it could have started **simply**.

Supporting Research

- A March 2025 study found that **neutral water spray** creates charged droplets, triggering chemical reactions — showing that **simple natural processes can drive complex chemistry**.

Big Takeaway

- **Life might have started from basic physics and heat**, without needing complex machinery or design.
- A **natural rock crack with a temperature difference** might have been enough to concentrate life-building molecules and start protein synthesis — the first step toward life.

7th July 2025

WHY THE E.U. IS PLANNING TO ADD CARBON CREDITS TO ITS CLIMATE GOAL-Indian Express Explained

Environment

Easy Explanation:

The **EU wants to meet its 2040 climate goal** of cutting greenhouse gas emissions by **90% from 1990 levels**. But many countries feel this is **too difficult** to achieve through domestic cuts alone.

So, the EU is proposing to use **carbon credits** for the first time—this means countries can **fund green projects in developing countries** (like planting forests or switching to electric buses) and **count those emissions reductions** toward their own targets.

This helps the EU stick to its ambitious climate goal while making it easier politically and economically. However, experts warn that this may **undermine domestic climate action** if the credits are low-quality or fraudulent.

Key Takeaways:

What are Carbon Credits?

- Carbon credits involve paying for projects abroad that reduce CO2 emissions.

- Buyers get credit for those emission cuts toward their own climate goals.

What is the EU planning?

- The EU proposes allowing **up to 3%** of its 2040 emissions target to be met using **carbon credits** from other countries.

- Currently, EU countries must meet targets solely through domestic emission cuts.

Why the shift?

- Due to pressure from countries like **Germany and Poland**, which want a more flexible approach.

- This allows the EU to keep the 90% target while reducing the burden on local industries.

What are the concerns?

- Risk of **low-quality credits** that don't actually reduce emissions.

- May lead to **less investment in clean industries within the EU**.

- The EU previously banned international credits after a surge of cheap, ineffective ones crashed the carbon market.

How will the EU address risks?

- The EU says it will follow **UN rules for trading carbon credits**, including stricter quality standards.

Cost Implications:

- Costs are not fixed yet.

- Credit prices vary from **a few dollars to over $100 per tonne of CO2**.

- The EU would likely need to buy **at least 140 million tonnes of CO2 credits**, equivalent to the **Netherlands' total annual emissions**.

Why SEBI banned US-based Jane Street from Indian market-Indian Express Explained

Economy

Easy Explanation:

SEBI, India's market regulator, has **banned the US-based Jane Street Group** from trading in Indian securities markets. The reason? The firm used **manipulative trading strategies** in the **derivatives market** to unfairly boost its profits—profits that were later **sent out of India**.

Jane Street is a **proprietary trading firm**, meaning it uses its own money (not clients' funds) to trade and make profits. SEBI found that Jane Street was **influencing prices of index futures**, especially **Nifty and Bank Nifty**, by placing aggressive trades around market close—**a sensitive time when daily settlement prices are decided**. This allowed them to **manipulate closing prices** in their favor and make huge gains.

SEBI also found that **Jane Street misused a local Indian entity** to route certain trades in a way that **appeared compliant** with rules, but was actually a **well-coordinated manipulation**.

Key Takeaways:

1. What did Jane Street do wrong?

- Used **aggressive trading in derivatives**, especially near the market's closing time.

- **Manipulated prices** of index futures like Nifty and Bank Nifty.

- Placed large buy/sell orders to **artificially push prices**—a strategy known as **"marking the close."**

- Made trades that **looked scattered**, but were part of a **planned price manipulation** strategy.

2. How did they operate in India?

- Jane Street used both **cash and derivatives segments**.
- Since **foreign investors aren't allowed intra-day trading** in the cash market, Jane Street **routed those trades through its Indian arm**, JSI Investments Pvt Ltd.
- It continued manipulative trades in the **Futures & Options (F&O)** segment.

3. What profits were involved?

- During SEBI's review period, Jane Street's foreign portfolio investors (FPIs) booked **₹32,681 crore** in profits.
- SEBI has **impounded ₹4,843.57 crore** of these as **unlawful gains**.
- These profits were **much higher than the usual assets held** by Jane Street's FPIs in India, and much of the money was **repatriated abroad**.

4. What action has SEBI taken?

- **Banned Jane Street from Indian markets** for manipulation.
- **Seized illegal gains**.
- Raised broader questions about **oversight of foreign firms** and the **need for tighter safeguards**.

5. Why does this matter?

- SEBI's move **sends a strong signal**: foreign firms aren't above scrutiny.
- Raises awareness about **sophisticated algorithmic and high-frequency trading risks**.
- Sparks debate on whether SEBI **acted too late**, since concerns had been raised in **early 2024**.
- Highlights the **growing role of retail traders** (up from 2% in 2018 to 40% in 2025), and the **increasing complexity** of India's financial markets.

6. Broader Implications:

- Opens discussion on **proprietary trading regulation**.
- Could lead to **stronger rules and monitoring**.

- Experts say this will improve governance and market integrity in the long run.

A PHILOSOPHY OF CARE-Indian Express Editorial

Sociology

Easy Explanation:

India's healthcare system has seen major improvements since 2014, guided by the Modi government's philosophy of providing **affordable, accessible, and quality healthcare for all**. Key steps include strengthening infrastructure, expanding health services, using digital tools, increasing government spending, and reducing out-of-pocket costs for people. Programs like **Ayushman Bharat**, **National Health Mission (NHM)**, and **Mission Indradhanush** have helped reduce maternal and infant mortality, fight major diseases like TB and malaria, and provide free medicines, diagnostics, and dialysis. The government has also introduced new vaccines and boosted preventive care.

Key Takeaways:

- Since 2014, India's healthcare has shifted to a **comprehensive and preventive care model**.
- **National Health Mission (NHM)** played a key role in reducing maternal and child deaths and strengthening health systems.
- **Maternal mortality** declined by **86%**, and **infant mortality** by **73%** — better than global averages.
- Over **1.77 lakh Ayushman Arogya Mandirs** now provide primary healthcare across India.
- **eSanjeevani** and **Tele-MANAS** have made specialist consultations accessible remotely.
- India declared **polio-free in 2014**, eliminated **maternal/neonatal tetanus in 2015**, and **trachoma in 2024**.
- Major disease control success:
    - **Malaria** cases and deaths dropped by **over 80%** (2015–2023).
    - **Kala Azar** elimination target reached in 2023.
    - **TB incidence** down by **17.7%**, **mortality** by **21%**; missing TB cases fell from **15 lakh (2015)** to **1.2 lakh (2024)**.

- Over **28 crore screened for hypertension**, **27 crore for diabetes**, **27 crore for oral cancer**.
- **Mission Indradhanush** introduced **6 new vaccines** since 2014; digitised with the **U-WIN portal**.
- **Government health spending** rose from **1.13% to 1.84% of GDP** (2014–2022).
- **Out-of-pocket expenses** dropped from **62.6% to 39.4%**.
- **Free Drugs and Diagnostics Initiative** expanded to most states; includes **CT scans and tele-radiology**.
- **PM Dialysis Programme** benefited over **28 lakh patients**, saving **₹8,725 crore** in medical expenses.
- Emergency care via **National Ambulance Services** and **Mobile Medical Units** reached remote areas.
- **PM Ayushman Bharat Health Infrastructure Mission** (2021):
    - 18,802 Ayushman Arogya Mandirs
    - 602 Critical Care Hospital Blocks
    - 730 District Health Labs
- **5.23 lakh additional health workers** recruited, including **1.18 lakh Community Health Officers (CHOs)**.

How computers' 'listening' abilities are changing our relationship with the ocean

Science

Easy Explanation:

The ocean constantly communicates through waves, winds, currents, and changes in temperature and chemistry. For centuries, humans tried to understand these signals through observation and experience. Today, **computers—powered by AI and real-time data—are helping us 'listen' better**, revealing hidden patterns and predicting future changes in the ocean.

Using satellites, underwater sensors, and AI, computers now collect, analyze, and visualize vast amounts of ocean data. This lets us better understand ocean currents, forecast storms, track marine life, and protect

coastal ecosystems. But the real value lies not just in listening—it's in **how we respond to the insights gained**, especially in the face of climate change.

Key Takeaways:

1. How computers are 'listening' to the ocean:

- Computers analyze data from **satellites, buoys, and underwater vehicles**.
- They convert raw data—temperature, salinity, chlorophyll levels, etc.—into structured insights.
- This reveals hidden patterns like **eddies, algal blooms**, or **shifts in currents**.

2. Why this matters:

- The ocean is not still—it's a **dynamic system** influencing weather, climate, and marine ecosystems.
- **Mesoscale eddies**, large rotating bodies of water, are like underwater storms affecting heat and nutrient flow. Computers can detect and analyze them.

3. Role of AI:

- **Artificial Intelligence (AI)** models like deep learning and convolutional neural networks help identify complex patterns in ocean data.
- For example, satellite images are analyzed just like facial recognition software scans photos.

4. Visualization is critical:

- Dashboards, animated maps, and 3D models help scientists and policymakers **see** and understand ocean dynamics.
- Example: How warm eddies move or how salinity changes during monsoons.

5. Real-world applications:

- **Disaster preparedness**: Improved cyclone and storm surge forecasts.
- **Fisheries**: Better insights into fish migration.
- **Coastal planning**: Predicting erosion and flooding.
- **Conservation**: Tracking coral health and ocean pollution.

6. Need for collaboration:

- Oceans cross borders—so should **data sharing and research**.
- Collaboration between **marine scientists, computer experts, and visual designers** is essential.

- Investment in **open data systems and education** is needed to prepare the next generation.

7. The deeper message:

- Computers don't replace human curiosity—they **amplify** it.

- The real challenge is not just collecting data, but **responding to it wisely**, especially in an era of climate change.

Why are Bihar's electoral rolls being revised?-The Hindu Text and Context

Polity

Easy Explanation:

The **Election Commission of India (EC)** has started a **Special Intensive Revision (SIR)** of electoral rolls, beginning with **Bihar**, ahead of its 2025 Assembly elections. This is because, over the years, **urbanisation and migration** have led to **duplicate or outdated entries** in the voter lists.

This SIR is different from regular annual revisions. Every voter must now **submit a form**, and many will need to provide documents to prove their **age and place of birth**. This aims to **clean up the rolls**, ensuring that only eligible citizens can vote. However, there are **concerns about migrants, underprivileged citizens**, and the **exclusion of Aadhaar** as valid ID proof.

Key Takeaways:

1. What is an electoral roll and who prepares it?

- Article 324 empowers the EC to prepare electoral rolls.

- The RP Act, 1950, lays down that only **citizens aged 18+ and ordinarily resident** in a constituency can vote.

- Sections 16, 19, and 20 explain disqualification, age, and "ordinarily resident" status.

2. Why has a Special Intensive Revision (SIR) been launched?

- Due to **duplicate entries** caused by **migration and urbanisation** over 20 years.

- EC is constitutionally bound to ensure **only citizens** are listed.

- Bihar is the starting point since its Assembly elections are due in **November 2025**.

3. What's different in this SIR?

- All voters must **submit enumeration forms**.

- Those added **after 2003** must provide **documents for self and parents** to prove date and place of birth.

- **Aadhaar is not accepted** as valid proof.

4. Arguments in favor of SIR:

- The 2003 SIR was completed in **31 days without tech**—with technology, the process can be faster and better.

- Involves a **large manpower base**: 1 lakh BLOs, 4 lakh volunteers, and 1.5 lakh BLAs.

- Helps clean the rolls before elections.

5. Concerns raised against SIR:

- Around **8 crore voters** need to fill forms; **3 crore** must submit documents.

- Risk of excluding **migrants, poor, and students** due to document issues.

- Possibility of **errors and omissions** even with many field workers.

6. Issues with Aadhaar exclusion:

- **Proponents**: Aadhaar doesn't prove citizenship or birth; carries a disclaimer.

- **Opponents**: Aadhaar is widely used, especially by underprivileged groups; Form 6 under RER 1960 considers Aadhaar valid.

7. Migrant voters:

- EC's stance: Voters must register where they are **ordinarily resident** now.

- Critics: Migrants often **retain ties** to their native places; law allows those **temporarily absent** to vote from home constituencies.

- EC had also considered **remote voting options** for migrants as recently as **January 2023**.

8. Way forward:

- EC must ensure the process is **error-free** with active participation from BLOs and BLAs.

- During the **claims and objections** phase, tailor rules to avoid excluding **eligible citizens**.

- Consider **Aadhaar-based de-duplication** (consultation began in March 2025).

- Do not delete migrants hastily; like NRIs, **domestic migrants** should retain voting rights in their preferred constituency.

The 'Khelo Bharat Niti' as a beacon for Indian football-The Hindu Editorial

Governance

Easy Explanation:

The **Khelo Bharat Niti 2025**, approved on July 1, is a major step in India's goal to become a global sports leader. It focuses on using sports, especially football, as a tool for national development. The policy has a

five-pillar approach—improving international performance, using sports for inclusion, boosting the sports economy, promoting grassroots participation, and strengthening sports in education.

It also opens discussions on using **Overseas Citizens of India (OCI)** talent in the national team, though Indian law doesn't allow dual citizenship. The policy aims to find ways within the legal and FIFA framework.

The **Football for Schools** initiative is already helping kids play from the age of 8, with AIFF ensuring a smooth path from school-level football to the professional stage.

Key Takeaways:

- The **Khelo Bharat Niti 2025** is India's new national sports policy aimed at building a **Viksit Bharat** through sports.
- Focuses on **five pillars**: excellence, inclusion, economic growth, community participation, and education.
- Special emphasis on football's role in improving **India's global sporting status**.
- Mentions use of **diaspora (OCI) talent** for strengthening the national football team, though dual citizenship is still not allowed.
- **FIFA Football for Schools (F4S)** initiative brings football to over **1.53 lakh schools** and supports training from **age 8**.
- AIFF is aligning efforts with **FIFA and the Indian government** to develop football at all levels.
- Policy aligns the **National Education Policy (NEP)** with sports for better infrastructure and training in schools.
- India is preparing to host international events, including expressing interest in the **2036 Olympics**.

Common goals-The Hindu Editorial

International relations

Easy Explanation:

Prime Minister Narendra Modi recently visited **Ghana**, **Trinidad and Tobago**, and **Argentina** on his way to the **BRICS summit in Brazil**, with a focus on building stronger ties with countries of the **Global South**. These visits focused on areas like **pharmaceuticals, digital technology, food security, and critical minerals**.

India upgraded its partnership with Ghana, offered pharma support to Trinidad, and discussed cooperation on minerals and energy with Argentina. Modi also addressed the Indian diaspora, especially in Trinidad, highlighting historical connections. The tour reflects India's broader aim to build a **fairer and more equal global system** by promoting **South-South cooperation** and working together with other developing nations.

Key Takeaways:

- PM Modi visited **Ghana, Trinidad & Tobago, and Argentina** en route to the **BRICS summit in Brazil**.
- Focus areas: **pharmaceuticals, vaccines, digital tech, food security, critical minerals**.
- India-Ghana ties were upgraded to a **Comprehensive Partnership**; support offered to make Ghana a **vaccine hub**.
- In **Trinidad**, India signed a major **MoU on Indian pharmacopeia** to improve access to affordable medicines.
- With **Argentina**, talks focused on **critical minerals, shale gas, oil**; India promoted its **pharma industry**.
- The visits reflect India's effort to strengthen relations with the **Global South** and promote **South-South cooperation**.
- India is offering **low-cost solutions** and promoting initiatives like the **Coalition for Disaster Resilient Infrastructure (CDRI)**.
- Modi addressed the **Indian diaspora**, calling them India's "pride"; highlighted historical migration and ancestry in Trinidad.
- India shares **colonial history** with these nations, which links to **Non-Aligned Movement** and **shared global aspirations**.
- The tour signals a push for a **more equal, representative global order** that better reflects **developing nations' needs**.

8th July 2025

Law on phone-tapping, and two HC rulings-Indian Express Explained

Polity

Easy Explanation:

The government **can tap phones** to stop serious crimes or protect public safety, but only if it follows strict laws and procedures. Phone tapping is allowed only when there is a **public emergency** or a serious threat like national security or big corruption cases.

Recently, two courts gave different answers on whether tapping phones before a crime happens is okay:

- **Delhi High Court said yes** in a big ₹2,100 crore corruption case because it was a serious threat.

- **Madras High Court said no** in a smaller ₹50 lakh bribery case because it wasn't an emergency and the proper process wasn't followed.

Key Takeaways:

- Phone tapping is allowed under these laws:
    - Indian Telegraph Act (1885) for calls
    - IT Act (2000) for digital messages
    - Indian Post Office Act (1898) for mail
- It can only happen for serious reasons like **public safety, national security, or stopping a crime**.
- Only the **Home Secretary** can approve tapping, and a special committee reviews the order.
- Tapping to catch small crimes like tax evasion is **not allowed**.
- If rules aren't followed, the tapped evidence **cannot be used in court**.
- Delhi HC allowed tapping for a big corruption case; Madras HC rejected it for a smaller bribery case.

ALL ABOUT THE UAE'S NEW GOLDEN VISA SCHEME FOR INDIANS-Indian Express Explained

International relations

Easy Explanation

The UAE has launched a **new lifetime Golden Visa** specifically for Indian and Bangladeshi nationals. Unlike earlier Golden Visas (which lasted 5–10 years and required hefty investments), this **nomination-based** program grants **permanent residency** for a one-time fee of **AED 100,000** (≈ ₹23.3 lakh). Applicants no longer need to buy property worth AED 2 million (≈ ₹4.66 crore) or make large business investments.

Key Takeaways

- **Lifetime Residency:** New visas are valid **for life**, replacing the 5- to 10-year term of previous programs.

- **Nomination-Based:** Entry is by **nomination** rather than meeting fixed investment thresholds.
- **Fee Structure:** Applicants pay a **one-time fee of AED 100,000** (about ₹23.3 lakh).
- **No Mandatory Investment: No need** to purchase real estate or inject capital into UAE businesses.
- **Eligibility Categories:** Open to **public investors, real-estate investors, entrepreneurs**, plus **"eminent persons"** (doctors, scientists, artists, athletes, etc.).
- **Family Sponsorship:** Visa holders can **bring spouses and children** to live, work, and study in the UAE.
- **Streamlined Application:** Can apply **from home country** without visiting UAE; background checks (anti-money laundering, criminal records, social media) are conducted by a nominated consultancy.
- **Economic & Social Benefits:** Aims to attract global talent and investment, enriching UAE markets in **culture, finance, trade, science, startups, and professional services**.

Its eye on dark mysteries, Rubin will reveal the cosmos like never before-Indian Express Explained

Science

Easy Explanation:

The **Vera C. Rubin Observatory** is a powerful new space telescope in **Chile** that will **watch the entire night sky** every few days for the next **10 years**.

It has the **largest digital camera in the world** and can take **very wide and super-detailed pictures** of space — much bigger and clearer than what Hubble or James Webb can do in one shot.

It will help scientists:

- Understand how our **Milky Way** formed
- Find **millions of new asteroids and comets**
- Look for possible **threats to Earth** (near-Earth objects)
- Learn more about **dark matter and dark energy**, which make up most of the universe

- Build a **time-lapse movie of space** changing over time

In its very first test, it already discovered **2,100+ new asteroids in just 10 hours**.
It's named after **Vera Rubin**, the scientist who gave the first proof of dark matter in the 1970s.

Key Takeaways:

- **What is it?**
  A revolutionary observatory located in the **Chilean Andes**, equipped with the **Simonyi Survey Telescope** and **world's largest camera** (3,200 megapixels).

- **Unique Features:**

  - **Wide view:** Can see an area equal to **40 full moons** in one shot.

  - **Super-fast movement:** Moves in **5 seconds** (normal telescopes take ~10 minutes).

  - **Huge data:** Will collect **20 terabytes of data per night** and send out **10 million alerts per night** for sky changes.

  - **Full-sky scan every 3 days.**

- **What it will study:**

  - **Milky Way's formation**

  - **Dark matter and dark energy**

  - **Asteroids and comets (including near-Earth objects)**

  - **A complete time-lapse of the changing sky**

- **First results:**
  In just **10 hours of test imaging**, it found **2,104 new asteroids**, including **7 near-Earth ones**.

- **Goal:**
  To **triple our current knowledge** of space objects and give the **clearest-ever map** of the universe

over the next **10 years**.

- **Historical Note:**
  Named after **Vera Rubin**, the astronomer who first found proof of **dark matter** in the 1970s.

Behind record-breaking heat in Kashmir:long dry spells,rise in urbanisation-Indian Express Explained

Geography

Kashmir is facing unusually high temperatures this summer. In June 2025, **Srinagar recorded its hottest June since 1978**, and **Pahalgam had its hottest day ever**. Even though it rained briefly, the heat is expected to return.

Why is this happening?

1. **Global Warming**: Overall rise in temperatures worldwide is affecting Kashmir too.

2. **Long Dry Spells**: Earlier, heat was followed by rain. Now, rainfall is delayed, making heatwaves longer.

3. **Urban Heat Islands**: Cities like Srinagar are hotter due to:
   - More concrete buildings
   - Less greenery and fewer water bodies
   - More cars and pollution

4. **Low Snowfall**: Kashmir had very little snowfall this year, and what did fall melted early. This left the mountains dry, reducing moisture in the air.

Important Numbers:

- **Srinagar's max temperature (June 2025)**: 37.4°C, highest since 1953
- **Pahalgam's hottest day ever**: 31.6°C
- **Average June temperature**: 3°C above normal

Key Takeaways

Kashmir experienced its hottest June in nearly 50 years, with Srinagar reaching 37.4°C, the highest since 1953.

Pahalgam recorded its highest-ever day temperature at 31.6°C.

Prolonged dry spells and delayed rainfall have worsened the heat situation.

Reduced snowfall and early snowmelt have decreased moisture availability, contributing to dryness.

Urban Heat Islands caused by rapid urbanisation, concrete surfaces, less greenery, and pollution are raising city temperatures.

Global warming is a major factor driving the overall temperature rise in the region.

Both maximum and minimum temperatures have consistently remained above normal this year.

Remaking the nuclear order in West Asia-The Hindu text and Context

International relations

Easy Explanation

- **Israel** and **Iran** are long-time rivals. Israel wants to make sure Iran never builds a nuclear bomb — not even peaceful nuclear capability.
- Israel's Prime Minister **Benjamin Netanyahu**, under pressure at home (due to the war in Gaza), launched **airstrikes on Iran** to shift focus.
- **Iran** had been quietly building up its **nuclear material**, but claimed it wasn't making a bomb.
- The **U.S. joined Israel** in attacking Iran's key nuclear sites on **June 22**, ending in a brief 12-day conflict.
- While Israel celebrated success, **Iran suffered heavy losses**, including military leaders and missile systems.
- Iran now sees **building a nuclear deterrent** (i.e., actual weapon capability) as essential for national survival — even if the regime changes in the future.
- A new **Iran nuclear deal** may be possible, but it will need both **threats and reassurances** from the U.S.

Key Takeaways

1. **Israel's Objective:** Prevent Iran from having **any nuclear capability**, not just nuclear weapons.

2. **Netanyahu's Tactic:** Used **military action on Iran** to distract from problems in Gaza.

3. **Iran's Miscalculation:** Believed the U.S. would **stop Israel**, but underestimated both **Mossad's intelligence** and Israel's military strike.

4. **U.S. Role: Trump supported Israel** with direct military strikes on Iran's underground nuclear sites.

5. **Iran's Response:** Lost **missile systems, military leaders**, and now feels its **"nuclear threshold" status is unsafe**, pushing it closer to weaponization.

6. **Future Risks:** U.S. and Gulf countries don't want **regime change** in Iran, fearing more instability.

7. **Next Steps:** Iran has **cut off UN inspectors**, and **new talks** will be difficult without **balanced diplomacy**.

On the Golden Dome: how Trump's missile shield tests space law-The Hindu text and Context

International relations

Easy Explanation

- **The U.S. has proposed a $175 billion space-based missile shield** called the **"Golden Dome"** under President Trump.

- It would use **satellites with weapons** to protect the U.S. from enemy missiles (including hypersonic or space-based threats).

- This raises **serious legal and diplomatic concerns**:

    - It may violate or bypass the **Outer Space Treaty (OST) of 1967**, which bans **Weapons of Mass Destruction (WMDs)** in space, but is vague on conventional weapons.

    - Many fear this will **start a space arms race**, destabilizing global security.

- **India**, a U.S. partner in space surveillance, is caught in a **dilemma**:

- Cooperating may help strategic ties with the U.S., but **contradicts India's support for peaceful use of space**.

- This affects India's **Space Activities Bill**, which will define its space policy.

- Experts warn the Golden Dome could **normalize the weaponisation of space**, making future wars more likely and treaties harder to enforce.

Key Takeaways

1. **Golden Dome Plan**: U.S. to launch satellites that can destroy incoming missiles using conventional weapons — not nuclear, but still offensive in nature.

2. **Legal Loophole**: The **Outer Space Treaty** bans WMDs but is unclear on conventional weapons — creating a legal grey area.

3. **Destabilising Risk**: Could **trigger an arms race in space**, weakening decades of arms control efforts and trust.

4. **India's Dilemma**: Strategically aligned with U.S. but diplomatically supports peaceful space use; faces policy pressure on its **Space Activities Bill**.

5. **Call for Action**: Countries like India must **push for clearer international space laws** and promote **transparency in military space projects**.

6. **Global Impact**: If the U.S. deploys the Golden Dome, **China and Russia may follow**, leading to conflict-prone militarisation of outer space.

[Ahead of COP30, Bonn climate talks fumble the pressure test-The Hindu Science]

Environment

Easy Explanation

The **Bonn Climate Conference** is a mid-year meeting that prepares the ground for the major **UN Climate Summit (COP30)** to be held later this year in **Belém, Brazil**. Countries meet in Bonn to sort out technical issues and test each other's seriousness about climate promises.

This year's conference faced:

- **Delays** in starting due to arguments on finance and trade

- **Sharp divisions** between rich and poor countries

- **Little progress** on key climate issues like adaptation, finance, and fairness

Developing countries like **India** demanded:

- Rich nations **fulfill financial promises** under the Paris Agreement
- Opposition to **carbon border taxes**, which penalize exports from poorer nations

Discussions on climate **adaptation**, **mitigation**, **loss and damage**, and **just transition** all ran into **tensions**—especially over how money is tracked and shared.

Despite some technical progress (like drafting climate indicators), political issues such as **climate finance** and **equity** remained unresolved.

Key Takeaways

1. **Slow Start**: Talks were delayed by 2 days over disputes on finance and trade agenda items. India and LMDCs wanted legal obligations discussed.
2. **Climate Finance Disputes**:
    - Rich countries resisted commitments.
    - Developing nations demanded clarity, transparency, and fair burden-sharing.
    - Demand for $1.3 trillion yearly funding raised deep divides.
3. **Adaptation Goal Debate**:
    - Countries argued over how to **measure climate resilience**.
    - India pushed for **flexible, context-based indicators**.
    - No agreement on including **finance and technology** indicators.
4. **Mitigation Work Programme (MWP)**:
    - Some wanted stronger emission cuts; others (India, LMDCs) warned against new burdens.

- Idea of a **digital platform** for sharing tools was floated but contested.

5. **Loss & Damage (L&D)**:
    - Talks on integrating L&D into national plans and improving support.
    - Funding remains unclear, especially for non-economic losses.
6. **Just Transition & Trade Concerns**:
    - Developing nations flagged **carbon border taxes** and **critical minerals** issues.
    - Emphasis on labor rights, equity, and inclusive policy design.
7. **Gender Action Plan**:
    - Debate emerged over terms like “intersectionality”.
    - Calls for addressing **unpaid care work**, **violence**, and **health access**.
8. **Transparency Gaps**:
    - Developing countries questioned reliability of **finance reporting** by rich nations.
    - Called for **reforms and accountability** under Article 9.5 of Paris Agreement.
9. **Progress Areas**:
    - Some agreement on technical tools like **adaptation metrics**, **transparency**, and **Article 6 mechanisms**.

10. **Overall Mood**:

- Science says act fast, but **politics and money still hold back real action**.

- Bonn showed the difficulty of converting climate talk into climate action.

[Air pollution tied to preterm births, low birth weight in India: study-The Hindu Science](#)

Environment

Easy Explanation

A new study has found that **air pollution in India is causing serious harm to unborn babies**. Breathing polluted air during pregnancy—especially air filled with **PM2.5 particles** (tiny dust-like pollutants)—**raises the risk of preterm birth (PTB)** and **low birth weight (LBW)**.

The research used data from India's **National Family Health Survey (NFHS)** and satellite data. It found:

- **70% higher chance of preterm birth**

- **40% higher chance of low birth weight**
  for mothers exposed to high PM2.5 levels during pregnancy.

States in **North India**—like **Delhi, Punjab, Haryana, UP, Bihar**—are worst affected because of pollution from vehicles, industries, and solid fuel (like wood or coal) used for cooking.

Higher temperature and rainfall also play a role, worsening the health risks during pregnancy. Poor and illiterate women were found to be more vulnerable.

Key Takeaways

1. **Air pollution harms unborn babies**:

    - High PM2.5 exposure increases risk of **preterm birth by 1.67x** and **low birth weight by 1.37x**.

2. **North Indian states worst affected**:

    - Highest impact in **Delhi, Punjab, Haryana, UP, Bihar** due to more pollution sources.

3. **Delhi has 13.8x higher PM2.5** than Kerala (as per another study in *The Lancet*).

4. **Vulnerable groups**:

    - Children of **illiterate, poor mothers**, and **users of solid fuels** more likely to suffer adverse birth outcomes.

- **Girls more prone** to low birth weight than boys.

5. **Heat and rain matter too**:

- **High temperature** increases LBW risk (due to heat stress, dehydration).

- **Heavy rainfall** affects healthcare access, worsens maternal health.

[Batting for prevention-The Hindu Editorial]

Science

Easy Explanation

Two new **Nipah virus cases** have been reported in Kerala, one of which has already resulted in death. Over **425 people**, including **140+ health workers**, are being monitored across **three districts** — Malappuram, Palakkad, and Kozhikode.

Nipah is **extremely dangerous**, with a **40–75% fatality rate**, and **spreads from fruit bats to humans**, often through contaminated fruits. Since there's **no cure or specific treatment**, only **prevention and containment** can stop its spread.

The editorial stresses the need for a **One Health approach**, which means closely linking **human, animal, and environmental health** — especially with rising **climate change** and habitat destruction causing more such disease outbreaks.

Key Takeaways

1. **New Nipah cases in Kerala**:

- 1 death (Malappuram), 1 critical case (Palakkad);

- 425+ contacts traced and under surveillance.

2. **High fatality rate**:

- Nipah kills **40–75%** of infected people.

3. **Transmitted by fruit bats**:

- Possibly through **eating bat-contaminated fruits**.

4. **Kerala has history of Nipah outbreaks**:
    - Regular outbreaks since 2018; major spike in 2018 killed 17 of 19 cases.
5. **No specific treatment or vaccine yet**:
    - Current strategy is **prevention, early detection, and isolation**.
6. **Need for One Health Programme**:
    - Integrate **human, animal, and environmental health systems**;
    - Monitor zoonotic diseases (those spreading from animals to humans).
7. **Climate change a growing concern**:
    - **Habitat destruction** increases bat-human interaction, raising infection risks.

[Fostering a commitment to stop maternal deaths-The Hindu Editorial]

Science

Easy Explanation

Easy Explanation

India's **Maternal Mortality Ratio (MMR)** is 93 per 1 lakh live births (2019–21). This is an improvement, but still means that **93 women die for every 1 lakh deliveries** — a number that could be much lower with timely and quality care.

Maternal deaths are mostly due to **three delays**:

1. Delay in **recognizing complications** and seeking care.
2. Delay in **transporting the mother** to a hospital.
3. Delay in **providing treatment** once at the hospital.

Deaths also result from lack of specialists, blood banks, and timely surgery. The situation is worse in **EAG states** like Bihar, UP, MP, etc., which need stronger infrastructure. **Kerala**, with an MMR of just 20, is a model due to its **audit systems and emergency care quality**.

Preventing maternal deaths requires **early checkups, institutional deliveries**, trained staff, emergency equipment, and **a committed public health system**.

Key Takeaways

1. **India's MMR is 93** (2019–21), improved from 103 (2017–19), but still too high.

2. **States grouped** for targeted strategy:

    - **EAG states** (e.g., UP, MP, Assam) have **highest MMR** (up to 175).

    - **Southern states** (e.g., Kerala, TN) have **lower MMR**; Kerala leads with 20.

    - **Other states** like Maharashtra, Gujarat are in between.

3. **Three major delays cause most maternal deaths**:

    - Delay in decision to seek care.

    - Delay in reaching a hospital.

    - Delay in getting treatment at the hospital.

4. **Key medical causes**:

    - **Post-delivery bleeding** (most fatal), especially in anaemic women.

    - **Obstructed labour** in malnourished or underage mothers.

    - **High blood pressure**, sepsis from home deliveries or unsafe abortions.

5. **Infrastructure gaps**:

    - Shortage of specialists at CHCs (66% vacant).

- Many First Referral Units (FRUs) lack **blood banks** or OT facilities.

6. **Kerala model praised**:
    - Confidential audits, early detection methods, better emergency response.
7. **Solutions**:
    - Early antenatal registration.
    - Quality emergency obstetric care.
    - Well-equipped referral centres and transport.
    - Awareness and family/community support.
8. **Commitment is key**:
    - Maternal deaths are largely **preventable**.
    - A mix of policy, healthcare access, education, and trained personnel can save lives.

12th July 2025

What Maharashtra's 'urbanMaoism' Bill says Bill-Indian Express Explained

Internal security

Easy Explanation:

The **MSPS Bill** is a new law passed by the Maharashtra Assembly to **stop the spread of Naxal (Maoist) ideas and activities**, especially in **cities**.

The government says that some **organisations are secretly helping Naxals** by giving them money, shelter, and support. So, this law gives the government **power to ban such organisations** and **punish people** who are connected with them.

But the law has caused worry because some parts are **not clearly defined** and may be used to **target ordinary people, activists, or NGOs** unfairly.

Key Takeaways :

Why this law was made:

- To stop Naxalism from spreading in urban areas.

- Government believes existing laws are not strong enough.

What the law allows:

- Government can declare any group as “unlawful.”
- People can be punished for:
    1. Being a member of such a group.
    2. Raising money for them.
    3. Helping manage the group.
    4. Doing any act that disturbs public peace or supports violence.

Punishment:

- Jail term of 2 to 7 years.
- Fine of ₹2 to ₹5 lakh.
- Arrests can be made without a warrant.
- Offences are non-bailable.

Changes made after feedback:

1. Title now clearly targets “Left-Wing Extremist organisations.”
2. Review Board will include a retired High Court judge, another retired judge, and a government lawyer.
3. Only senior police officers (Deputy Superintendent of Police or above) can investigate.

Concerns:

- Definitions like “unlawful activity” are vague.
- Law could harm freedom of speech and civil rights.

Kailash-Mansarovar yatra resumes after five years: history of a storied pilgrimage-Indian Express Explained

History

Easy Explanation:

The **Kailash-Mansarovar Yatra**, a sacred pilgrimage for Hindus, Buddhists, Jains, and Bon followers, has **resumed in 2025** after a 5-year break due to **Covid-19 and India-China tensions**.

This year, **750 Indian pilgrims** will go:

- **250 via Lipulekh Pass (Uttarakhand)**
- **500 via Nathu La Pass (Sikkim)**

Mount Kailash (in Tibet) is considered the **home of Lord Shiva** and is near the sacred **Manasarovar Lake**. The pilgrimage involves a **ritual walk** (parikrama) around both the lake and the mountain, considered spiritually powerful.

Key Takeaways :

1. Religious and Cultural Significance

- Mount Kailash is holy in **Hinduism, Buddhism, Jainism, and Bon**.
- Four major rivers (Indus, Brahmaputra, Sutlej, Karnali) originate near it.
- Seen as the **home of Lord Shiva** and the **navel of the universe** in Buddhist belief.

2. Routes and Pilgrim Details

- **750 pilgrims** selected by India's Ministry of External Affairs.
- **Two routes**:
    - **Lipulekh Pass (Uttarakhand):** Traditional, tougher, now motorable till near the border.
    - **Nathu La Pass (Sikkim):** Opened in 2015, easier, mostly by vehicle.

3. History of the Yatra

- Yatra was **limited until early 1900s**.
- Became more common after **British-era efforts** to promote it.
- **Stopped after 1959** due to China's control of Tibet.
- Reopened in **1981** after talks between Indian MP Subramanian Swamy and Chinese leadership.

4. Trek Details

- **Manasarovar parikrama:** Around 90 km, takes 3–5 days.

- **Kailash parikrama:** Around 52 km, takes 3 days, high-altitude trek.

- Yatris acclimatise gradually to high altitudes before entering Tibet.

5. What's New in 2025

- Trekking distance on the **Lipulekh route reduced** from 27 km (2019) to just **1 km** on Indian side.

- On the **Nathu La route**, the entire journey to Mansarovar is now **by car/bus**, making it much easier.

How a novel initiative helped Tamil Nadu bringdownTB deaths in the state-Indian Express Explained

Sociology

Easy Explanation:

Tamil Nadu launched a special program in **2022** called **Tamil Nadu Kasanoi Erappila Thittam (TN-KET)** to prevent deaths from **tuberculosis (TB)**.

The state used a **simple paper-based tool** to quickly find out if a TB patient is **severely ill** and needs to be admitted to a hospital immediately — without waiting for lab tests. This fast, patient-focused care has helped **reduce early TB deaths by 20% across the state**.

Three districts — **Dharmapuri, Karur, and Villupuram** — showed a clear drop in TB death rates within a year.

Key Takeaways :

1. What is TN-KET?

- A **TB death-free initiative** launched by Tamil Nadu in 2022.

- Focuses on **early detection** of severely ill TB patients.

- Uses a **quick triage tool** with just 5 health checks (e.g., BMI, oxygen level, leg swelling).

- Avoids delay caused by lab-based tests.

2. How does the tool help?

- Identifies severely ill patients **within a day**.

- **98% of such patients** are admitted to hospitals **within 7 days**.

- Prevents deaths that usually happen within **first 2 months of TB diagnosis**.

3. What is differentiated TB care?

- A **patient-centered model** instead of one-size-fits-all.
- Treatment is tailored based on age, weight, and severity of illness.
- More care is given to patients who are at **higher risk of death**.

4. Results in Tamil Nadu:

- TB death rate fell:
  - **Dharmapuri**: 12.5% → 7.8%
  - **Karur**: 7.1% → 5.3%
  - **Villupuram**: 6.1% → 5.2%
- **20–30% drop** in total TB deaths seen in most districts in 2024.

5. Why is it important?

- **India has the world's highest TB burden**:
  - 28 lakh TB cases (2023)
  - 3.15 lakh TB deaths (29% of global total)
- TN-KET is one of the **first programs** in India to follow **2021 NTEP guidelines**.
- Shows how **simple tools and quick care can save lives**.

View India's Gender Gap Report ranking as a warning-The Hindu Editorial

Sociology

Easy Explanation:

India has made progress in areas like the economy, technology, and education. But when it comes to **gender equality**, especially in **women's health, employment, and economic participation**, the country is still far behind.

According to the **Global Gender Gap Report 2025**, India ranks **131 out of 148 countries**, with particularly poor scores in **economic opportunity and health** for women.

This is not just a social issue — it affects **India's growth, stability, and future**. Without investing in women's well-being, the country cannot achieve its full economic and demographic potential.

Key Takeaways:

1. Poor Ranking

- India ranks **131/148** in the **Global Gender Gap Report 2025**.
- Ranks **143rd in economic participation** (women earn less than one-third of what men earn).
- One of the **worst sex ratios at birth**, showing deep-rooted **son preference**.

2. Health Crisis for Women

- Over **57% of women (15–49 age group)** are **anaemic**.
- Women's **healthy life expectancy** is now **lower than men's**.
- **Lack of nutrition, preventive care**, and poor reproductive health services are key issues.

3. Care Work Is Invisible

- Indian women do **7 times more unpaid domestic work** than men.
- This work is not counted in the economy or supported by public policy.
- **Lack of childcare, elder care, and maternity support** keeps women out of jobs.

4. Economic Impact

- Closing the gender gap could have added **$770 billion to India's GDP by 2025** (McKinsey).
- Without women's participation, India faces a **rising dependency ratio** (more old people, fewer workers).

5. What Needs to Be Done

- **Invest in care infrastructure**: child/elder care, maternity benefits.
- **Include unpaid care work** in policies and national accounts.
- **Link gender equality with economic planning** — not just rights-based slogans.

6. Why This Is Urgent

- India's population is ageing. By 2050, **20% will be elderly**, mostly women.

- Fertility rates are below replacement level; the **working-age population will shrink**.

- Without **healthy and active women**, **economic growth will slow**

13th July 2025

What is the state of inequality in India?: TH FAQ

Economy

EASY EXPLANATION

A new **World Bank report** says that **inequality in India has come down** and extreme poverty has reduced. It even shows India's **Gini coefficient** (a number that measures inequality, where 0 means perfect equality and 1 means total inequality) **fell from 0.288 in 2011-12 to 0.255 in 2022-23**. This makes India seem like one of the most equal economies in the world.

The Indian government welcomed this, saying it proves their policies are working.

But many experts strongly disagreed.

They pointed out that the **report only looks at consumption inequality**, not **income** or **wealth** inequality — which is a big problem. Why?

Because:

1. **Consumption inequality is always lower** than income or wealth inequality. A poor family spends most of its income on food and rent, while a rich family saves and invests more. So even if income differences are huge, their consumption levels might not look that different.
2. The **surveys used (from 2011-12 and 2022-23)** are not perfect. They can't capture how rich the richest people really are. Also, the two surveys use different methods, so comparing them is not very accurate.

Other researchers, like those at the **World Inequality Database (WID)** led by Thomas Piketty, looked at **tax records and rich lists** and found a very different picture:

- India's **income inequality Gini** is **0.61**, making it one of the most unequal countries in the world.
- Its **wealth inequality Gini** is even worse at **0.75**.
- The **top 1% in India own nearly 40%** of all personal wealth. Only 4 countries in the world are more unequal in this regard.

So, the World Bank's report **only captures a small part of the real story**. While it shows consumption is more equal, it ignores how **massive the gap is in incomes and wealth**, which actually matters more for long-term growth, opportunity, and social stability.

KEY TAKEAWAYS

World Bank Report:

- Says India's inequality is decreasing.
- **Gini coefficient for consumption** fell from **0.288 (2011-12) to 0.255 (2022-23)**.
- Government used it to praise its economic policies.

The Problem with the Report:

- It only focuses on **consumption inequality**, not income or wealth inequality.
- **Consumption inequality is always lower** because:
    - Poor spend most of what they earn.
    - Rich save more, which doesn't show in consumption data.
- **Data source issues:**
    - Based on **HCES surveys** (2011-12 & 2022-23).
    - Surveys **miss extremely rich** households.

- **Methodologies changed**, making the two surveys **non-comparable** over time.

What Other Research Shows:

- **WID (World Inequality Database)** reports:
  - **Income inequality Gini in 2022-23: 0.61**.
  - **Wealth inequality Gini in 2022-23: 0.75**.
  - India is among the **most unequal countries** globally in both metrics.
- **Top 1% own nearly 40%** of India's net wealth.
  - Only **Uruguay, Eswatini, Russia, and South Africa** are worse.

Trends Over Time:

- Income Gini rose from **0.47 (2000) to 0.61 (2023)**.
- Wealth Gini rose from **0.70 (2000) to 0.75 (2023)**.

Why Consumption Inequality Can Fall Even If Income Inequality Rises:

- As **rich save more**, their consumption doesn't rise proportionally.
- **Poor consume most of what they earn**, so their consumption grows faster.
- But **savings by the rich lead to more wealth accumulation**, worsening long-term inequality.

Conclusion:

- India is not becoming more equal overall.
- The World Bank report **understates the growing concentration of income and wealth**.
- Rising inequality has **serious consequences for future economic growth** and social fairness.

How is Mizoram handling the refugee crisis?: TH FAQ

International Relations

EASY EXPLANATION

Since the **military coup in Myanmar in February 2021**, many people have fled to **Mizoram** in India for safety. Recently, **about 4,000 more refugees crossed over** after two **rival armed groups** — both fighting Myanmar's military — **clashed violently** in Chin State near the India border. These groups were supposed to be on the same side but started fighting each other over control of key trade areas near the border with India.

These refugees are mostly **ethnically related to the Mizo people** of Mizoram, which makes things emotionally and politically complex. Mizoram is now **struggling to decide** whether to push these people back or continue to help them despite **limited resources and weak support from the Central Government**.

Mizoram already hosts more than **40,000 refugees** from:

- **Myanmar** (due to civil war),
- **Bangladesh** (mainly Bawm people fleeing persecution), and
- **Manipur** (Kuki-Zo people fleeing ethnic violence).

Though the Centre had asked northeastern states **not to let refugees in**, Mizoram went ahead on **humanitarian and ethnic grounds**, supported by local groups like the **Young Mizo Association** and church bodies.

Over time, however, **villagers are feeling overwhelmed**. Some village councils have even **banned refugees from trading or moving outside camps**, and have **threatened eviction** if rules aren't followed.

Mizoram's Chief Minister has now started to **raise concerns**, saying the **Free Movement Regime (FMR)** — an agreement that allowed people to cross borders within a certain limit — has made it easier for **illegal trade and repeated crossings**. He has even **asked for a new law** to identify foreigners in the state.

India doesn't have a **national refugee law** and is **not part of the UN Refugee Convention**, so these situations are handled on an ad hoc basis. The central government is talking tough now, but local realities in Mizoram remain difficult — the state is **trapped between compassion and capacity**.

KEY TAKEAWAYS

What happened recently?

- Around **4,000 refugees** entered Mizoram in July 2024.
- This followed a **violent clash** between two anti-junta groups in Myanmar: **CNDF vs. CDF-H**.
- These groups, once united, are now fighting over **strategic areas near India**.
- The **Champhai district** recorded nearly 4,000 refugees in border villages like **Zokhawthar**.

Background of Mizoram's refugee crisis:

- Began after the **2021 Myanmar coup**.
- Mizoram allowed entry due to **ethnic ties** and **humanitarian concerns**, despite Centre's objection.
- Also hosts:
    - **Bawm people** from Bangladesh (since 2022).
    - **Kuki-Zo people** from Manipur (due to recent clashes).
- **Total: over 40,000 refugees** from Myanmar, Bangladesh, and Manipur.

Why Mizoram allowed refugees:

- The **Mizo community shares ethnic roots** with the Chins (Myanmar), Bawms (Bangladesh), and Kuki-Zos (Manipur).
- **Civil society and church groups** offered support.
- CM Lalduhoma told the Centre that the state **can't turn them away** on humanitarian grounds.

Emerging tensions:

- Some **villages have banned trading and movement** of refugees.
- Civil society groups issued **eviction threats**.
- **Local resentment** is growing due to pressure on **resources and security**.

India's legal position:

- India is **not part of the 1951 UN Refugee Convention**.
- There is **no national refugee law**.
- Refugees are treated under the **Foreigners Act**, on a case-by-case basis.

Recent concerns by the Mizoram government:

- CM now says **FMR is aiding smuggling** and repeated border violations.
- Called for **Presidential assent** on a bill to **identify foreigners**: *Mizoram Maintenance of Household Registers Bill*.

Summary:

- Mizoram's refugee crisis is worsening.
- The state is balancing **ethnic compassion** with **economic and legal challenges**.
- The Centre's response so far is **limited**, while **locals are showing signs of fatigue**.

Why is Trump taking aim at BRICS?: TH FAQ

International Relations

EASY EXPLANATION

Recently, former U.S. President **Donald Trump** warned that he would impose a **10% tariff** on **BRICS countries** (Brazil, Russia, India, China, South Africa — plus new members like Egypt, UAE, etc.) just for being part of the group. This isn't the first time he's threatened them — he had earlier warned of **100% tariffs** if BRICS tried to **create a common currency** or **reduce reliance on the U.S. dollar**.

Why is he so upset? Because the **BRICS group is exploring ways to trade using their own currencies**, which weakens the **global dominance of the dollar** — something Trump sees as a threat to U.S. power.

At the **2025 BRICS summit in Rio**, the leaders continued discussing this **Cross-Border Payments Initiative**, but were careful not to say they want to replace the dollar. Still, Trump saw this as a problem.

He has already:

- **Imposed 50% tariffs on Brazil** (angry at Lula for targeting ex-President Bolsonaro),
- **Imposed 30% tariffs on South Africa**, and
- Plans a **500% tariff on Russian oil**, which will hurt **India and China** too, since they buy from Russia.

India, on the other hand, has made it clear it does **not want to replace the dollar**, especially since it's working on a **Free Trade Agreement with the U.S.** Indian leaders have said that while Russia may have suggested alternatives, **India only "took note" of it**, and there's **no unified BRICS policy** against the dollar.

KEY TAKEAWAYS

Why is Trump targeting BRICS?

- He believes **BRICS is anti-American** and **threatens the U.S. dollar**.
- He warned of **tariffs up to 100%** if BRICS pushes for a common currency.
- In 2025, he changed it to a **10% tariff just for being part of BRICS**.

What has BRICS done recently?

- BRICS is working on a **Cross-Border Payments Initiative** to **trade in local currencies**.
- This is partly a response to **Western sanctions on Russia**, which affected global trade.
- The **Rio declaration (2025)** talks about payment system cooperation but **does not attack the dollar directly**.

Tariffs already imposed or planned by Trump:

- **50% on Brazil** (over Bolsonaro-related accusations)
- **30% on South Africa** (over trade imbalance and concerns about White minority treatment)
- **500% planned on Russian oil/products** — likely to affect **India and China**

Is BRICS trying to dethrone the dollar?

- **BRICS leaders deny this.**
- South Africa and India have **officially clarified** that there is **no plan to replace the dollar**.
- Indian officials say the controversial Russian proposal was **only noted**, not approved.

India's position:

- Wants to **maintain strong U.S. relations** and is **negotiating an FTA with the U.S.**
- Clarified that there is **no Indian policy** to push for de-dollarisation.
- External Affairs Minister Jaishankar admitted **BRICS doesn't have a unified stand** on currency matters.

Summary:

Trump sees **BRICS as a threat to U.S. dominance**, especially due to efforts to **trade without using the dollar**. While BRICS says it's only exploring options, Trump is threatening **tariffs and sanctions**. **India is walking a tightrope**, balancing **its BRICS role** with **strategic U.S. ties**.

From the margins to the centre: TH Profiles

International Relations

EASY EXPLANATION

The term **Global South** refers to countries in Asia, Africa, and Latin America that were mostly colonized in the past and now seek to overcome global inequality. They have historically tried to **unite among**

themselves (South-South cooperation) to achieve development and fight Western dominance. The idea started from events like the **Bandung Conference (1955)** and **Non-Aligned Movement (NAM)**.

BRICS (Brazil, Russia, India, China, South Africa) is now seen as the most important platform that reflects the **goals of the Global South**. Over time, BRICS has expanded both in **membership and influence**, surpassing the G7 in economic share as of 2024. It created institutions like the **New Development Bank (NDB)** to give alternatives to the **IMF and World Bank**, which are seen as Western-controlled.

At the **2025 Rio Summit**, BRICS showed both its strength and limitations. Members supported stronger roles for India and Brazil in the **UN Security Council**, introduced **"partner countries"** like Cuba and Uganda, and condemned terrorism and Western military actions. However, **differences among members**—especially over the Ukraine conflict and their individual relations with the U.S.—continue to limit unity.

While **intra-BRICS trade is rising fast**, and the **NDB is helping in infrastructure** funding, the dream of **replacing the U.S. dollar** in global trade is still far off due to **technical and political difficulties**.

India will lead BRICS next year with the theme of **resilience and innovation**. As the world's largest democracy with ties to both China and the U.S., it is in a tricky spot. The challenge is whether BRICS will remain a **true platform for Global South cooperation**, or become just another stage for **global power competition**.

KEY TAKEAWAYS

What is the Global South?

- Mostly former colonies in Asia, Africa, Latin America.
- Seeks to reduce global inequality and Western dominance.
- Promotes **South-South cooperation** (mutual help among developing countries).
- Originated from Bandung Conference (1955), Non-Aligned Movement.

What role does BRICS play?

- Most organized form of Global South cooperation today.
- Comprises **35% of global GDP** and **nearly 50% of world population**.
- Created **New Development Bank (NDB)** and **Contingent Reserve Arrangement (CRA)** as alternatives to World Bank/IMF.
- Aims for greater **voice in international bodies** and less dependence on the **U.S. dollar**.

What happened at the 2025 Rio Summit?

- Backed India and Brazil for UN Security Council reforms.
- Condemned terrorism and unilateral Western actions.
- Created **"partner country" status** for new nations (e.g., Bolivia, Kazakhstan).
- Highlighted success in some areas, but also revealed internal divisions.

Challenges within BRICS:

- Each country has **different priorities**:
  - Brazil focuses on **Amazon & sustainability**.
  - India focuses on **tech & services**.
  - China uses **Belt and Road** as a major outreach.
- Russia, though geographically in the Global North, is in BRICS for **anti-West strategic alignment**.
- **Border tensions between India and China**, and India's growing U.S. ties (e.g., **Quad**) create tension.

Trump's Reaction:

- Called BRICS **anti-American**.
- Threatened **10% tariffs** on BRICS members.
- Warned of higher tariffs if they **replace the dollar**.

India's Role Ahead:

- Will lead BRICS in 2026 with the theme: **"Building Resilience and Innovation."**
- Needs to balance ties with **China, U.S., and BRICS** partners.
- Has potential to act as a **bridge-builder**, but must handle **internal and external pressures**.

Conclusion:

BRICS offers the **best current hope for Global South representation**, but it must avoid becoming **just another power bloc**. Its success depends on **unity, inclusivity**, and prioritizing **development and democracy**, not just geopolitics.

Immune cells' fat blocks brain's ability to clean Alzheimer's plaques: TH Science

Science

EASY EXPLANATION

Alzheimer's is a brain disease that causes memory loss, confusion, and changes in behavior. It develops slowly and worsens over time. For years, scientists believed that the buildup of two proteins — **amyloid-beta** and **tau** — was the main reason for this disease. These proteins damage brain cells long before symptoms appear.

Now, scientists are shifting focus to another type of brain cell: **microglia** — the immune cells of the brain. Normally, microglia protect the brain by cleaning up harmful proteins like amyloid-beta. But in people with Alzheimer's, this cleaning job fails.

A new study found that the **fat metabolism of microglia** may be a major problem. An enzyme called **DGAT2** makes the microglia store extra fat inside them, especially near amyloid plaques in the memory center of the brain (hippocampus). These fat-filled microglia then lose their ability to clean up harmful proteins, which makes the disease worse.

To fix this, scientists used a special technique to block DGAT2 only in microglia. In mice with Alzheimer's, this **reduced fat**, **restored microglia's cleaning function**, and **cut brain plaque by over 50%** in just one week.

Although this is early-stage research, and there are concerns about applying it to humans, it gives hope. Alzheimer's is a complex disease. Tackling just one cause, like amyloid, may not be enough. But if we manage a few key pathways — like **fat metabolism** — we may be able to slow the disease.

KEY TAKEAWAYS

What is Alzheimer's disease?

- A brain disorder that affects memory, behavior, and thinking.
- Caused by a buildup of **amyloid-beta** and **tau** proteins.
- Starts damaging the brain **years before symptoms show**.
- No cure yet, only treatments to slow it down.

New research focus: Microglia and fat metabolism

- Microglia are brain immune cells that clean up waste.
- In Alzheimer's, they stop working properly.
- The enzyme **DGAT2** makes them store too much fat.
- These fat-storing cells then become **less effective at clearing harmful proteins**.

What did the study find?

- Mice and human brain samples showed **high fat** in microglia near amyloid plaques.
- This was worst in the **hippocampus**, the memory center.
- **More plaques = more fat = more dysfunction**.

How did they fix it in the study?

- Scientists blocked **DGAT2** only in microglia using a custom tool.
- Microglia started working properly again.

- **Plaques reduced by 50%** in just one week.
- Brain damage markers also went down.

Why this matters:

- Alzheimer's is not caused by just one thing.
- Past drugs targeting only amyloid have mostly failed.
- Lipid metabolism (fat management) might be **a new way to fight the disease**.

Limitations:

- These results are from mice; human results may differ.
- DGAT2 exists in many body cells — targeting it broadly could have side effects.
- The special method used here worked **only in brain microglia**, avoiding this problem.

Big picture:

- Alzheimer's is caused by a mix of protein buildup, inflammation, and now — fat metabolism problems.
- Fixing even **3–4 major pathways** (like this one) may help **slow the disease**.
- This study is an early, but promising step toward better treatment options.

When cells rush to repair DNA, they also know when to stop: TH Science

Science

EASY EXPLANATION

When our DNA gets damaged — by UV light, harmful chemicals, or copying mistakes during cell division — cells immediately try to repair it. But repairing too much or too little can also harm the cell. So, how do cells get the balance right?

A new study shows that cells have a **smart way to slow down the production of DNA repair proteins**, only temporarily, using special control proteins. These proteins act like **traffic lights**, stopping the protein-making process until the emergency is handled.

Researchers studied this using **baker's yeast** and **human skin cells**. They discovered that two proteins — **Scd6 in yeast** and **LSM14A in humans** — form clumps (called **RNA granules**) when DNA is damaged. These granules **hold on to the mRNA** (the message that tells cells to make repair proteins), preventing the cell from making too many repair proteins.

For example, the Scd6 protein grabs the message to make **Srs2**, a protein that helps unwind DNA. By holding back this message, the cell makes **less Srs2**, which can be helpful. Too much Srs2 when DNA is already damaged can actually hurt the cell.

They found a similar system in human cells. When the human version of Scd6 (LSM14A) was removed, the cell made **more error-prone repair proteins**, which could lead to incorrect DNA repair.

This system of temporarily pausing repair protein production helps the cell avoid **overreaction**. Researchers believe this mechanism could help us better understand **cancer treatment and neurodegenerative diseases**, where stress responses in cells are already disturbed.

KEY TAKEAWAYS

What triggers the process?

- DNA damage from **UV light**, **chemicals**, or **copying errors**
- Cells need to balance protein production: not too much, not too little

What did the researchers find?

- Cells temporarily **pause** the production of some DNA repair proteins
- This pause is controlled by **RNA granules** formed during stress

Key proteins involved:

- In **yeast**: Scd6

- In **humans**: LSM14A
- These proteins grab onto mRNA (messages) for repair enzymes and prevent their overproduction

How does this help the cell?

- Prevents **too much repair protein**, which can also harm the cell
- Helps the cell **survive stress** more efficiently
- Reduces **error-prone** DNA repair

Why is this discovery important?

- Could lead to new **cancer treatments** — by blocking this process, cancer cells might become more sensitive to chemotherapy
- Might also help understand diseases like **Alzheimer's or Parkinson's**, where the cell's stress-handling system breaks down

Main conclusion:

Cells use a clever, reversible system to **pause repair protein production** during DNA damage using RNA granules — a discovery that opens new paths for treating diseases where this stress response fails.

15th July 2025

'After obesity,GLP-1 research focused on Alzheimer's... hypothesis centres on its ability to reduce inflammation in brain...this is different from current approaches' -Indian Express Explained

Science

Easy Explanation:

GLP-1 (Glucagon-Like Peptide-1) is a natural hormone released after eating. It helps:

- Control blood sugar by increasing insulin and lowering glucagon.
- Reduce hunger by acting on the brain.
- Improve heart, liver, kidney functions.

However, natural GLP-1 breaks down within 2 minutes. Scientists solved this by attaching a **fatty acid** to GLP-1, allowing it to stay longer in the body (up to 160 hours). This led to the development of **GLP-1 drugs** like **semaglutide**, which are now used to treat diabetes, obesity, and possibly heart and brain diseases.

Key Takeaways:

1. **What is GLP-1**: A hormone that regulates blood sugar and hunger, and also acts as a neurotransmitter.
2. **Initial Use**: Originally developed for type 2 diabetes due to its insulin-regulating effect.
3. **Breakthrough Idea**: Using fatty acids to make GLP-1 last longer in the body by attaching it to albumin protein.

4. **Semaglutide's Development**:
    - Approved for diabetes in 2009.
    - Approved for obesity in 2014.
    - Designed for both conditions from the start.
5. **Impact**:
    - Reduces blood sugar and hunger throughout the day.
    - Shown to lower heart disease risk and inflammation.
    - Helps people without diabetes lose more weight than those with diabetes.
6. **SELECT Trial**: Proved that GLP-1-based weight loss can reduce heart attacks, strokes, and death – a first in obesity treatment history.
7. **GLP-1 and Brain Diseases**:
    - Current research is exploring its role in **Alzheimer's disease**.
    - The hypothesis: GLP-1 may reduce brain inflammation, unlike traditional Alzheimer's drugs.
8. **Multi-organ Benefits**: GLP-1 works not just through the gut-brain axis but across several organs, including the heart, kidneys, and liver.
9. **Safety**: GLP-1 drugs are generally safe with mild side effects like nausea. Over 52,000 people have been studied in trials.
10. **Future Outlook**: Major ongoing trials are testing GLP-1 in treating Alzheimer's. Results are expected soon and could redefine brain disease treatment.

How Denmark plans to use copyright law to protect against deepfakes-Indian Express Explained

International relations

Easy Explanation:

Denmark is planning to update its **copyright laws** to protect people from **deepfakes**—fake but realistic-looking videos, audio, or images created using AI. This new law will give **ordinary people** control over their **face, voice, and likeness**, just like artists are protected under copyright laws. If someone publishes a deepfake of another person without permission, they could face legal action. The law aims to protect people from impersonation, regardless of the intent behind the deepfake.

Key Takeaways:

1. **What's the issue?**
   Deepfakes are AI-generated fake videos, audio, or images that look real and are hard to detect. They're used to mislead, defame, or impersonate people.

2. **Denmark's proposal**:
   The country wants to **amend its copyright law** to protect personal traits (like face, voice, appearance) from being used in deepfakes without consent.

3. **New protections introduced**:
   - **Imitation protection**: Bans sharing deepfakes mimicking someone's physical traits.
   - **Performance protection**: Covers artistic or improvised acts not usually protected by copyright.
   - **Artist protection**: Targets digital mimicry of musicians, actors, etc.

4. **Applies to all individuals**:
   Protection extends to **ordinary people**, not just celebrities. Also covers up to **50 years after a person's death**.

5. **Consent required**:
   Sharing realistic deepfakes will be **illegal without consent**, and the burden of proof is on the sharer.

6. **Platform responsibility**:
   Online platforms must remove deepfakes or face heavy penalties.

7. **Exemptions and limitations**:
    - **Satire and parody** may still be allowed.
    - Law applies only to **public sharing**, not creation.
    - **Civil courts** will decide disputes case-by-case.
8. **Challenges ahead**:
    - Law can only be enforced within Denmark.
    - Critics worry enforcement may be slow or weak.
    - Still, it may inspire other countries to act.
9. **Relevance to India**:
   Indian courts have protected celebrities using privacy and defamation laws, but there is **no dedicated deepfake law** for all citizens yet.

Two unequal-Indian Express Editorial

Economy

Easy Explanation:

India recently reported a **very low consumption inequality**, with a **Gini index of 25.5** for 2022–23 — the **lowest in the world**. But this has triggered confusion, misreporting, and politicized claims.

The government and media wrongly claimed India is either the **fourth most equal society overall** or most equal in terms of "social equality". In truth, India is most equal **only in terms of consumption**, not **income** — and **no official income distribution data even exists** for India.

Meanwhile, critics tried to correct this by using **synthetic data** from the **World Inequality Database (WID)**, which itself has major credibility issues. To make matters worse, the **World Bank**, which typically relies only on verified survey data, quoted both the official consumption Gini and the WID income Gini — even though the two numbers are logically incompatible.

Key Takeaways:

1. **India has the lowest consumption inequality** in the world (Gini index of 25.5 in 2022-23).
2. The government and media wrongly claimed India is among the most equal countries overall — that's only true for consumption, not income or social equality.

3. There is **no official income inequality data for India**.

4. Some critics used unreliable income inequality estimates, causing further confusion.

5. The World Bank's mixed use of official and estimated data harms trust in the numbers.

6. Reliable inequality measurement needs official survey data; synthetic estimates can be misleading.

7. Institutions must clarify and maintain data credibility on inequality.

Why is corporate investment lagging behind?-The Hindu Text and Context

Economy

Easy Explanation:

Corporate investment in India remains low because **there isn't enough demand** in the economy. Even though the government cut corporate taxes, increased spending on infrastructure, and the RBI reduced interest rates, businesses are still not investing enough.

Why? Because **no firm wants to invest in producing more if people aren't buying what they already make**. In a slowdown, factories run below full capacity, so adding more capacity (through investment) doesn't make sense to individual companies.

Economists argue that to revive investment, the economy first needs a **demand boost**. This stimulus must come from **external markets** (exports) or **government spending** (public demand). But exports are weak, and the impact of government capex is delayed, limited, or diverted to imports and machines instead of generating local jobs.

Key Takeaways:

1. **Investment follows demand**:
   Companies invest only when they expect higher demand for their goods. Without that, investment lags.

2. **Government efforts so far**:

   - **Corporate tax cut** (2019)

   - **Increased government capital expenditure (capex)**

   - **Lower interest rates** via RBI
     Despite these, private investment remains weak.

3. **Corporate sector doing well financially**:
   Profits are up, but hiring and wage growth are slow, and investment in machinery/IP has risen

only 35% in four years.

4. **Economic theory insight**:
    - Rosa Luxemburg: Investment depends on **expected demand**.
    - Tugan Baranovsky: Investment can be self-sustaining—but only in theory.
    - **Real-world firms act individually**, and avoid investing if demand is low.
5. **Why capex hasn't worked well yet**:
    - Large projects take time (gestation lag)
    - Some spending goes to **imports**, not local production
    - Many projects are **capital-intensive**, not labour-intensive → fewer jobs → less consumer demand
6. **Low interest rates not enough**:
   Even cheap loans don't help if businesses fear low returns. Demand revival is a **prerequisite**.
7. **Only two exogenous sources can boost demand**:
    - **Government expenditure**
    - **External markets** (exports)
      But exports are weak, so public spending becomes crucial.
8. **Conclusion**:
   To revive investment, **demand must rise first**. Without it, even low taxes and cheap loans won't make businesses invest. A demand-led revival is necessary.

[Scientists find pheromone that causes locusts to swarm and a way to block it-The Hindu Science]

Science

Easy Explanation:

Locusts are usually solitary, but after eating, they release a chemical (pheromone) called **4VA** from their legs, which attracts others and triggers **swarming**. This group behavior can devastate crops on a massive scale — like in India and East Africa in 2019-20.

Chinese scientists discovered **how 4VA is made** in the locust's body — it comes from a plant compound called **phenylalanine** and is produced using enzymes (mainly **4VPMT1**).

They also found a way to **block this pheromone** using a chemical called **4-nitrophenol (4NP)**. This can **prevent swarming behavior** by stopping the locusts from producing 4VA.

However, 4NP is **toxic** to the environment, so researchers are also exploring safer methods like **RNA-based biopesticides** and **trapping techniques**.

Key Takeaways:

1. **Why locust swarms are dangerous**:
   Locusts in swarms destroy crops rapidly; 1 sq km swarm = food consumed by **35,000 people** per day.

2. **What triggers swarming**:
   After eating, locusts release **4VA** (a pheromone) → attracts others → physical contact → serotonin surge → **swarm begins**.

3. **How scientists cracked the process**:
   - 4VA is created from **phenylalanine** in plants.
   - Enzyme **4VPMT1** (and 4VPMT2) convert it into swarm-triggering 4VA.
   - Genetic engineering blocking 4VPMT1 = no swarming.

4. **Chemical breakthrough**:
   - **4-nitrophenol (4NP)** can **bind to enzymes** and **block 4VA production**.
   - It is more effective than the original molecule and **prevents aggregation**.

5. **Problem with 4NP**:
   - It's **toxic**, used in dyes, fungicides, etc.

- Harmful to humans and environment; persists in soil/water.

6. **Safer alternatives proposed**:
    - **RNAi insecticides** to stop enzyme production.
    - **Biopesticides**, **traps**, and **pheromone decoys**.
    - **GM locusts** to disrupt gregarious behavior.
7. **Five-step control plan suggested**:
    - Use 4VA to **trap locusts**.
    - **Prevent aggregation** using inhibitors.
    - **Monitor populations** via 4VA detection.
    - Release **genetically modified locusts**.
    - Combine **chemical and biological methods**.

The importance of India and Europe walking in step-The Hindu Editorial

International relations

Easy Explanation:

In a rapidly changing global order, both **India and Europe** are realizing the strategic value of working closely together. With the U.S.-led alliances becoming unstable and global power becoming more dispersed, India and Europe — both middle powers — have an opportunity to **build a balanced, multipolar world**.

The relationship is evolving in areas like **trade, technology, defense, climate change**, and **global governance**. Recent diplomacy — like PM Modi's G7 participation and high-level EU engagements — shows renewed intent to deepen this partnership.

While economic ties are growing, both sides still have a lot of untapped potential, especially in **clean energy, digital infrastructure, education, and defense co-production**. But for this to succeed, political will, public support, and mutual understanding are essential.

Key Takeaways:

1. Why this matters now

- Global alliances are shifting, especially after Trump's term changed how the U.S. engages globally.

- Europe wants more “strategic autonomy”; India seeks “multi-alignment” — both want a **rules-based multipolar world**.

2. India-Europe convergence

- Shared values: democracy, pluralism, rule of law.
- Both oppose binary power politics (like US-China rivalry) and want **inclusive global institutions**.

3. Economic opportunities

- **FDI from the EU to India** rose 70% (2015–2022); France alone increased by 373%.
- India-EU Trade & Investment Agreements need to be **fast-tracked**.
- Climate rules like the **EU’s Carbon Border Adjustment Mechanism** should be fair to India’s developmental needs.

4. Technology partnership

- Europe is strong in **deep tech, AI hardware, and manufacturing**.
- India brings **software innovation, digital public goods** (like UPI, Aadhaar).
- Areas of potential: biotechnology, clean energy, sustainable ocean tech, digital regulation.

5. Human capital exchange

- Need for **student, scientist, and skilled worker mobility** agreements.
- Helps reduce Indian unemployment and deepens innovation ties.

6. Strategic & defense ties

- Stronger cooperation in **defense co-production, cyber security, counter-terrorism, and maritime security**.
- Both aim for **self-reliance**: India via *Atmanirbhar Bharat*, Europe via *ReArm 2025*.
- Europe urged to be firmer on **Pakistan’s support for extremism**.

7. Global leadership & multilateralism

- India & Europe can lead reforms in UN, WTO, Quad, and AI governance.
- Both support **Global South representation**, resisting great power coercion.

8. Perceptions & soft power

- Public and media narratives need to match strategic intent.

- Both sides should move beyond outdated stereotypes.

- Recent events like **Raisina Dialogue in Marseille (2025)** and **EU Commission President's India visit** are promising signals.

Women, STEM careers and a more receptive industry-The Hindu Editorial

sociology

Easy Explanation:

Even though **India has the highest number of female STEM graduates globally (43%)**, **only 27% actually work in STEM jobs**. This shows a **gap between education and employment** due to social, cultural, and workplace-related challenges.

While the government has introduced policies like the **National Education Policy 2020**, **gender budgeting**, and **vocational training schemes**, these **cannot work alone**. **Industry support is essential** to make workplaces welcoming, safe, and equal for women.

Stereotypes like "mechanical means masculine" still exist and **stop women from entering technical fields**. Many women leave STEM jobs not due to lack of ability but due to **unfriendly environments** and **life transitions** like marriage or caregiving.

Private sector initiatives like **UN Women's WeSTEM programme** show that engaging families, creating role models, and ensuring workplace safety **can help women succeed**. The article argues that **investing in women's STEM careers isn't optional — it's essential** for India's future growth and equality.

Key Takeaways:

1. **Paradox:** 43% of STEM graduates are women in India, but only **27% work** in STEM jobs.

2. **Barriers:** Cultural norms, unsafe workplaces, lack of support during life transitions limit women's participation.

3. **Positive shift:** Female Labour Force Participation Rate (FLFPR) has increased to **41.7%**, but mostly due to rural women.

4. **Government action:**

    - NEP 2020, gender budgeting (₹4.49 lakh crore in 2025-26),

    - vocational training, and skilling schemes like Skill India, PM Vishwakarma Yojana.

    - But **policy alone isn't enough**.

5. **Role of Industry:**
    - Must shift from **passive recruiters to active enablers**.
    - Support through **mentoring**, **training**, and **gender-sensitive policies**.
6. **Examples:** UN Women's **WeSTEM programme** in MP and Gujarat focuses on skills, community engagement, and role models.
7. **The larger impact:** When women earn and succeed, it impacts **families, industries, and national growth**.

16th July 2025

Recovery after space journey-Indian Express Explained

Science and technology

Easy Explanation:

Shubhanshu Shukla and his team spent 20 days in space, including 18 days on the International Space Station (ISS). When they returned to Earth, they needed help standing and walking because the human body weakens in space due to **lack of gravity** (microgravity).

In space, muscles don't work the same way, and body fluids shift to the upper body. This affects **balance**, **coordination**, and causes **dizziness** when astronauts return. So, astronauts go through a **recovery and exercise program** to slowly return to normal.

Their spacecraft, **Crew Dragon**, landed safely in the **Pacific Ocean** using parachutes. Landing in water is **safer and easier** than landing on land because water cushions the impact and gives more space.

Key Takeaways:

1. Recovery After Space Travel:

- Shukla returned after 20 days in space (18 on ISS).
- Astronauts face **physical stress** in space due to **microgravity** and **radiation**.
- Symptoms after return: **dizziness, weak muscles, trouble standing or walking**.

2. Health and Reconditioning:

- Astronauts undergo **medical tests** after landing.
- They are given **personalized exercise plans** to regain strength, balance, and movement.
- **92% of astronauts** report post-flight issues like **muscle injuries, eye problems, and balance issues**.

3. Space Sickness:

- Caused by the brain getting confused due to different signals from the **inner ear** in space.

- Astronauts train their body to **relearn movement and balance** on Earth.

4. Splashdown Landing:

- **Splashdown in the ocean** is safer than ground landing.

- Water **absorbs shock** better than land.

- Spacecrafts use **parachutes** to slow down before landing in water.

- **Crew Dragon** used 2 small and 4 large parachutes to land safely in the Pacific.

5. Why Water Landing is Better:

- Water provides a **soft cushion** during landing.

- It avoids the need for complex systems like **landing legs**.

- Oceans offer **large open space**, reducing risk of collision with obstacles.

- The spacecraft is built to **float on water**.

WHY THE EARTH IS SPINNING FASTER THAN BEFORE—FOR NOW-Indian Express Explained

Geography

Easy Explanation:

Recently, some days have been **slightly shorter than 24 hours**. For example, on **July 9**, Earth completed its rotation **1.34 milliseconds early**. This has been happening more often in recent years.

However, **this is temporary**. In the **long run**, Earth is actually slowing down. **Millions of years ago**, a day was about **23.5 hours** long. It's getting longer due to the **Moon's gravitational pull**, which slows Earth's spin over time.

In the **short term**, Earth's rotation can speed up or slow down slightly due to:

- **Movements in Earth's core**

- **Atmospheric changes**

- **Earthquakes or melting ice**
  These small changes cause short-term fluctuations, but don't affect the long-term trend of **slower spins and longer days**.

Key Takeaways:

1. Earth Is Spinning Slightly Faster (For Now):

- **July 9** was **1.34 milliseconds shorter** than a full 24 hours.

- Earth's spin has been **faster than usual in recent years**.

2. Why It Happens (Short-Term Reasons):

- **Movements in Earth's core, crust, and mantle**

- **Atmospheric winds and pressure**

- **Moon's position**

- **Climate change** (melting ice redistributes water, changing shape of Earth and affecting spin)

3. Long-Term Trend:

- Over **millions of years**, Earth's rotation is **slowing down**.

- **Moon's gravity** creates tides, which slowly **reduce Earth's spin**.

- The **Moon moves 4 cm away each year**, causing Earth's rotation to slow further.

4. Past and Future:

- During the time of dinosaurs, a day lasted **23.5 hours**.

- In the future, days will become **longer**, but this takes **billions of years**.

The Millennium Village-Indian Express Editorial

Sociology

Easy Explanation

Gurugram, often called the "Millennium City," faces severe flooding each monsoon. Despite its expensive real estate and high-end infrastructure, waterlogging and power cuts are common. But the article argues that **the problem is not just infrastructure — it's a mindset problem**.

The city's design and planning are deeply influenced by **rural social structures**, especially caste, class, and family loyalties. There's little sense of **public responsibility**. People look after only their own private spaces — not parks, drains, or shared areas. This rural mindset has carried over into modern urban spaces, even in gated communities and luxury enclaves.

What's missing is a real **sense of the public** — shared spaces, shared responsibility, and planning for the common good. Gurugram's planning continues to serve **private interests** over public welfare. Land meant for the public is often appropriated with help from government officials, and city design happens without genuine concern for people beyond the walls of gated colonies.

The author argues that **without a change in our concept of publicness**, no amount of smart technology or infrastructure will fix these problems.

Key Takeaways

1. **Gurugram floods regularly despite being rich and developed.**
    - Waterlogging, power cuts, and poor drainage are recurring problems.
2. **The core issue is not infrastructure, but mindset.**
    - A rural mindset — focused only on family, caste, and private gain — dominates urban living.
3. **No real concept of "public" exists in planning.**
    - Shared spaces and public welfare are ignored in favor of private benefit.
4. **Privatisation is not the only reason.**
    - Blaming neoliberalism or private capital is too simplistic. The problem lies in long-standing social attitudes.
5. **City building continues caste- and class-based exclusions.**
    - Gated communities push public problems outside their walls instead of solving them together.
6. **Public land is often illegally privatized.**
    - Officials misuse mapping technologies and rules to help private players.
7. **Smart cities won't solve this.**
    - Real change needs a shift in how we view public life and collective responsibility — not just more tech or planning jargon.
8. **The article warns against "hollow modernity."**

- Without a strong public spirit, our cities are modern in looks only — but broken in function.

Hedging against America-Indian Express Editorial

International relations

Easy Explanation

India is feeling uncomfortable with Donald Trump's second term as U.S. President. He is acting friendly with Pakistan, placing tough trade rules on India, and is unhappy about India buying oil from Russia.

But India is not the only country upset. Even close U.S. allies like France, Britain, Japan, and Australia are facing problems because Trump is making decisions that hurt them too — like adding new tariffs (extra taxes on goods).

Now, these countries are talking about becoming **more independent** in their decisions, just like India's idea of **strategic autonomy** — where India stays friendly with big powers but makes its own choices.

India is used to handling sudden changes in global politics. So, it's staying calm and working on trade talks with the U.S., but is ready to protect its own interests if things don't go well.

Key Takeaways

1. India feels unsettled by Trump's second-term policies but is not alone; even close U.S. allies in Europe and Asia share this frustration.

2. The concept of "strategic autonomy"—avoiding excessive reliance on any single power—is now being adopted by European and Asian partners as a response to U.S. unpredictability.

3. France and Britain are enhancing their own defence cooperation and reducing dual dependency on the U.S. and China.

4. Japan has resisted new U.S. tariffs and made it clear it will not compromise national interests under pressure.

5. Australia insists that alliance with the U.S. should not limit its sovereignty or decision-making.

6. India's long-standing approach of balancing relations and preserving its freedom of action gives it an advantage in navigating global shifts.

7. New U.S.–India trade talks are underway, but India remains prepared to walk away if terms prove unfair.

8. Overall, the article argues that India's model of hedging between great powers is increasingly relevant—and being mirrored by traditional U.S. allies.

How is global shipping trying to decarbonise? -The Hindu Text and Context

Economy

Easy Explanation:

Global shipping aims to **cut carbon emissions** and reach **net zero by 2040-2050**. Ships mostly run on fossil fuels today, but the industry is slowly shifting to **cleaner fuels** like **green methanol and green ammonia**.

Green fuels are made using **renewable energy**, mainly through **green hydrogen**. However, switching to these fuels is **expensive**, requires new infrastructure, and the **shipping industry is slow to change**.

India sees this as a big opportunity. It wants to:

- **Produce green fuels** (like green ammonia)
- **Set up green fuel ports**
- **Build eco-friendly ships**

  This can make India a **key player in global green shipping**.

Key Takeaways :

1. Goal of Decarbonisation:

- **Global shipping aims to be net zero by 2040–2050.**
- Shift away from fossil fuels like VLSFO and diesel.

2. Future Green Fuels:

- **Green Methanol**: Easier to store and handle; emits ~10% carbon.
- **Green Ammonia**: No greenhouse gas emissions; harder to store and use.
- **Biofuels**: Can also be used as cleaner alternatives.

3. Why It's Difficult:

- **New tech adoption is slow** in shipping.
- **Green fuels are expensive** (e.g., green methanol is 3x the cost of current fuels).
- Requires **new engines**, storage systems, and **large capital investment**.

4. How Green Fuels Are Made:

- **Green Hydrogen**: Made by electrolysis using solar/wind power.
- **Green Ammonia**: Hydrogen + Nitrogen.
- **Green Methanol**: Hydrogen + captured CO_2 from industries.

5. India’s Plans:

- Build **green fuel ports** at Tuticorin and Kandla.
- **Supply green fuels to Singapore**, a major ship refueling hub.
- Use **solar energy advantage** to make green hydrogen/ammonia.

6. Challenges for India:

- **Dependence on imports** for solar panels and electrolysers.
- Need for **investment, infrastructure, and policy support**.
- **High upfront costs** for production facilities.

7. What India Can Do:

- Use **sovereign guarantees** to attract global investors.
- Offer **PLI schemes for electrolyser production**.
- Promote **carbon capture and use CO_2** for green fuel.
- Encourage **foreign shipbuilders** to invest in India.
- Retrofit old ships and **build new green ships** (some of 110 ships planned).

The need to protect India's linguistic secularism-The Hindu Text and Context

Polity

Easy Explanation:

India is a **secular and culturally diverse** country with **121 languages and 270 mother tongues** (2011 Census). While secularism is often seen as a **religious concept**, in India, it also includes **linguistic diversity**.

Unlike other countries, India **does not have a national language**. Hindi is only the **official language of the Union**, and states can choose their own official languages. This setup protects **regional languages** and promotes **unity through diversity**.

However, **recent tensions** — such as violence against non-Marathi speakers — show how **language-based identity politics** can threaten India's secular fabric. The Constitution gives all citizens the right to **preserve their language and culture**.

To **preserve India's unity**, we must **respect all languages**, avoid imposing any one language (like Hindi), and remember that **tolerance and openness** are core Indian values.

Key Takeaways:

1. India's Unique Secularism:

- Goes beyond **religion** to include **language**.
- Constitutionally promotes **tolerance and equality**.
- Empowers the state to act against both **religious and linguistic communalism**.

2. Language in the Constitution:

- **No national language** in India.
- **22 languages** listed in the **Eighth Schedule**.
- **Article 343**: Hindi (Devanagari script) is the Union's **official language**.
- **States** can choose their **own official languages**.
- **Article 29**: All citizens have the right to **preserve their language, script, and culture**.

3. Data from 2011 Census:

- **121 languages**, **270 mother tongues**.
- **96.71%** of Indians speak one of the 22 scheduled languages.

4. Need to Protect Linguistic Diversity:

- Languages must be **respected**, not imposed.
- **Southern and northeastern states** have resisted Hindi imposition.
- **Maharashtra** has seen **violence over language**, showing the dangers of **identity politics**.

5. Unity in Diversity:

- India's strength lies in **liberal and tolerant values**.
- Imposing one language threatens **social harmony**.
- Political parties must **safeguard linguistic rights** as per the Constitution.

[Searching for extraterrestrial life means asking the right questions first-The Hindu Science]

Science

Easy Explanation:

Scientists are searching for life beyond Earth, especially on **exoplanets** (planets outside our solar system). So far, they've found **no definite signs of alien life**, but this doesn't mean life doesn't exist elsewhere.

A new study by researchers at **ETH Zurich** argues that even a **"no signs of life" result is useful** — it helps refine how and where we search in the future. They stress that we need to **ask better, more specific scientific questions** to make meaningful progress.

For example, instead of just asking **"Is there life?"**, scientists should ask **"Are there signs like water vapor, oxygen, or methane?"** These specific questions reduce confusion and improve data interpretation.

Key Takeaways:

1. No Signs ≠ No Life

- The lack of detected life **doesn't mean** it's not out there.
- It's important to interpret **null results** carefully.

2. Use of Bayesian Analysis

- Researchers use this **statistical method** to update beliefs based on evidence.
- It helps adjust expectations of how common life is as more planets are studied.

3. How Many Planets Are Enough?

- If life is **rare (10-20%)**, studying **40–80 exoplanets** without finding life still makes sense.
- But if life were **common**, we should have seen signs by now — so maybe it's rarer than we thought.

4. Ask Better Questions

- Vague: "Does this planet have life?"
- Better: "Does this planet have the temperature and chemicals that support life?"
- Specific questions reduce **false positives/negatives**.

5. New Missions Coming

- Upcoming telescopes like **LIFE** and **HWO** will help detect key molecules on Earth-like planets.
- But **theoretical work** is still needed — like defining what exactly counts as a **sign of life**.

6. Significance

- The study reminds us: **"Absence of evidence is not evidence of absence."**
- With the right tools **and right questions**, we're getting closer to finding life beyond Earth.

Contesting the future of forest governance-The Hindu Editorial

Environment

Easy Explanation

The Forest Rights Act (FRA) 2006 gave **gram sabhas (village assemblies)** the right to manage local forests under **Community Forest Resource Rights (CFRR)**. These rights aim to reverse colonial-era policies where the government took control of forests, sidelining local communities.

Recently, **Chhattisgarh's forest department tried to take back control**, naming itself the main agency for CFRR and trying to impose a central model plan. This move **violated the law**, as gram sabhas are supposed to make their own plans based on local needs.

After public protests, the decision was withdrawn. But such actions **highlight deeper tensions** between forest departments (that still follow colonial-style management focused on timber) and gram sabhas (that prioritize livelihoods and ecological sustainability).

The article argues that India needs to **truly empower gram sabhas** to manage forests, stop forcing them into outdated forest planning models, and **fund and support** community-led forest governance.

Key Takeaways

1. **What is CFRR?**
    - A provision under the Forest Rights Act, 2006 that gives **gram sabhas** the right to manage their **traditional forest lands**.
2. **Recent Conflict in Chhattisgarh:**
    - The forest department tried to make itself the **controlling authority** over CFRR and enforce a **centralized model** plan.
    - This move violated FRA's **decentralised, community-led approach**.
    - It was withdrawn after strong local protests.
3. **Colonial Legacy Still Persists:**
    - Forest departments still follow **"scientific forestry"** models focused on timber, based on **colonial forest working plans**.
    - These exclude local needs and knowledge and often lead to degraded forests.
4. **FRA's Vision is Different:**

- Gram sabhas should make **customized forest management plans** based on their needs and ecological understanding.

- These plans are meant to be **integrated**, not overridden by state working plans.

5. **Current Ground Reality:**

   - Though over **10,000 gram sabhas** have CFR titles, **less than 1,000** have created management plans.

   - Forest departments often delay or reject CFR claims and deny funding, aiming to **retain control**.

6. **MoTA's Mixed Signals:**

   - Ministry of Tribal Affairs initially supported flexible plans.

   - But later, it supported a **one-size-fits-all** plan model requiring compliance with the **National Working Plan Code (NWPC)** — which goes against FRA.

7. **Way Forward:**

   - Recognize **local knowledge** and shift away from timber-focused forest science.

   - Support gram sabhas with **funds and freedom** to manage forests in a **livelihood and climate-resilient** manner.

   - Use existing frameworks like the **Dharti Aaba Abhiyan** to guide but not control CFR plans.

17th July 2025

Why even moderate rainfall leads to flooding in Gurgaon-Indian Express Explained

Sociology

Easy Explanation

Gurgaon floods easily even with light rain (about 600 mm a year) because it was **never meant to be a big city**. Originally, its land wasn't suitable for urban growth—it had **no groundwater** and was sloped to allow rain to drain northward.

But in the rush to develop, especially after Maruti set up a factory in the 1980s, private builders and authorities **ignored the natural drainage** and **topography** of the land. They built roads and buildings without proper planning. As a result, water now has **no natural channels** or proper man-made drains to flow through.

The land that once absorbed water (like fields and natural canals) is now covered with **concrete**, which **blocks rainwater from seeping into the ground**. So, even light rains cause roads to flood and traffic to jam.

Key Takeaways

1. Ignored Topography

- Gurgaon slopes from south (Aravalli ridge) to north (Najafgarh lake).
- Earlier, natural drainage channels carried rainwater away.
- Roads like Golf Course Road now run against water flow, worsening runoff.

2. Unplanned Urban Growth

- Development happened in bits and pieces with no master plan.
- Land was acquired irregularly by private builders.
- Roads were built without proper slopes or drains.

3. Disappearing Natural Drains

- Gurgaon once had 60 natural canals, now reduced to just 4.
- Absorbent land has been replaced with concrete surfaces.

4. Inadequate Drainage Infrastructure

- Civic bodies failed to build effective drains.
- Concrete drains can't absorb water and often cause more flooding.

5. Flawed Engineering Approach

- Urban planning in India focuses on concrete and steel, ignoring natural elements like earth and soil.
- Water absorption and harvesting systems are neglected.

HOW CLIMATE CHANGE IS FUELLING DEVASTATING WILDFIRES IN EUROPE-Indian Express Explained

Environment

Easy Explanation

Europe, especially Mediterranean countries like Spain, France, Greece, and Syria, is facing an increasing number of wildfires. In 2025 so far, more than **227,000 hectares** have burned — over **twice the 20-year average**.

These wildfires are being **intensified by climate change**, which makes summers **hotter and drier**. This creates perfect conditions for wildfires to start and spread rapidly, especially when there's a lot of dry vegetation and strong winds.

Europe is **warming twice as fast** as the global average. This warming increases the **frequency and intensity of heatwaves**, which in turn causes **longer and more dangerous fire seasons**. More wildfires are expected, especially in **August**, due to **warmer-than-average temperatures and dry conditions**.

Key Takeaways

1. Surge in Wildfires in 2025

- Over **227,000 hectares** burned already — more than **double the 20-year average**.
- **Over 1,100 fires** reported by early July, up from 716 last year.
- Not yet a record-breaking year, but it's trending high.

2. Hotspots of Fires

- Affected areas include **Catalonia (Spain)**, **Marseille (France)**, **Crete and Evia (Greece)**, and **Syria**.
- In Syria, **over 3% of forests lost** this year alone.

3. Why It's Happening

- **Hot, dry summers** in the Mediterranean make wildfires likely.
- Fires spread quickly due to **dry vegetation and strong winds**.
- **Climate change is worsening conditions** — summers are now longer, hotter, and drier.

4. Role of Climate Change

- Earth's average temperature has increased by **1.3°C since pre-industrial times**.
- **Europe is warming at twice the global rate.**
- Heatwaves are now **more frequent and intense**, creating ideal wildfire conditions.

5. What to Expect Next

- August forecast: **warmer-than-average** temperatures in most of Europe.
- **Southern Europe** may see normal rainfall, but **Central and Eastern Europe** could be **drier than normal**, raising fire risks further.

Secretly recorded conversations admissible in divorce cases:what SC said-Indian Express Explained

Polity

Easy Explanation

The Supreme Court of India has ruled that **secretly recorded conversations between spouses** can be used as evidence in **divorce or matrimonial cases**. This overrules a previous High Court decision that had disallowed such evidence.

Normally, **spousal privilege** under Indian law protects private conversations between a husband and wife during and even after marriage. But the Court clarified that this rule was meant to **uphold the sanctity of marriage**, not to guarantee absolute privacy in all situations.

The Court said that if a secretly recorded conversation is **relevant, verifiable**, and falls within the legal rules of evidence, it can be used—even if it invades privacy. The right to privacy, the Court added, must be balanced with the **right to a fair trial**.

Key Takeaways

1. What Is Spousal Privilege?

- Under Section 122 of the Indian Evidence Act (1872), spouses **cannot be forced to reveal private communications** during marriage.
- Disclosure is only allowed if the **other spouse consents** or if the communication is shared with a **third party who then testifies**.

2. Why Secret Recordings Were Previously Rejected

- Concerns over how the recordings were made — possibly using **coercion** or **invasion of privacy**.
- Marriage carries a **reasonable expectation of privacy**, and recording without consent could **harm trust**.
- High Courts were cautious about using such evidence unless it was lawfully and fairly collected.

3. Why the Supreme Court Allowed It Now

- Cited a 1973 case where the court allowed a **secret phone recording** as evidence in a bribery case.
- Said that **digital recordings** are like having a third-party witness (eavesdropper).
- Ruled that **relevant and verifiable evidence** can be admitted even if collected secretly.
- Balancing act: **Right to privacy** vs **Right to fair trial**.

4. Significance of the Ruling

- The Court clarified that Section 122 was meant to **protect the idea of marriage**, not necessarily **privacy within it**.
- Reflects how the law is adapting to **technological changes** and **modern marital disputes**.

- Acknowledges that if spouses are recording each other, the **relationship is already broken**.

- Highlights concerns:

    - Risk of **surveillance culture in marriages**.

    - **Gender gap in smartphone access** in India (39% gap) may **disadvantage women** in producing evidence.

[A world of our making-Indian Express Editorial]

International relations

Easy Explanation

India's foreign policy is facing deep problems, but we're not asking the tough questions. The government focuses more on managing public image than on real international issues. After Operation Sindoor, India expected global support but didn't get much. The world isn't convinced of India's moral high ground, especially when its own actions seem contradictory — such as its silence on Gaza, mixed messaging on terrorism, and unclear actions in Balochistan.

The editorial argues that India's current approach is **not true realism** — it's based on past biases and a false sense of strength from aligning with powerful countries like the US. This overconfidence is damaging India's **diplomatic credibility**, especially in the **Global South** and among neighbors.

The core issue: India's leaders seem to believe the very narratives they use for internal propaganda — making it harder to accept and act on global realities.

Key Takeaways

1. Foreign Policy in Crisis

- India's foreign policy is caught in a **cycle of hyper-nationalism** and **media image management**.

- **Realistic self-assessment is missing** — we're not asking how others (especially adversaries) see us.

2. Post-Operation Sindoor Reality Check

- India expected strong global support after the operation but received only **weak statements**.

- **No major country stood firmly** with India — showing a **diplomatic failure**.

- The government was too focused on self-congratulation and missed how others truly saw the situation.

3. Loss of Moral High Ground

- The world doesn't clearly see a **moral difference between India and Pakistan**, especially due to:

    - Bragging about interfering in **Balochistan**.

- Religious targeting at home (e.g., minorities).
- Ignoring global issues like **Gaza genocide**.

- These contradictions **weaken India's global credibility**.

4. Nuclear Risks Ignored

- Both India and Pakistan may think they can **control escalation** during conflict.
- But the world worries about **nuclear accidents**, not control theories.
- Even **Donald Trump's remarks** reflect these concerns — war makes India a **global risk**, not a leader.

5. Credibility Crisis in Global South

- India's silence on **Gaza**, and messy diplomacy in the **Khalistan cases (US/Canada)**, hurt its image.
- Lack of **open debate** at home on foreign policy further worsens trust.

6. Faulty Realism

- Current strategy claims to be "realist" but is based on **false assumptions** and **reaction to past policies**.
- Overdependence on **US support** seen as strength — but it's actually a sign of **domestic weakness**.

7. Dangerous Self-Deception

- Leadership has started to **believe its own propaganda**.
- Quoting a Chinese official: "Lying to the public may be strategy, but lying to oneself is dangerous."
- India's foreign policy is in trouble because of **this self-deception**.

CERN collider reveals major clue to universe's bias against antimatter-The Hindu Science

Science

Easy Explanation

Scientists at CERN's **Large Hadron Collider (LHC)** have, for the first time, observed **CP violation** in **baryons** — particles like **protons and neutrons** that make up ordinary matter.

This means that **matter and antimatter do not behave the same way**, even at the level of the particles that form the universe. It's an important discovery because the **Big Bang should have created equal amounts of matter and antimatter**, but today the universe is made almost entirely of matter. What happened to all the antimatter is still a mystery.

The finding doesn't fully explain the imbalance, but it adds a **crucial missing piece** to the puzzle and **opens the door to discovering "new physics"** beyond current theories.

Key Takeaways

1. What was discovered?

- For the **first time**, scientists observed **CP violation** in **baryons** (specifically, in the Λb^0 baryon).
- CP violation means that **the laws of physics are not identical** for matter and antimatter — a fundamental asymmetry.
- Previously, CP violation had been seen only in **mesons** (particles made of a quark and an antiquark), not in baryons (made of three quarks).

2. Why is CP violation important?

- CP stands for:
    - **C (Charge Conjugation):** swapping particles with antiparticles.
    - **P (Parity):** flipping spatial coordinates (like looking in a mirror).
- If CP symmetry were perfect, the universe should have equal amounts of matter and antimatter.
- CP violation helps explain why matter survived and **antimatter mostly disappeared** after the Big Bang.

3. What did the experiment involve?

- CERN's **LHCb detector** studied the **decay** of Λb^0 baryons into other particles.
- They compared these decays to those of **antibaryons (Λb^0-bar)**.
- They used **machine learning** and control channels to rule out background noise or experimental bias.
- The **measured CP asymmetry was ~2.45%**, which is statistically significant.

4. Why is this a big deal?

- It's a **breakthrough for particle physics**, showing CP violation in **baryons**, the particles that make up the visible universe.
- It confirms **part of the Standard Model**, but the amount of CP violation seen in the Standard Model **isn't enough** to explain the massive matter-antimatter imbalance.

- So, this hints at **unknown factors** or "**new physics**" beyond what is currently understood.

5. What's next?

- Scientists need to **measure the "complex phase"** in baryons (a key variable in CP violation) — this wasn't achieved in the current study.

- Further **precision experiments and theoretical models** are needed to understand the full picture.

- If results **don't match the Standard Model**, it could reveal **new forces or particles**.

6. Sakharov Conditions (1967) for Matter Dominance

To explain matter's dominance, three conditions must be met:

1. **Baryon number violation** – there must be more matter than antimatter created.

2. **CP violation** – which this discovery helps establish for baryons.

3. **Departure from thermal equilibrium** – reactions must occur out of balance so the universe doesn't cancel matter and antimatter equally.

A tectonic shift in thinking to build seismic resilience-The Hindu Editorial

Geography

Easy Explanation

A 4.4-magnitude earthquake near Delhi on July 10, 2025, was a **reminder of India's vulnerability to earthquakes**, especially in highly populated areas like Delhi that sit in high-risk zones. Although the tremor didn't cause major damage, it exposed the **poor seismic safety of most buildings**, particularly older ones.

India lies on a **highly active tectonic plate** and is overdue for a **massive Himalayan earthquake** that could affect millions. Despite this, enforcement of **seismic safety codes** (like IS 1893:2016) remains weak. To prevent disaster, India must act fast—by enforcing codes, retrofitting unsafe buildings, and improving early warning systems.

Key Takeaways

1. Delhi Earthquake was a Warning

- On July 10, a 4.4 magnitude quake hit near Delhi.

- No major damage, but it showed that **Delhi is not ready** for a bigger earthquake.

- Over **80% of buildings**, especially old ones, **don't follow earthquake safety codes**.

2. India Sits on a Dangerous Fault Line

- The **Indian Plate collides with the Eurasian Plate**, causing frequent quakes.

- A "**Great Himalayan Earthquake**" is overdue, possibly **magnitude 8 or more**, which could impact **300 million people** in India, Nepal, and Bhutan.

3. High-Risk Zones

- Delhi lies in **Seismic Zone IV** (high risk).
- **Northeast India** and **Andaman & Nicobar Islands** are in **Zone V** (very high risk).
- Recent quakes in **Myanmar, Tibet, and even distant Greece** show increased global seismic activity.

4. Urbanisation Makes It Worse

- Cities like Delhi have **unsafe buildings**, especially in areas with soft soil (liquefaction risk).
- Construction often ignores the **IS 1893:2016 safety code**.

5. What India Needs to Do

- **Retrofit old buildings** using steel supports and strong foundations.
- **Enforce building codes strictly**, especially in high-risk zones.
- Use lessons from **Bangkok (strong materials)** and avoid mistakes like **Myanmar (weak structures)**.
- **Public awareness**, early warning apps like **IndiaQuake**, and disaster preparedness kits are essential.

6. Urgency is Real

- Experts estimate India needs to invest **₹50,000 crore yearly** to make buildings safer.
- Without action, a big earthquake could be catastrophic, like Bhuj (2001) or Nepal (2015).
- **National-level action and public responsibility** are both crucial to build seismic resilience.

19th July 2025

Has China beaten US tariffs: Reading GDP growth data-Indian Express Explained

Economy

Easy Explanation

China's economy grew by **5.2% in the second quarter (April–June 2025)**, a bit slower than 5.4% in the first quarter. On the surface, it looks like **China is handling US tariffs well**, but that's not the full picture.

China's economy is **heavily dependent on exports**, and many exports were **shipped early** (before tariffs hit). Also, there's a **temporary trade truce** with the US, which will **expire on August 12**. So, the real effect of tariffs is **delayed**, not gone.

Meanwhile, **China's people are not spending much**—they're cautious because of:

- Job insecurity,
- Falling home prices,
- And general economic uncertainty.

This weak domestic demand is a **long-term issue** caused by **past policy choices**: the government focused more on infrastructure and investment than on raising wages or improving safety nets.

China now wants to **move towards a more balanced economy**, focusing on **innovation and domestic consumption**—but this will be **slow and painful**, with job losses in some industries.

So far, **China has not launched a big stimulus**, just small targeted measures. They are waiting to see if the economy weakens more.

Key Takeaways

1. **GDP Growth**: 5.2% in Q2, showing moderate strength.
2. **Tariff Impact Delayed**: Effects softened due to stockpiles and a temporary US-China truce, ending August 12.
3. **Weak Domestic Demand**: People are cautious about spending due to job insecurity and deflation.
4. **Structural Issues**: China's past focus on investment over wages has led to long-term imbalances.
5. **Export Dependence is Risky**: Heavy reliance on exports makes China vulnerable to global trade tensions.
6. **Trade Diversification**: ASEAN and EU are growing as trade partners, but they can't fully replace the US.
7. **Global Pushback**: Other countries are resisting cheap Chinese goods and may impose trade barriers.
8. **Need for Reform**: China must shift toward innovation and better-quality products to sustain growth.
9. **No Major Stimulus Yet**: The government is cautious and hasn't launched large-scale economic support yet.

Saving lives in the deep-Indian Express Explained

Science and technology

Easy Explanation

INS Nistar is a new advanced **Diving Support Vessel (DSV)** commissioned by the Indian Navy in July 2025 at Visakhapatnam. Built by **Hindustan Shipyard Limited**, it is the **first indigenously designed and constructed vessel of its kind** in India, with over 80% local content.

Its main role is to **rescue submarines in distress**, especially those trapped deep under the sea. It carries a **Deep Submergence Rescue Vehicle (DSRV)** that can dive up to **1,000 meters**, attach to a submarine's hatch, and rescue up to 14 crew members at a time. The ship can also perform complex **diving operations up to 300 meters**, making it vital for submarine support.

This vessel replaces the older INS Nistar (1971–1989) and represents a big step in **India's maritime self-reliance (Aatmanirbhar Bharat)** and **strategic capabilities** in the Indian Ocean.

Key Takeaways

1. **First of its kind**: INS Nistar is the **first fully Indian-designed and built diving support and submarine rescue vessel**.
2. **Strategic Importance**: It helps India strengthen its **underwater rescue capabilities**, vital for a growing submarine fleet.
3. **Submarine Rescue Role**: Equipped with a **DSRV**, ROVs, sonar, medical facilities, and an onboard hospital, it can handle deep-sea emergencies.
4. **Self-reliance in Defence**: Over **120 Indian MSMEs** contributed to its construction, reflecting progress in defence indigenisation.
5. **Operational Advantage**: Nistar allows **immediate deployment** during underwater crises—India no longer needs to lease rescue ships.
6. **Dual-coast Setup**: Nistar (East Coast) and its sister ship Nipun (to be based in Mumbai for the West Coast) ensure **pan-India submarine rescue coverage**.
7. **International Role**: India is now among just **12 countries** with DSRV capabilities and can **help other navies in emergencies**, enhancing India's role as a **maritime first responder**.
8. **Soft Power Boost**: This capability improves India's **global naval image** and contributes to international **maritime safety and diplomacy**.

UPSC'S HELPING HAND-Indian Express Editorial

Governance

Easy Explanation

Every year, lakhs of candidates appear for the UPSC Civil Services Examination, but only a tiny fraction make it to the final list. Many of those who don't succeed spend years preparing and enter the job market late, often without any work experience. This affects their career trajectory and earnings.

To help such candidates, the **UPSC has launched an initiative called PRATIBHAA (Setu)**. It publicly discloses data about **non-recommended but qualified candidates**—those who cleared the written exam but didn't make it past the interview. This data can now be accessed by **government bodies, PSUs, and private employers** to hire suitable candidates. This scheme, first introduced in 2018, is now being expanded to include the **private sector**, increasing job opportunities.

While this is a **positive step**, the editorial argues that **India's broader labour market issues—like delayed employment, skill mismatch, and lack of job opportunities—need long-term structural reforms** beyond just one scheme.

Key Takeaways

1. **Why is this needed?**
    - Lakhs prepare for UPSC yearly; very few are selected.
    - **In 2024**:
        - 9.9 lakh applied,
        - 5.8 lakh appeared,
        - Only **1,009** finally recommended.
    - The rest face challenges entering the job market late, with no experience and lower lifetime earnings.
2. **What is PRATIBHAA (Setu)?**
    - A **Public Disclosure Scheme** by UPSC.
    - Shares data of **non-recommended candidates** who cleared the **written exam** but not the interview.
    - Includes various UPSC exams like:

- Civil Services
- Indian Forest Service
- Indian Economic/Statistical Service
- Combined Medical Services

3. **How does it work?**
    - Employers can search candidates by **subject or qualification**.
    - Helps match **qualified candidates** with job openings in:
        - Government organisations
        - PSUs
        - **Private sector** (new addition)
4. **What has changed now?**
    - Initially aimed at **government recruitment**, now expanded to **private employers**.
    - Increases chances for unused talent to be absorbed by the job market.
5. **Why this matters**
    - Reduces **wastage of skilled manpower**.
    - Makes UPSC efforts **productive** even for non-finalists.

- Encourages **early career planning** and employment among aspirants.

6. **Limitations & Policy Concerns**

- Labour market problems in India are **deeper**:
  - Late entry into jobs
  - Skill-job mismatch
  - Underemployment
- A single scheme **cannot solve structural issues** in employment generation.

Respect thy neighbour-Indian Express Editorial

International relations

Easy Explanation:

India and China have been working to improve ties after tensions that peaked during the **Galwan Valley clash in 2020**. Recent high-level meetings—like between PM Modi and President Xi at BRICS 2024—signal a cautious thaw. Resumption of border activities and the Kailash Mansarovar Yatra is a good sign, but **major issues** like trade imbalance, border disputes, terrorism, and China's support for Pakistan still **block full normalization**.

China often demands that India respect its "One China" policy (over Taiwan and Tibet), but **doesn't show similar respect for India's concerns** over Jammu & Kashmir or its sovereignty (like the CPEC project going through PoK).

On terrorism, China's past blocks at the UN on Pakistan-based terrorists were frustrating for India. However, the **BRICS joint declaration in 2024** is the **first time** that a terror attack in J&K was explicitly condemned—**a diplomatic win** for India.

However, **China's deepening ties with Pakistan**, suspicious view of India's Quad participation, and regional assertiveness still raise concerns. While positive steps have been taken, a **lack of trust** remains. A **stable relationship** needs mutual respect, realistic expectations, and sustained engagement.

Key Takeaways:

1. **Galwan Impact & De-escalation**:
   India-China relations have been tense since Galwan (2020), but recent BRICS and SCO meetings suggest **a partial thaw**.

2. **Trust Deficit Persists**:
   Despite talks, **mutual distrust**, especially regarding border issues and terrorism, continues to strain ties.

3. **Terrorism Consensus at BRICS**:
   For the **first time**, a BRICS declaration condemned a **terror attack in Jammu & Kashmir**, rejecting terror safe havens—a **win for Indian diplomacy**.

4. **China's Double Standards**:
   China **expects India to respect the One China policy**, but **ignores India's core concerns**—like PoK, CPEC, and China-Pakistan nexus.

5. **Trade & Tech Restrictions**:
   India's **trade imbalance**, **restricted market access**, and new curbs by China on tech and rare earth exports have added to tensions.

6. **Geopolitical Games**:
   China's expanding presence in South Asia (e.g., with Bangladesh and Pakistan) and suspicion toward India's ties with the US and Quad are **strategic friction points**.

7. **Civilizational Disconnect**:
   Historically, China overlooked India's civilizational values of non-violence and mutual respect—**a key philosophical divide**.

8. **The Way Forward**:
   India and China must build ties on **equality, mutual respect**, and **realistic expectations**. Progress will be slow but worthwhile.

The mental health of pilots is the elephant in the room-The Hindu editorial

Governance

Easy Explanation

After the June 2025 Air India flight incident in Ahmedabad, attention turned to the often-ignored issue of **pilots' mental health**. While the exact cause of that incident is still under investigation, this event has sparked a wider conversation.

Pilots face **unique pressures**—irregular sleep, long working hours across time zones, family strains, financial burdens, and the fear of losing their job if they admit to mental struggles. These pressures can build up silently.

Past tragedies like the **Germanwings crash in 2015**, where a pilot deliberately crashed a plane, show how dangerous it can be to ignore these issues.

Many pilots hesitate to seek help due to the **stigma** and fear of losing their license. But **early support, confidential treatment, and understanding policies** can prevent small problems from becoming major risks.

Airlines and aviation authorities need to change how they approach mental health—not through more pressure or tests, but by **trust-building, peer support, and mental health education**.

Key Takeaways

1. **Mental Health is Underrated in Aviation**
    - Pilots often suffer silently due to stigma and job insecurity.
    - Mental health issues can lead to tragic outcomes if ignored.
2. **Documented Incidents Exist**
    - At least **19 known cases of pilot suicide** exist globally.
    - The **Germanwings crash in 2015** was a turning point in pilot mental health awareness.
3. **Unique Job Pressures on Pilots**
    - Sleep disruption due to time zones
    - Irregular schedules affecting family life
    - High financial and emotional stress
    - Exposure to distressing content via social media
4. **Study Findings (Harvard, 2016)**
    - **12.6% of pilots showed signs of depression**
    - **4.1% had suicidal thoughts in the previous two weeks**
5. **Airlines Can Help**
    - Allow **paid leave during personal crises**

- Create **peer-support programs** managed by pilots
- Permit pilots with certain treated conditions to continue flying safely

6. **Policy Shift Needed**
   - Harsh mental health testing may backfire
   - Encourage **early treatment** over punishment
   - **Educate flight instructors** to detect early signs in trainees
7. **Global and National Reforms**
   - The US FAA is now making reforms via a dedicated mental health committee
   - India's DGCA must adopt a **progressive and balanced approach** to pilot wellness
8. **Suggested Legal Framework**
   - The **Health Ministry** could enact rules to inform aviation authorities when a pilot's condition affects safety, **while protecting privacy**
9. **Final Message**
   - Mental health issues in aviation can't be fully eliminated, but **they can be managed** with early action, understanding, and system-level reforms.

[All in one-The Hindu Editorial]

Economy(Agriculture)

Easy Explanation

The **PM Dhan-Dhaanya Krishi Yojana (PMDDKY)** is a new central scheme aimed at **improving agricultural productivity and self-reliance**. It will work by **merging 36 existing schemes from 11 ministries** (like PM-KISAN and PMFBY) and will be **implemented in 100 low-productivity districts** starting from the **2025 Rabi season**.

The government wants to remove the wide productivity gaps between states and districts by **better planning at the district level**, using a **bottom-up approach**. Though the idea seems promising, **public**

investment in agriculture has been declining in recent years. Hence, there is concern about whether merging schemes under one umbrella without increased funding will actually solve farmers' problems.

It is modeled on the **Aspirational Districts Programme** and aims to monitor **117 progress indicators monthly**. But for this scheme to be successful, **local governments, farmers' organisations, and cooperatives must be actively involved**.

Key Takeaways

1. **What is PMDDKY?**
    - A central government scheme to **improve agricultural productivity** and **reduce regional disparities**.
    - Involves **converging 36 schemes** from 11 departments (e.g., PM-KISAN, PMFBY).
2. **Implementation Plan**
    - Launch: **October 2025 (Rabi season)**.
    - Focus on **100 low-performing districts**, selected based on:
        - Low productivity
        - Low cropping intensity
        - Low credit disbursement
    - Based on **NITI Aayog's Aspirational Districts Programme**.
3. **Budget**
    - ₹24,000 crore annually
    - For a duration of **6 years** (total ₹1.44 lakh crore)

4. **District-Level Customisation**
    - Scheme will be run via **District Dhan Dhaanya Samitis**.
    - Focus on **District Plans** aligned with national goals like:
        - Crop diversification
        - Water and soil conservation
        - Self-sufficiency in food, oilseeds, and pulses
5. **Concerns Highlighted**
    - **Decline in public agriculture spending**:
        - From 3.53% of plan outlay (2021-22) to 2.51% (2025-26)
    - Risk of **underfunding critical agriculture needs**.
    - **Private partnerships** need safeguards to ensure **public good**, especially in food security.
6. **Monitoring and Evaluation**
    - **117 key indicators** to be tracked **monthly** by the Centre.
7. **Need for Participation**
    - Effective implementation requires:
        - **State governments**

- **Panchayats & local bodies**
- **Farmer producer organizations (FPOs)**
- **Agri universities and cooperatives**

8. **Big Picture**
   - A **bold step** towards coordinated agricultural reform.
   - Success depends not just on convergence, but on **adequate funding**, **ground-level participation**, and **localised planning**.

20th July 2025

What has preliminary crash report revealed?: TH FAQ

EASY EXPLANATION

After the crash of Air India Flight AI 171 on June 12 in Ahmedabad, several foreign media outlets started publishing details from inside the ongoing investigation — especially technical points and pilot actions. This happened *before* India's Aircraft Accident Investigation Bureau (AAIB) had even released its official preliminary report.

In response, the AAIB urged everyone to wait for the **final report** and called these leaks **irresponsible**, as they were based on **partial and unverified information**. The AAIB explained that their process follows international standards and that conclusions must only come after the full investigation.

The **U.S. National Transportation Safety Board (NTSB)** supported India's AAIB, saying that these reports were **speculative** and that **major investigations take time**.

Despite this, foreign media like *The Wall Street Journal*, *The Air Current*, and *Corriere della Sera* have published stories suggesting that **pilot error or manual actions on fuel switches** may have played a role.

Indian pilots' associations have strongly opposed these leaks, with one group planning legal action for **defamation and emotional distress**.

The AAIB's **preliminary report** does not yet assign blame but confirms that both engines stopped due to the **fuel cut-off switches being flipped** — one after the other, just a second apart. The cockpit voice recording captured one pilot asking the other why the switch was turned off, and the other replying that he did not do it.

The engines restarted seconds later, and the pilots declared a **Mayday emergency**. While no issues were found with the aircraft or engine type, pilot groups have criticized the report for ignoring possible **system vulnerabilities**.

Experts say the fuel switches in Boeing 787s are **manual and not hackable remotely**, and that any engine issues would have been detected by **real-time monitoring systems** used by Boeing and GE.

In response to the incident, **Air India has been ordered to conduct additional safety checks** on its Boeing 787s, especially around the **fuel control switches**. This follows a 2018 FAA advisory about potential issues with the locking mechanism of such switches.

Finally, experts like IATA's chief suggest that installing **video cameras in cockpits** could help in future investigations, though this is part of a long-running global debate.

The final report will take time but is expected to provide **clear and credible conclusions**.

KEY TAKEAWAYS

Why is the issue in the news?

- Media reports leaked partial information on the Air India AI 171 crash investigation.
- India's AAIB responded with a strong appeal to wait for the official final report.

What did the AAIB say?

- It follows global rules for aircraft accident investigation.
- Accused foreign media of drawing premature conclusions.
- Preliminary report is about *what happened*; final report will cover *why*.

What does the preliminary report reveal?

- Both engines lost power after fuel switches were moved from *Run* to *Cutoff* — one second apart.
- Voice recorder captured one pilot questioning the fuel switch action.
- Engines restarted soon after; a Mayday call was made.
- No faults found in aircraft or engines, but pilot bodies want deeper inspection of systems.

Reactions:

- Indian pilot bodies criticized media leaks, citing reputational damage.
- NTSB and IATA backed AAIB's call for restraint and thorough investigation.

What are experts saying?

- Boeing 787's fuel switches are **manual-electrical** — not remotely controlled.
- Monitoring systems would have detected engine or software faults in real time.
- Data and health systems on Boeing aircraft are extensive and sophisticated.

What safety steps have been taken?

- DGCA has ordered inspections of Boeing 787 and 737 fuel control switches.
- Checks follow an older FAA advisory from 2018 about faulty locking mechanisms.

Debate reignited:

- Aviation experts suggest **adding video cameras** in cockpits to improve future accident investigations.

Conclusion:

- Only a full, transparent, and careful investigation can reveal the truth — and this process needs time, not speculation.

What does the sugar and salt labelling say?: TH FAQ

Science

EASY EXPLANATION

The Health Ministry of India has asked all government departments to display clear warnings about how much **sugar and oil** are in common snacks like samosas, kachoris, vada pav, burgers, and pizza. This information should be displayed not just in canteens, but also in **lobbies, meeting rooms, and even on official stationery** like letterheads and folders.

Why? Because India is facing a **huge rise in non-communicable diseases (NCDs)** like heart problems, diabetes, and cancer, which now account for **over 66% of deaths** in the country. A major reason is our increasing intake of foods high in **sugar, salt, and fat**, often without realizing it.

The Ministry wants to make people more aware of what they are eating. These visual reminders — boards showing fat and sugar content — will act as **nudges** to encourage healthier food choices.

Experts say that foods with too much added sugar, refined oil, and salt — even those that are marketed as healthy — are often harmful. At the same time, people don't eat enough **fruits, vegetables, and whole grains**, which are essential for good health.

How do we measure what's "too much"? Scientists use lab tests and food composition databases to calculate the amount of sugar, salt, and fat per 100g of food. If sugar gives more than 10% of total calories, or fat gives more than 15%, or if salt is over 625 mg per 100g — that food is considered **HFSS (High in Fat, Sugar, or Salt)**.

The ICMR's latest guidelines and the WHO both emphasize the need to eat **less than 25g of added sugar**, **less than 65g of total fat**, and **less than 5g of salt** per day for adults.

The ultimate goal is not to ban or shame food — but to **encourage long-term, healthy eating habits**, especially in children and youth.

KEY TAKEAWAYS

What is the new government initiative?

- Mandatory display of **sugar and oil content** on common Indian snacks.
- Must be shown in cafeterias, lobbies, meeting rooms, and on official stationery like letterheads and notepads.

Purpose:

- To **nudge people** into making healthier food choices.
- Part of a national effort to fight the rise in **non-communicable diseases (NCDs)**.

Why is this important?

- Over **66% of deaths in India** are due to NCDs like heart disease, diabetes, and cancer.
- These diseases are increasing, especially among people over 30.

What are HFSS foods?

- HFSS = High Fat, Sugar, Salt.
- Defined as:
    - Sugar >10% of total calories
    - Fat/oil >15% of total calories
    - Salt >625 mg per 100g
- Usually processed and **low in essential nutrients**.

How is this data calculated?

- Through **lab analysis** or ingredient data from ICMR's Indian Food Composition Tables (IFCT).
- Expressed per **100g** for clarity.

What are the WHO and ICMR guidelines?

- Adults should consume:
    - **<65g fat/day**
    - **<25g added sugar/day**
    - **<5g salt/day**
- Children have stricter limits depending on age.

Expert advice:

- Cook at home more often.
- Eat local, fiber-rich, less processed foods.
- Small, sustainable changes matter more than extreme diets.

Conclusion:

- The initiative promotes **informed food choices**.
- Aims to tackle **obesity and lifestyle diseases** starting from public spaces and institutions.

[What is the universe's antimatter mystery?: TH FAQ]

Science

EASY EXPLANATION

Scientists working at the **Large Hadron Collider in Europe** have made a big discovery. They found that a certain kind of tiny particle called a **baryon** (specifically, the Λb0 particle) and its antimatter version don't behave the same way when they break apart, or **decay**. This is important because it might help us understand one of the **biggest mysteries in science**: why the universe has more **matter** (like stars, planets, and people) than **antimatter** (which should have been created in equal amounts during the Big Bang).

Normally, matter and antimatter are supposed to behave like mirror images of each other — if you flip them and swap charges, their behavior should still follow the same rules. But in reality, this **symmetry is sometimes broken**, and that's called **CP violation** (C for charge, P for parity or mirror flip). CP violation is thought to be one of the reasons matter ended up dominating antimatter in our universe.

Until now, scientists had only seen CP violation in **mesons** (another kind of particle), but this new discovery shows it in **baryons**, which are more common in the visible universe. This is the **first time** such a thing has been seen in baryons, and it's a **major breakthrough**.

Scientists observed this using the **LHCb detector** at the Large Hadron Collider by studying billions of proton collisions. They used **machine learning** to find rare cases where Λb0 and its antimatter counterpart decayed into specific sets of particles. Then they carefully checked how often the particle decayed versus the antiparticle. They found a **difference of about 2.45%**, which is enough to qualify as a real scientific discovery.

Even though this difference is not enough to fully explain why the universe is full of matter, it's a **huge step forward**. It helps scientists look deeper into the rules of physics, and maybe discover even more differences in how nature treats matter and antimatter — and why we exist at all.

KEY TAKEAWAYS

What was discovered?

- Scientists found **CP violation in baryons** for the first time.
- Specifically, the **Λb0 baryon** and its antimatter counterpart decay at **different rates**.

Why is this important?

- The Big Bang should have created **equal amounts of matter and antimatter**, but the universe is mostly matter.
- This imbalance is a mystery, and CP violation may help explain it.
- CP violation had only been seen in **mesons** before — this is the first time it's seen in **baryons**, which make up most visible matter.

What is CP violation?

- **C (charge conjugation)**: swapping a particle with its antiparticle.
- **P (parity)**: flipping left and right, like in a mirror.
- If the laws of physics stay the same after both these flips, there is CP symmetry.
- **CP violation** happens when this symmetry is broken — i.e., the particle and antiparticle behave differently.

How was the experiment done?

- At the **Large Hadron Collider** using the **LHCb detector**.
- Scientists collected data from **billions of proton-proton collisions**.
- **Machine learning** was used to detect rare decays of Λb0 and its antiparticle into specific particles.
- The **difference in decay rates** (called CP asymmetry) was measured.

Main result:

- CP asymmetry measured at **2.45%**.
- Result is **5.2 sigma**, which means it is statistically significant enough to be called a discovery.

Limitations and future directions:

- The CP violation found is **not large enough** to fully explain matter-antimatter imbalance.
- Scientists will now look for **more such violations in other baryons**.
- Aim is to find **new particles or forces** that could deepen our understanding of the universe.

Why does this matter to us?

- This discovery is a step towards answering a **fundamental question**: Why does the universe exist in its current form — full of matter and not antimatter?
- Every **atom in our body** exists because matter somehow won — this research helps explain how.

BioEmu sketches the moving picture of protein structures: TH Science

Science

EASY EXPLANATION

Proteins in our body are not stiff like statues. They constantly **move, twist, open, fold, and change shape**, and these movements are crucial for them to do their jobs — like breaking down food (enzymes) or sending signals in cells.

A tool called **AlphaFold**, developed earlier using AI, can predict what a protein looks like — but only in one fixed, stable form, like a single photo. But in reality, proteins act more like a **movie**, constantly shifting shapes depending on conditions.

Now, a new AI tool called **BioEmu**, developed by Microsoft and researchers in the US and Germany, takes this a step further. It can predict **all the different shapes a protein naturally takes**, like a full album of photos showing different poses. This is called an **equilibrium ensemble**.

Earlier, scientists used a method called **Molecular Dynamics (MD)** to do this, which is super accurate but **very slow and expensive** — it could take weeks using powerful computers. BioEmu uses AI to **do this much faster**, even in just **a few hours on a single GPU**.

To teach BioEmu, scientists gave it real protein data, results from AlphaFold, motion data from MD simulations, and effects of mutations. Once trained, BioEmu can generate **thousands of possible protein shapes**.

It even caught **hidden pockets in proteins**, where drugs can fit — very important in **drug discovery**, especially for diseases like cancer.

However, BioEmu has limitations:

- It **doesn't show how** a protein moves from one shape to another (just the final poses).
- It **can't handle complex environments**, like temperature or pH changes, cell walls, or how different proteins interact.
- It **can't predict drug interactions** as clearly as MD can.

So, scientists say it's best to **use both tools together**: BioEmu for quick exploration, and MD for detailed simulations.

In simple terms, **AlphaFold gives a blueprint**, **BioEmu shows the dance moves**, and **MD explains how the dance happens**.

KEY TAKEAWAYS

What is BioEmu?

- A new **AI-based deep learning system** developed by Microsoft, Rice University (USA), and Freie Universität (Germany).

- Predicts the **full range of shapes** a protein can take in natural conditions.
- Described as modeling the **"equilibrium ensemble"** of proteins.

How does it improve on AlphaFold?

- **AlphaFold** gives one stable structure.
- **BioEmu** gives **thousands of shapes** a protein might take, capturing its **flexibility**.

How is it different from Molecular Dynamics (MD)?

- **MD** is accurate but very **slow and costly**.
- **BioEmu** is **fast and efficient**, using AI to **generate results in hours** on a single GPU.
- But MD provides detailed **step-by-step motion**; BioEmu gives **final forms**, not the journey.

Training and Functioning of BioEmu

- Trained on:
  - **Millions of AlphaFold structures**
  - **200 milliseconds of MD simulation data**
  - **Half a million mutant protein sequences**
- Learns to generate protein shapes using **AI diffusion models** (reverse of dissolving sugar in water).

Performance and Achievements

- Predicted:
  - **83% of large** protein shape changes correctly.
  - **70–81% of small** changes accurately.
- Identified **hidden drug-binding sites** in proteins like **Ras (linked to cancer)**.
- Captured **local unfolding and refolding**, helping understand how proteins switch "on" or "off".

Limitations

- Doesn't simulate:
  - **How proteins move** from one shape to another.
  - **Effects of temperature, pH, or cell environment**.
  - **Drug molecules, cell membranes**, or **protein-protein interactions**.
- Can't give a **confidence score** like AlphaFold.
- Seen as a **hypothesis-generating tool**, not final proof.

Why does it matter?

- Makes **drug discovery** faster and more scalable.
- Can help predict how proteins behave in **health and disease**.
- Reduces resource costs for labs that can't afford large supercomputers.

Future Implications

- Needs **trained researchers** who understand both **biology** and **machine learning**.
- BioEmu and MD can be used **together**: one for breadth, one for depth.
- Could transform how **we study life at the molecular level**.

Greater awareness helps to deal with rare diseases: TH Science

Science

EASY EXPLANATION

There are nearly **10,000 known rare diseases** in the world today, and more are being discovered. Although each of these diseases affects only a few people, **together they impact around 300 million people worldwide** — including about **90 million in India**. Sadly, most of these diseases affect **children**, and about **30% of them don't survive past age five**.

Most rare diseases are **genetic**, meaning they are caused by changes in our genes. These diseases are **often unknown to many doctors**, which delays diagnosis. Without proper data and reporting, it's hard for governments to **create policies or support systems**, and for patients to find others facing the same condition. It also makes it tough for the healthcare industry to **develop treatments**.

To help, scientists like **Dr. Iliyas Rashid** and his team at the **Tata Institute for Genetics and Society** have created a special tool called **GenTIGS**. This is a **gene database** for rare genetic diseases. Patients or families can use it by entering symptoms to find out what rare disease they might be dealing with. They can then take this to a doctor and even find patient support groups.

But there's a major problem: **less than 5% of rare diseases have approved treatments**, and even those are **very expensive**, especially for Indian patients. Health insurance often doesn't cover these costs. Some people get help through **crowdfunding** or rare cases of companies donating medicines, but these are not dependable solutions.

In India, the issue is even bigger because of **endogamy** — the custom of marrying within one's community. If a genetic problem exists in a community, these marriages can keep passing it down to future generations.

In such cases, **genetic counselling before marriage** is one way to reduce risk. In Tamil Nadu, a group called **MDCRC** has worked on a rare condition called **Duchenne Muscular Dystrophy (DMD)**, which affects only boys. They screened many people to identify carriers and counselled them so that **two carriers don't marry**, preventing children from getting the disease. Over time, such efforts can **eliminate the disease entirely**.

So, the article emphasizes the need to:

- **Raise awareness**
- **Support research tools like GenTIGS**
- **Promote genetic counselling**
- **Create strong policy and support systems for rare disease patients**

KEY TAKEAWAYS

What are rare diseases?

- Nearly **10,000 rare diseases** are identified globally.
- Around **80% are genetic** in nature.
- Primarily affect **children**, with **30% not surviving beyond age five**.
- While individually rare, they **affect 300 million people globally**, including about **90 million in India**.

Challenges with rare diseases

- **Lack of awareness** among doctors and society.
- **Delayed or incorrect diagnosis** is common.
- **Data is missing** due to underreporting.
- Makes it difficult to:
    - Design public health policies.
    - Connect patients to each other.

- Encourage pharmaceutical industry to develop treatments.

Role of GenTIGS (Genetic Database)

- Developed by **Dr. Iliyas Rashid** and team at Tata Institute for Genetics and Society, Bengaluru.
- Allows users to input symptoms and **predict potential rare diseases**.
- Helps families approach doctors and connect with **support groups**.
- Aims to reduce **suffering and diagnosis delays**.

Treatment availability

- Less than **5% of rare diseases** have approved treatments (by the US FDA).
- Treatments are often **prohibitively expensive**.
- **Health insurance rarely covers** these.
- Some patients rely on **compassionate drug access** or **crowdfunding**, which are unreliable.

The Indian context: endogamy and genetics

- **Endogamy** (marrying within one's community) increases the chance of **genetic conditions being passed on**.
- This keeps certain genetic diseases **circulating within communities**.

Example: Work by MDCRC on Duchenne Muscular Dystrophy (DMD)

- DMD affects **only boys**, but **women are carriers**.
- The **Molecular Diagnostics Counselling Care and Research Centre (MDCRC)** in Coimbatore is doing:
  - **Genetic screening** across Tamil Nadu.
  - **Counselling carriers** to avoid marriage with another carrier.
  - Aim: **Eliminate DMD** from the state.
- This model can be applied to **other disorders across India**.

Recommendations and future action

- **Raise awareness** among public and doctors.
- **Genetic counselling** before marriage in vulnerable communities.
- Develop **India-specific policies** for rare diseases.
- Encourage **low-cost research and screening**.
- Scale up **databases like GenTIGS** to improve diagnosis and support.

Conclusion

- **Awareness, early diagnosis, and genetic counselling** are key tools.
- Collaboration between scientists, healthcare providers, and community groups can help **reduce the burden** of rare diseases.

21st July 2025

Why 78% coal plants won't need to add anti-pollution devices-Indian Express Explained

Environment

Easy Explanation:

Most of India's coal power plants (78%) have now been **exempted** from installing machines called **FGD devices**, which are used to **remove Sulphur Dioxide (SO_2)** — a harmful gas — from their emissions. SO_2 contributes to **air pollution (PM2.5)** and **acid rain**, which harm both human health and the environment.

The government had earlier made it **mandatory to install FGD devices by 2017**, but the deadline kept getting extended. Now, the Environment Ministry says that many plants **don't need to install them at all**, citing studies that claim SO_2 levels are already under control. However, **experts disagree**, saying these studies don't reflect the **real-world pollution impact**.

Key Takeaways

- SO_2 from coal plants contributes heavily to **PM2.5 pollution**, which harms human health (causes asthma, heart issues, etc.) and environment (acid rain).
- FGD devices reduce SO_2 emissions but are costly and can disrupt power supply.
- The government classified coal plants into three categories based on location and pollution levels:
    - **Category A:** Near Delhi-NCR or big cities (must install FGDs by 2027)
    - **Category B:** Near critically polluted or non-attainment cities (case-by-case)
    - **Category C:** Others (mostly exempted from FGD installation)
- Nearly 78% of plants fall in Category C and don't need FGDs now.
- Studies supporting this exemption claim SO_2 levels near these plants are within national air quality standards.
- Experts criticize this, saying monitoring stations don't fully capture pollution spread and SO_2's conversion to more harmful particles.
- SO_2 pollution can travel long distances and last about 10 days in the atmosphere, worsening air quality far away.
- The government aims to focus on reducing overall particulate pollution, not just SO_2.

Unlocking investment-Indian Express Editorial

Economy

Easy Explanation

The world is experiencing a **sharp decline in foreign direct investment (FDI)**, especially in **emerging markets and developing economies (EMDEs)** like India. Since the 2008 global financial crisis, FDI as a share of GDP has fallen steadily for these countries.

India has attracted a good amount of **gross FDI** — $81 billion in FY25 — but its **net FDI** (after adjusting for money going out) has dropped **by 96%** due to:

- Rising **repatriation of profits**

- Growing **Indian investment abroad**

- Low **reinvestment** by existing foreign investors

This shows India needs a stronger, more focused **policy approach** to attract and retain foreign investment. A proactive, state-level and national strategy is crucial to take advantage of the global economic rebalancing.

Key Takeaways

1. Global FDI trends:

- FDI to EMDEs dropped to **$435 billion in 2023**, the lowest since 2005

- FDI as a share of GDP in EMDEs has declined from **5% (2008)** to **2% (2023)**

- Slower pace of new **investment treaties** (only 380 since 2010 vs 870 in 2000–09)

- Causes: **Geopolitical tensions**, **structural headwinds**, **policy uncertainty**

2. India's unique FDI experience:

- **Gross FDI rose 14%** to $81 billion in FY25

- But **net FDI plunged 96%** to just $0.35 billion — the lowest in nearly 20 years

- Reasons: High repatriation, more outward FDI by Indian firms, low reinvestment

3. Sector and state-level trends:

- Global FDI is shifting towards **services, clean energy, and construction**

- In India, interest is growing in **energy and communication** sectors

- FDI is concentrated in **Maharashtra, Karnataka, Tamil Nadu**

- Decline seen in **Gujarat and Delhi**

4. World Bank insights:

- FDI positively impacts growth, but more so in economies with:
    - **Open trade regimes**
    - **Strong institutions**
    - **Human capital development**
    - **Lower informality**

5. What India should do:

i. Trade and treaties:

- Sign more **FTAs and trade deals**
- Strengthen ties with **trusted geopolitical partners**
- Trade openness increases FDI inflows (each 1% rise in trade-to-GDP ratio → 0.6% more FDI)

ii. Deregulation and governance:

- Reduce **red tape**, enforce contracts, and ease doing business
- Speed up regulatory reforms like the **Deregulation Commission**

iii. Infrastructure and logistics:

- Fix **trade bottlenecks** and **digitise customs clearance**
- Improve port efficiency (e.g., Kolkata has highest average import clearance time)

iv. Coordination:

- **Centre, states, and agencies** must align efforts to attract FDI
- Build synergy between **domestic policy and international rule-making**

v. Role of states:

- States must lead in creating **FDI-friendly ecosystems** (land, logistics, manpower)

- Customised policies needed based on sector, state strengths, and timing

NOT SO PRIVATE-Indian Express Editorial

Polity

Easy Explanation

The **Supreme Court of India** has ruled that a **secretly recorded phone call** between a husband and wife **can be used as evidence** in **divorce or matrimonial cases**.

Earlier, a High Court had said this was a violation of privacy. But the Supreme Court clarified:

- In a **marriage**, the **right to privacy** is not absolute.

- In **legal disputes between spouses**, courts can consider such recordings to ensure a **fair trial**.

- In today's **digital age**, things like phone calls, texts, CCTV footage, and emails are common types of evidence.

- However, courts must still carefully check if such evidence is **relevant and not misused**, especially because **not everyone has equal access to technology**.

Key Takeaways

1. **SC Allows Secret Recordings as Evidence**
    - Phone conversations recorded without the spouse's knowledge **can be admitted in court** for divorce or custody battles.
2. **Privacy vs Fair Trial**
    - The Court said that while privacy is important, **the right to a fair trial can sometimes outweigh it**.
3. **Privacy Within Marriage Not Absolute**
    - According to SC, **privacy rights apply mainly against the State**, not always between individuals like husband and wife.
4. **Digital Era Recognition**

- The ruling acknowledges that in today's world, **evidence often comes from digital sources** like recordings, texts, and emails.

5. **Tech Access is Unequal**

- The Court also noted that **not everyone—especially women—has equal access to smartphones and technology**, which must be considered by trial courts.

6. **Impact on Future Cases**

- This could influence other sensitive areas like **marital rape**, where **proof is difficult** and covert evidence might be important.

7. **Final Say with Trial Courts**

- Even though SC allowed covert evidence, **lower courts must decide** if it is **reliable and fair** in each case.

The soil of a nation-Indian Express Editorial

Economy

Easy Explanation

India has made great strides in food production — from needing food aid in the 1960s to becoming the **world's largest rice exporter** in 2024–25. Yet, many Indian children still suffer from **malnutrition**, even though food availability has increased.

Why? Because the **quality of soil** affects the **nutrition in crops**, and our soils are in **very poor health**.

The overuse of nitrogen-rich fertilizers (like urea) and neglect of other nutrients like phosphorus, potassium, and micronutrients (zinc, iron, boron, sulphur) have **damaged soil health** and **lowered the nutritional value of crops**.

This leads to what experts call "**hidden hunger**" — when people get enough calories but not enough nutrients, especially zinc, which is linked to **child stunting and poor brain development**.

India must **shift to science-based, balanced fertilisation**, using **soil testing** to guide what the land actually needs — not just dump nitrogen-rich fertilizers like urea. This will not only improve agriculture but also tackle malnutrition and public health issues.

Key Takeaways:

1. **India's Agricultural Success vs Nutrition Failure**

- India is the world's top rice exporter and has reduced poverty, yet **child malnutrition remains high**:

- 35.5% stunted
- 32.1% underweight
- 19.3% wasted (NFHS-5)

2. **Unhealthy Soils = Unhealthy People**
    - **Crops grown on nutrient-poor soils** are also **nutrient-poor**, leading to **"hidden hunger"** or micronutrient malnutrition in humans.
3. **Status of Indian Soils (2024 Data)**
    - **70% low in nitrogen**, **53.5% low in organic carbon**,
    - Only 20% have sufficient soil organic carbon
    - **Zinc, sulphur, and boron deficiencies** are widespread
4. **Overuse of Nitrogen (Urea)**
    - Punjab uses **61% more nitrogen** than needed
    - Only 35–40% of nitrogen from urea is used by plants; rest is lost as **pollution** or contaminates groundwater
5. **Environmental Impact**
    - Nitrous oxide from urea is a greenhouse gas **273 times more potent than CO_2**
    - Nitrate contamination of groundwater is a **health hazard**

6. **Fertiliser Use Must Be Balanced**
    - Use of **phosphorus and potassium is too low**, and **micronutrients are neglected**
    - Fertiliser-to-grain productivity ratio has dropped from **1:10 in the 1970s to 1:2.7 in 2015**
7. **Need for a Paradigm Shift**
    - India must switch to:
        - **Tailored, crop-and-region-specific fertiliser strategies**
        - **Use of soil health cards and testing**
        - **Restoration of soil organic carbon**
8. **Health and Agriculture Are Linked**
    - This is **not just an agricultural problem**—it is a **public health issue**.
9. **Initiatives in Progress**
    - ICRIER and OCP Nutricrops are collaborating to build **region-specific, data-driven soil nutrition solutions**
10. **The Core Message**
    - To improve human health, we must **first heal the soil**. A healthy nation starts with **healthy soil**.

What is the European Commission's age check plan to keep children safe online?-The Hindu

Text and Context

International relation

Easy Explanation

The **European Commission** is creating an **age verification app** to stop **children from accessing harmful content online** (like pornography or violent material). This app is part of the **Digital Services Act (DSA)** and aims to **protect kids** while still **respecting adults' privacy**.

The system is being tested and developed with support from countries like **France, Italy, Denmark, Greece**, and **Spain**. It will likely link with the **European Digital Identity (eID)** to verify age without exposing personal details.

However, some critics — including adult content websites like Pornhub — argue that the plan could **risk user privacy**, be **technically flawed**, and even **drive users to unsafe websites**.

Key Takeaways

Why is age verification needed?

- To protect minors from:
    - Pornographic or violent content
    - Cyberbullying, online addiction, and unwanted contact from strangers
- To allow safer online experiences tailored by age

What is the plan?

- An EU-wide age verification app is being developed under the **Digital Services Act**
- Will use **European Digital Identity (eID)** tech to verify age securely
- No personal info like exact age or name will be shared — only a "Yes/No" age check
- Pilot testing is ongoing in countries like **France and Italy**

What about adult privacy?

- The app uses privacy-friendly methods like **zero-knowledge proof** (you prove you're over 18 without revealing who you are)
- The EU says browsing history won't be tracked and user identity will remain private

Why is there criticism?

- Critics argue it may increase privacy risks and cause data breaches

- Porn sites like **Pornhub (owned by Aylo)** say:
    - Age verification should happen at the **device level** (by Apple/Google)
    - This method may drive users to unsafe or illegal websites
    - Repeatedly entering personal data poses a **security risk**

Legal debate:

- In **France**, courts are debating whether mandatory age checks violate EU laws
- President Macron supports stricter rules, even suggesting banning social media for users under 15

[Mental fatigue can trick the brain into taking the easy way out-The Hindu Science]

Science

Easy Explanation

Even if you're sitting at a desk all day, your brain can get tired from constantly focusing — this is called **cognitive fatigue**. A new study shows that when you're mentally tired, you're more likely to choose **easier tasks**, even if those tasks give **less reward**. This happens because fatigue **changes how your brain values effort**.

For example, after a long day, it's easier to watch videos than go to the gym or read. The study found that a specific part of the brain, the **insula**, gets input from other brain areas about how tired you feel and then influences your **choices based on effort**.

Surprisingly, even when people felt mentally tired, their performance didn't drop. Instead, they just started **choosing easier tasks**. This suggests the brain protects performance by changing behavior.

Key Takeaways

1. What is cognitive fatigue?

- It's the mental tiredness you feel after long periods of focus, even in non-physical work.
- It builds up with continuous effort on tasks like studying, working, or problem-solving.

2. What did the study find?

- People who were mentally tired **chose easier tasks**, even if it meant earning less.
- When well-rested, they were willing to take on **harder tasks for more reward**.
- Mental fatigue affects **decision-making**, not just performance.

3. What happens in the brain?

- **dlPFC** (behind the forehead) senses mental effort and fatigue.
- **Insula** evaluates if the effort is "worth it" and helps make decisions.
- Fatigue changes how much "value" the brain places on effort.

4. Why is this important?

- Even when we don't perform worse, we might **avoid challenging tasks** when tired.
- This explains everyday behavior like skipping workouts or important tasks when mentally drained.

5. Implications for health and productivity:

- Cognitive fatigue affects patients with conditions like **stroke, MS, depression, and anxiety**.
- Understanding fatigue can help design better **treatment and productivity strategies**.

6. What can you do?

- Take **regular breaks** to prevent mental fatigue.
- **Reframe difficult tasks** to make them feel less effortful.
- Be aware that when you're mentally tired, your **decisions may be biased toward the easier route**, even if it's not the best.

A long list-The Hindu Editorial

International relations

Easy Explanation

The U.S. has officially labelled **The Resistance Front (TRF)** — the group that claimed the **April 2025 Pahalgam attack** — as a **Foreign Terrorist Organization (FTO)** and a **Specially Designated Global Terrorist**. This decision helps India because TRF is considered a **proxy of the banned group Lashkar-e-Taiba (LeT)**, which is believed to be supported by Pakistan.

Although this is a positive development, U.S. actions after the attack have shown **inconsistencies** — including claims that the U.S. mediated the India-Pakistan ceasefire and public praise for Pakistan's military. These mixed signals raise doubts about how strongly the U.S. will act against Pakistan's terror links.

India must continue pushing through diplomatic and legal channels to hold Pakistan accountable and prevent future terrorist attacks.

Key Takeaways

1. TRF Designated as Terror Group

- The U.S. listed TRF as a **Foreign Terrorist Organization**.
- TRF claimed responsibility for the **April 2025 Pahalgam terror attack**.
- TRF is recognized as a **proxy for Lashkar-e-Taiba (LeT)**.

2. Supports India's Stand

- Validates India's claim about TRF-LeT links.
- Boosts India's efforts to get TRF listed under **UNSC 1267 Sanctions Committee**.
- Counters earlier U.S. and UN omission of TRF's name due to **Pakistani influence**.

3. Exposure of Pakistan's Role

- Despite claims by Pakistan that LeT is inactive, the TRF's activity suggests otherwise.
- Strengthens global recognition of **Pakistan's continued use of terror proxies**.

4. Contradictions in U.S. Response

- The Trump administration:
    - Claimed to have **negotiated the ceasefire** between India and Pakistan.
    - Equated India and Pakistan's actions — a move welcomed by Pakistan.
    - Hosted and praised **Pakistan's military chief**, raising questions about U.S. sincerity.

5. Tahawwur Rana's Extradition

- U.S. extradited **Tahawwur Rana** (linked to the 2008 Mumbai attacks) to India earlier.

- TRF's designation may signal a **renewed U.S. commitment to help India fight terrorism**.

6. Need for Continued Indian Efforts

- India must:
    - Maintain **diplomatic pressure** on Pakistan.
    - Use **legal tools** to pursue justice.
    - Ensure the global community holds Pakistan accountable for **sponsoring terror**.

22nd July 2025

Syria's continuing turmoil: al-Sharaa,Druze &Israel-Indian Express Explained

International relations

Easy Explanation

Syria is again facing serious violence. In the southern Suweida region, fighting broke out between the **Druze minority** and **Sunni Bedouin militias**, killing over **1,000 people**.

To support the Druze, **Israel launched airstrikes** on Syria's Defense Ministry in Damascus.

Syria's new President, **Ahmed al-Sharaa**, wants to rebuild the country after a 14-year civil war. But he is **distrusted by minority groups** like the **Alawites, Kurds, and Druze** because of his past links to al-Qaeda and failure to stop violence.

While **Arab countries and Turkey** are helping Syria's recovery, **Israel's military actions and territorial ambitions** in southern Syria are making the situation worse. The country remains **unstable** due to both **internal divisions** and **external interference**.

Key Takeaways

1. **Deadly Clashes**: Over 1,000 killed in Druze–Sunni Bedouin fighting in Suweida.
2. **Israeli Airstrikes**: Israel backs Druze militarily, attacks Syrian government targets.
3. **Distrust in Leadership**: President Sharaa's past as an extremist leader fuels minority distrust.
4. **Minority Tensions**: Alawites, Kurds, and Druze oppose central control and new constitution.
5. **Geopolitical Game**: Israel uses Druze issue to justify strikes and expand control in Golan Heights.
6. **Arab-Turkish Support**: Gulf states and Turkey back Syria's rebuilding, want to limit Iran's role.
7. **Ongoing Instability**: Ethnic divisions + foreign interference = fragile peace, uncertain future.

Why so many' snake rescuers' in India get bitten on the job-Indian Express Explained

Environment

Easy Explanation

In India, many self-styled "snake rescuers" are **dying from snakebites** — not because they're saving lives, but because they're doing dangerous **stunts for social media fame**.

For example, one man recently died after placing a **cobra around his neck** during a video. This isn't an isolated case — **hundreds have died** doing such acts.

These individuals often **lack proper training**, but still handle venomous snakes like cobras and vipers. Some even **stage fake rescues** for views and money.

Although a few states like **Kerala and Maharashtra** have introduced rules to regulate snake rescue, in most of India, **anyone can do it without certification**.

Experts say **rescues should be done using tools** (like snake hooks), not by hand. Many victims are **young, untrained, and poor**, and their families suffer after their death.

A possible solution could be to **ban filming and sharing stunt videos**, so only serious and trained rescuers remain.

Key Takeaways

1. **Rising Deaths**: Many snake rescuers are dying from venomous bites, especially during social media stunts.

2. **Social Media Fame**: Dangerous acts with snakes are being done for **followers, fame, and income**, not real conservation.

3. **Lack of Regulation**: Most states have **no strict rules** for who can rescue snakes, leading to **untrained and reckless rescuers**.

4. **Few States Act**: Only **Kerala, Maharashtra, Odisha, Gujarat, Karnataka** have rules; **Kerala's SARPA app** is most effective.

5. **High Risk Snakes**: India's **"Big Four" venomous snakes** (cobra, krait, Russell's viper, saw-scaled viper) are **unpredictable and deadly**.

6. **Wrong Methods**: Rescuers often **touch or display snakes**, which increases bite risk and **violates the Wildlife Act**.

7. **Real Costs**: Many rescuers are **young, under-educated, from poor families**, and their deaths create **emotional and economic loss**.

8. **Suggested Solution**: Penalize **filming and sharing rescue videos** to discourage stunt-driven rescues and keep the job **safe and professional**.

Verdict should wake us up-Indian Express Editorial

Governance

Easy Explanation:

The **Bombay High Court's acquittal** of all accused in the **2006 Mumbai train bomb blasts**, which killed 180+ people, has shocked many. The article expresses deep concern over failures in India's **criminal justice system** — from weak investigations to poor prosecutions and lack of witness protection. Despite years of effort by police and special squads, the court ruled there was not enough credible evidence. The writer (a former crime branch officer) reflects on operational challenges, political pressure, and calls this a **wake-up call** to strengthen forensic capacity, legal processes, and coordination across police, prosecutors, and judiciary. He also warns against political interference in bodies like the **NIA**, which has a strong conviction rate.

Key Takeaways:

- **Shocking Acquittal**: All accused in the 2006 Mumbai train blasts case were acquitted after 19 years, raising serious questions about the criminal justice system.
- **Justice Denied**: Over 180 killed and 800+ injured in the blasts—yet no one held accountable.
- **Investigation Failures**: Key gaps in evidence, over-dependence on confessions, and lack of scientific proof led to weak prosecution.
- **Delay in Trial**: Convictions came 9 years after the blasts (in 2015); acquittals took 19 years—justice delayed and denied.
- **Witness Issues**: Fear of testifying and poor witness protection diluted the case. Courts now distrust such testimonies.
- **Systemic Breakdown**: The case reflects a **collective failure**—police, prosecutors, courts, and governance.
- **Need for Reform**: Urgent need for better investigation training, forensic capability, and video-recording of confessions.
- **NIA as a Model**: NIA's 95% conviction rate cited as an example—needs independence and state-level replication.
- **Wake-up Call**: The judgment is a clarion call for deep reform in India's criminal justice system.

[LISTEN TO THE COURT-Indian Express Editorial]

Sociology

Easy Explanation

The Supreme Court recently ruled that **tribal women have equal rights to ancestral property**, overriding **customary laws** that previously denied them inheritance. The case began in 1992 when a tribal woman, Dhaiya, was repeatedly denied property rights based on local customs. The **Court emphasized that**

customs cannot violate constitutional rights, especially **Article 14 (Right to Equality)**. It also referenced a similar 2022 judgment supporting property rights for a tribal woman in Odisha. Although **Hindu Succession Act** doesn't apply to Scheduled Tribes, the Court made it clear that **constitutional values of gender justice and equality** must prevail over discriminatory traditions.

Key Takeaways:

1. **Historic SC Verdict (July 17, 2024):**
   Supreme Court ruled that **tribal women have equal right to ancestral property**, striking down the Chhattisgarh HC's 2022 order based on lack of customary support.

2. **Custom vs Constitution:**
   SC invoked **Article 14 (Right to Equality)** to assert that **customary law cannot override constitutional principles** of non-discrimination.

3. **Quote from Court:**
   "Customs too, like the law, cannot remain stuck in time."

4. **Broader Judicial Trend:**
   In **2022**, SC upheld the right of a tribal woman in Odisha to claim **compensation for ancestral land**, rejecting gender discrimination in tribal inheritance.

5. **Hindu Succession Act Gap:**
   HSA doesn't apply to Scheduled Tribes. SC advised Centre to examine this **legal vacuum** and consider reforms.

6. **Customary Law Limitations:**
   Examples like the **Santhal Pargana Tenancy Act** highlight how some tribal laws conditionally allow women co-ownership only if they marry as ghar-jamai's wife — often discriminatory.

7. **Significance:**
   Landmark move toward **gender justice in tribal areas**; may push legislative reforms to align tribal laws with constitutional values.

Water, energy demand spotlights risk of human-induced quakes-The Hindu Science

geography

Easy Explanation

Not all earthquakes are caused by nature — **some are triggered by human activities**, like **mining, groundwater extraction, dam construction, fracking**, or even **climate-related changes**. These are called **human-induced earthquakes**.

In places like **Delhi-NCR**, excessive **groundwater withdrawal** has been linked to minor earthquakes. When water is removed from underground, it **removes pressure**, which can **trigger faultlines** beneath the surface.

Similarly, **big dams** like **Koyna (Maharashtra)** and **Mullaperiyar (Kerala)** have led to earthquakes due to the **immense water load** they add or remove.

Energy extraction methods, such as **fracking**, also shake up deep layers, sometimes triggering quakes. India has **56 fracking sites**.

Climate change is another trigger. **Heavy rainfall**, **melting glaciers**, and **droughts** affect how pressure builds underground and can **influence seismic activity**, especially in **fault-prone zones**.

Experts stress that **these human actions don't directly "cause" earthquakes**, but they can **speed up or delay** natural seismic activity in already vulnerable zones.

Key Takeaways

1. **Human-induced Earthquakes**: Caused by activities like mining, dam-building, fracking, and excessive groundwater use.

2. **700+ Recorded Globally**: Over 700 such earthquakes in the last 150 years, and they're rising in number.

3. **Delhi-NCR Example**: Depleting groundwater (2003–2012) saw increased tremors; activity slowed when water table stabilized post-2014.

4. **Koyna Dam Case (1967)**: A deadly 6.3 magnitude quake linked to the Koyna dam — killed 180+ and destroyed thousands of homes.

5. **Dam Safety Concerns**: Unregulated water loading/unloading in **seismic zones** like the Himalayas can worsen risks.

6. **Fracking Risks**: India has 56 sites; injecting fluids into rocks increases quake chances.

7. **Climate Change Links**: Melting glaciers, intense rainfall, and prolonged droughts can all contribute to fault movement and tremors.

8. **Not All Areas at Risk**: Human activities lead to quakes mainly in **faultline or deformation-prone areas** (e.g., Western Ghats, Palghar, Himalayas).

9. **Need for Regulation**: Experts call for scientific **groundwater management**, **dam construction norms**, and **better seismic monitoring**.

10. **Caution in Interpretation**: Human actions may **not directly cause** earthquakes but **can influence** the timing and intensity of natural tectonic events.

📊 **Table: Indian Examples of Human-Induced Earthquakes**

Location	Triggering Activity	Magnitude / Period	Key Details
Koynanagar,Maharashtra	Reservoir loading from **Koyna Dam**	**6.3 (1967)**	Over 180 deaths; dam water weight blamed for triggering quake.
Delhi-NCR	**Groundwater over-extraction**	Up to **4.5 (2003–2012)**	Increased quakes during depletion period; reduced after water levels stabilized.
Mullaperiyar, Kerala	Stressfrom**Mullaperiyar Dam**	Not specified	Increased seismicity near dam in quake-prone zone.
Palghar,Maharashtra	**Fluid migration from rainfall**	Since **2018**	Ongoing isolated quakes likely due to changing water content underground.
WesternGhats (Sahyadri)	**Heavy rainfall stress on crust**	Ongoing	Rainfall changing surface stress; linked to tremors and seismic activity.

New deep sea mining rules lack consensus despite pressure from the U.S.-The Hindu Science

International relation

Easy Explanation

The **International Seabed Authority (ISA)**, which oversees mining of minerals on the ocean floor in international waters, is struggling to finalize deep-sea mining rules. The rules are needed to regulate the extraction of metals like **cobalt, nickel, and manganese**, which are essential for electric vehicles and clean energy.

However, **no consensus has been reached**, especially on how to protect the **marine environment** from damage. Meanwhile, the **U.S., under Donald Trump**, tried to bypass ISA by fast-tracking deep-sea mining permits using a domestic law from 1980. This move has been widely criticized for undermining international rules.

Some companies, like **Canada's The Metals Company (TMC)**, are trying to benefit from this loophole. But many countries and environmental groups are pushing for a **moratorium** (pause) until enough scientific research is done.

Key Takeaways:

1. **No Final Agreement Yet:**
   The International Seabed Authority (ISA) failed to finalize global deep-sea mining rules after two weeks of negotiations.

2. **Environmental Safeguards Missing:**
   Crucial rules on how to protect marine ecosystems remain unresolved, with 37 countries (including Chile) demanding a moratorium.

3. **U.S. Pushes Unilaterally:**
   The U.S., not a member of the ISA or UNCLOS, is attempting to fast-track permits under a 1980 domestic law, bypassing global frameworks.

4. **Corporate Action Sparks Tension:**
   Canada's The Metals Company (TMC) applied for a mining license, exploiting the U.S. move, drawing criticism from NGOs and some ISA members.

5. **Draft Response Under Review:**
   A draft text calls for ISA's legal body to examine violations of international law by contractors like TMC.

6. **Opaque Negotiations Criticized:**
   NGOs and some states criticized the ISA for closed-door talks and shifting procedures, warning of threats to "common heritage of humankind."

7. **Strategic Resource Interests:**
   The metals in question (cobalt, nickel, manganese) are vital for electric vehicles and renewable energy technologies, making the issue geopolitically sensitive.

At FTA's heart, the promise of Global Capacity Centres-The Hindu Editorial

International relations

Easy Explanation:

As India and the U.K. move closer to signing a Free Trade Agreement (FTA), Global Capability Centres (GCCs) are emerging as a key area of cooperation. India is already a global leader in hosting over 1,500 GCCs, which are advanced back-end units of multinational companies doing work in areas like R&D, cybersecurity, and analytics. The FTA could make it easier for professionals to work across borders, align digital standards, and help both countries benefit economically.

The U.K. sees the FTA as a post-Brexit chance to tap into India's fast-growing digital economy, while India aims to attract more investment and move higher up the value chain. State governments like Uttar Pradesh are also actively promoting GCCs. Industry experts stress the need for a national GCC policy and smart collaboration through FTAs to remove legal and regulatory hurdles.

Key Takeaways:

1. **India as a GCC Powerhouse:**
   India hosts over **1,500 Global Capability Centres (GCCs)** employing **1.9 million+ people**, making it a global leader in the sector.

2. **FTA as a Strategic Enabler:**
   The **India–U.K. Free Trade Agreement (FTA)** can **boost digital trade, services, and professional mobility**, enhancing bilateral economic ties.

3. **Mutual Benefits:**

- **U.K.**: Gains access to India's fast-growing digital economy post-Brexit.

- **India**: Attracts investment and support for digital skilling and innovation.

4. **Policy Momentum in India:**

   - A **national GCC policy** is being framed by MeitY with industry bodies like NASSCOM and Zinnov.

   - **State governments** (e.g., Uttar Pradesh) are rolling out their own GCC initiatives.

5. **Need for Harmonisation:**
   The FTA can help resolve key hurdles:

   - **Double taxation**
   - **Data localisation rules**
   - **Regulatory mismatches**
   - **IP rights**

6. **UKIBC's Role:**
   The **UK India Business Council** and industry leaders are pushing for policy clarity, better governance frameworks, and global best practices.

7. **GCCs as Innovation Drivers:**
   GCCs are no longer just back-offices but **strategic centres for R&D, AI, cybersecurity, and analytics**, supporting global innovation from India.

8. **A Knowledge-Based Partnership:**
   The evolving FTA aims to build a **resilient, services-driven "knowledge corridor"** between India and the U.K.

23rd July 2025

What are biostimulants,now under Agri Ministry's scrutiny?-Indian Express Explained

Economy(Agriculture)

Easy Explanation

- Farmers were being **forced to buy biostimulants** (like nano-fertilisers) **along with regular fertilisers** like urea and DAP.
- Many **complained about their ineffectiveness** and extra cost.
- Union Agriculture Minister **Shivraj Singh Chouhan** asked all states to **stop this forced bundling**.
- **Biostimulants** help plants grow better by improving nutrient uptake and stress tolerance, but **they are not fertilisers or pesticides**.
- India's biostimulant market is **rapidly growing**, but until recently, it was **poorly regulated**.
- Since 2021, the government included them under the **Fertiliser Control Order (FCO)** and required **registration, safety, and efficiency testing**.
- Companies were allowed to sell under **provisional registration** until June 2025, but now this has **expired**, and unregistered products can no longer be sold.

Key Takeaways

1. **Forced Selling Banned**: Farmers can no longer be forced to buy biostimulants with subsidised fertilisers.
2. **Biostimulants Defined**: Substances that boost plant growth—**not fertilisers or pesticides**.
3. **Regulation Introduced**: Came under FCO in **2021**; requires testing and registration.
4. **Market Size**: Worth **$355 million in 2024**, projected to triple by 2032.
5. **Provisional Sales Ended**: Temporary sale approvals **expired in June 2025**.
6. **Only Registered Products Allowed**: Strict control now in place to ensure only **tested, approved** biostimulants are sold.

Tracking India's climate goals-Indian Express Explained

Environment

Easy Explanation

India had set **three major climate targets** under the **2015 Paris Agreement**, to be achieved by **2030**. As of mid-2025:

1. **Achieved** the target of **50% installed electricity capacity from non-fossil fuel sources** (like solar, wind, hydro, nuclear).

2. **Likely already achieved** the goal of creating **2.5–3 billion tonnes of additional carbon sink** through forests and trees.

3. The third goal of **reducing emissions intensity** (emissions per unit of GDP) by **45% from 2005 levels** is on track — India had already achieved a **36% reduction by 2020**.

Despite these achievements, actual **clean electricity generation** is lower than capacity due to the intermittent nature of renewables and India's overall high fossil fuel use outside electricity (e.g., in transport and cooking).

Key Takeaways

1. India's 2030 Climate Targets (under Paris Agreement):

- 50% electricity capacity from **non-fossil sources** → **Achieved in 2024**

- Reduce **emissions intensity** by 45% over 2005 → Already 36% by 2020, on track

- Create **2.5–3 billion tonnes CO_2** equivalent **carbon sink** → Likely achieved by 2023

2. Installed Capacity vs Actual Generation:

- 50% of installed capacity is clean energy, but only **28% of actual generation** is from non-fossil sources.

- Electricity = only **22%** of total energy use. So, clean energy is **just 6%** of total energy consumption.

3. Growth in Renewable Energy:

- 2024 saw a **record 30 GW** addition, mostly solar (24 GW).

- But **China adds 10 times more** than India annually.

- Nuclear expected to **double to 17 GW** by 2030. Bharat Small Modular Reactors won't be ready soon.

4. Carbon Sink Progress:

- By 2021: 2.29 billion tonnes added.
- India adds ~150 million tonnes/year (based on ISFR).
- By 2023: Likely over 2.5 billion tonnes → **Target achieved ahead of schedule**.

5. Emissions Intensity:

- 2005–2020: Already 36% reduction.
- On course for 45% reduction by 2030.

6. Global Context:

- Many developed countries have **not met their targets**.
- India has overachieved, **despite inadequate international climate finance and technology support**.

A bridge to London-Indian Express Explained

International relations

Easy Explanation

India and the UK have formally signed a long-awaited Free Trade Agreement (FTA), marking a potential turning point in their modern bilateral relationship. This FTA is not just about trade but also about correcting historical baggage and adjusting to new global realities. India and the UK, once entangled in colonial legacies, now aim to build a forward-looking, pragmatic partnership. Key areas include technology, defence, education, and joint industrial growth.

Despite past friction—like the missteps during Queen Elizabeth's 1997 visit—both sides are now more mature in their approach. London is shedding its colonial overhang, and India is moving beyond reactive postures. Strategically, this alignment comes at a time of global turbulence, rising Chinese assertiveness, and an unpredictable US foreign policy, offering both countries an opportunity to act as mutual force multipliers.

Key Takeaways

1. **FTA Signed: A Milestone Moment**
    - India–UK Free Trade Agreement formally signed during PM Modi's visit to London.
    - Comes after decades of diplomatic ups and downs.

2. **Resetting a Troubled Past**
    - Previous high-profile visits (e.g., Queen Elizabeth's 1997 visit) were marred by colonial hangovers and diplomatic missteps.
    - Delhi had viewed Britain as a "diminished power"; London retained a tone of colonial condescension.
    - This relationship now aims to mature into a pragmatic partnership.
3. **Strategic Timing**
    - Global context: US political unpredictability, China's rise, and a reshaping world order.
    - Both nations are "middle powers" with potential to shape multilateral forums and regional stability.
4. **Key Areas of Cooperation**
    - Trade, technology security, joint defence production, higher education, clean energy, life sciences.
    - 2030 Roadmap for India-UK Relations being implemented.
    - FTA complements previous agreements on defence industrial cooperation and technology.
5. **Political Will Driving Change**
    - From UK: Post-2010 Conservative governments, especially under David Cameron and Boris Johnson, pushed for deeper India ties.
    - From India: Modi government showed greater openness, shedding excessive post-colonial sensitivity.
6. **Labour Party's Shift**
    - Keir Starmer (current UK PM) moved away from previous Labour Party hostility toward India, reining in extremist factions critical of India (especially on Kashmir).
    - This has built trust in Delhi.

7. **India's Own Contradictions**
    - Indian elite criticizes colonialism but still seeks validation from British systems—e.g., English education, Oxbridge dreams, migration to UK.
    - Growing awareness that India must build its own ecosystems, not just send talent abroad.
8. **Opportunities in New UK Industrial Strategy**
    - Britain is moving away from over-dependence on services, focusing on advanced manufacturing, defence, clean energy, etc.
    - This opens new India–UK collaboration pathways, especially in innovation-led sectors.
9. **Shifting Global Roles**
    - Britain remains the world's 6th largest economy with high per capita income (~$55,000).
    - India is emerging as a dominant Indo-Pacific power; UK seeks relevance in European security amid US pullback.
10. **Way Forward**
    - Build genuine economic partnerships, not just people-to-people links.
    - Leverage British capital and institutions within India itself.
    - Both should act as **force multipliers** for each other, especially in a world shaped by **China's assertiveness** and **America's unpredictability**.

Redeeming India's nuclear power promise-The Hindu text and Context

Economy

Easy Explanation

India has a massive goal: to boost its nuclear power capacity from around 8 GW today to an ambitious **100 GW by 2047**. This is critical for India to become a developed nation and achieve its "net-zero emissions" target by 2070.

Why nuclear? It's a **clean, reliable** energy source that provides steady power, unlike solar and wind which are intermittent. This consistent power is vital for India's growing economy and huge electricity demands.

The big hurdle is that the government can't do this alone. Building nuclear plants is incredibly expensive and requires a lot of money and expertise. To hit this target, India needs to open up its nuclear sector, traditionally a government monopoly, to **private and foreign companies**.

This means making significant changes to current laws and policies. The government plans to:

- Allow private companies to own and operate nuclear facilities.
- Address concerns from foreign companies about liability in case of accidents.
- Create a truly independent body to oversee nuclear safety.
- Offer financial incentives to attract investors.

India is also looking into **Small Modular Reactors (SMRs)**, which are smaller, quicker, and cheaper to build.

Key Takeaways

- **Massive Target:** India aims for **100 GW of nuclear power by 2047**, a huge jump from current levels.
- **Dual Purpose:** Essential for **economic growth** (reliable power) and **climate goals** (clean energy).
- **Current Barrier:** The nuclear sector is a **government monopoly**, hindering private and foreign investment due to high costs and restrictive laws.
- **Crucial Reforms:**
    - **Legal:** Amend the **Atomic Energy Act** to allow private participation and the **Civil Liability for Nuclear Damage Act** to ease supplier liability.
    - **Financial:** Classify nuclear energy as "green" for incentives and offer financial support to projects.
    - **Regulatory:** Establish a truly **independent safety regulator (AERB)**.
- **Future Focus:** Developing **Small Modular Reactors (SMRs)** for faster, more cost-effective deployment.
- **The Path Forward:** India must swiftly implement these reforms to attract the necessary private and foreign partners to achieve its ambitious nuclear energy vision.

How different constitutional drafts imagined India-The Hindu text and Context

polity

Easy Explanation:

Before India adopted its Constitution in 1950, there were several attempts between 1895 and 1948 to envision how independent India should be governed. These efforts came from various political thinkers and movements, each with its own ideology — liberal, socialist, Gandhian, or nationalist. These drafts reflected diverse views on democracy, decentralisation, economy, religion, and the role of the state. Although none of them were adopted fully, many of their ideas shaped the final Constitution

Key Takeaways:

1. Constitution of India Bill, 1895 (Early Liberal Draft)

- Attributed to early nationalists like Bal Gangadhar Tilak
- Emphasised civil liberties, equality before law, and representative government
- Inspired by British legal models; aimed at dominion status within Empire
- Focused on legal rights but lacked economic vision or mass participation

2. M.N. Roy's Draft Constitution of Free India, 1944 (Radical Democratic Party)

- Advocated participatory democracy and linguistic federalism
- Introduced right to revolt, justiciable socio-economic and civil rights
- Proposed citizen committees and popular sovereignty over Parliament
- Ahead of its time in decentralisation, political education, and enforceable welfare rights

3. Constitution of the Hindusthan Free State, 1944 (Hindu Mahasabha)

- Proposed a unitary state with cultural unification (one language, one law)
- Surprisingly upheld secularism — no state religion, religious freedom guaranteed
- Allowed right to secession, promoted national unity, and spiritual values
- Mixed a strong centralised state with liberal guarantees

4. Gandhian Constitution for Free India, 1946

- Written by Shriman Narayan Agarwal, with Gandhi's foreword
- Based on Gram Swaraj: self-sufficient village republics
- Rejected industrialism, supported khadi, moral authority over law
- Included right to bear arms — contrasting Gandhi's non-violence

5. Socialist Party's Draft Constitution, 1948 (Jayaprakash Narayan)

- Advocated nationalisation of land, industry, and banking
- Called for class-based unicameral legislature (workers, peasants, intellectuals)
- Prioritised economic democracy over procedural liberties

- Supported gender equality and caste abolition

6. Major Contrasts Across Drafts

- 1895 and Roy's drafts focused on civil rights, but Roy added participatory tools
- Roy and Gandhian models emphasized decentralisation; others were centralised
- Socialist and Roy's drafts stressed socio-economic justice
- Hindusthan draft supported nationalism but guaranteed individual freedoms
- Gandhian and Socialist drafts rooted in Indian traditions; 1895 in Western liberalism

7. Influence on the 1950 Constitution

- Directive Principles echo Roy and Socialist economic rights
- Panchayati Raj reflects Gandhian decentralism
- Liberal legal framework shaped by 1895 vision
- Fundamental rights reflect early liberal and humanist thinking

8. Broader Insight

These drafts demonstrate that India's path to becoming a republic was not limited to one ideology. Multiple and often conflicting visions existed — some focusing on freedom and democracy, others on economic transformation or moral governance. The final Constitution is a blend of these ideas, reflecting India's pluralistic and democratic evolution.

A beetle-fungi combo threatens plantations in rubber capital Kerala-The Hindu Science

Science

Easy Explanation:

Rubber plantations in Kerala are facing serious damage due to a new threat: the **ambrosia beetle (Euplatypus parallelus)**, which has formed a harmful **partnership with two fungi** — *Fusarium ambrosia* and *Fusarium solani*. This beetle-fungus alliance causes **leaf fall, trunk drying, tree death**, and **loss of latex production**, hurting farmers and the economy.

The beetles dig tunnels (galleries) in tree bark and carry fungi inside, which grow and release enzymes that weaken the tree's wood. The fungi also block the tree's xylem, making it hard to transport water, leading to death in parts of the tree.

Because the fungi live deep in the tree, treating infected trees is extremely difficult, and the infection spreads fast. The beetles are invasive and known to attack over **80 types of trees** — including cashew, coffee, teak, and coconut — raising alarm over a possible **broader outbreak**.

Scientists warn that these beetles may join with other dangerous fungi in future, increasing their damage. There's also concern about **human health risks**, especially for plantation workers, as *Fusarium* fungi can infect people with weak immunity. Experts recommend location-specific, sustainable management strategies.

Key Takeaways:

1. Threat Identified:

- **Ambrosia beetle (Euplatypus parallelus)** and fungi (*Fusarium ambrosia* and *F. solani*) are damaging Kerala's rubber trees.
- First report of *F. solani* being associated with adult ambrosia beetles.

2. Nature of Damage:

- Beetles bore tunnels (galleries) into bark and farm fungi for food.
- Fungi release enzymes weakening wood, block xylem vessels, and reduce latex flow.
- Causes **leaf fall, trunk drying, reduced latex, and even tree death**.

3. Origin and Spread:

- Beetles are **native to Central & South America**, first spotted in India (Goa, 2012).
- They are **invasive**, capable of infesting over **80 broadleaf tree species**.

4. Control Challenges:

- Fungal infections are **deep inside the plant**, hard for fungicides to reach.
- Once systemic infection spreads, plants often **cannot be saved**.
- Management includes antifungal treatments, removing infected parts, and using traps.

5. Human and Ecological Risk:

- *Fusarium* fungi are **opportunistic pathogens**, can affect humans (esp. immunocompromised).
- Infection poses risks to **ecosystems** and **plantation workers**.

6. Future Concerns:

- Beetles may pair with **new indigenous virulent fungi**, expanding their threat.
- Other crops at risk: **coffee, cashew, mango, coconut, teak**.

7. Economic Impact:

- India is **6th-largest rubber producer**, **Kerala contributes 90%**.

- Infection threatens productivity and income of rubber growers.

8. Policy and Research Recommendations:

- Develop **plantation-specific strategies** (not one-size-fits-all).

- Explore **sustainable biocontrol** methods:

    - Use of **antagonistic fungi**

    - **Microbial consortia** with beneficial bacteria

- Emphasize **early detection**, **field-level awareness**, and **collaborative research**.

Realities behind the global experiment of 'remote work'-The Hindu Editorial

Sociology

Easy Explanation:

Remote work was once hailed as a future revolution, offering freedom and flexibility. But the reality is more complex. While many workers worldwide want to work remotely more, actual remote work days remain low due to cultural norms, managerial reluctance, infrastructure issues, and health concerns. Women, especially mothers, prefer remote work more because it helps balance caregiving, but this may reflect ongoing gender inequality rather than true empowerment. Employers worry about teamwork and innovation losses. Remote work can cause physical and mental health problems, and many homes are ill-equipped for productive work. The best solution appears to be hybrid work — mixing office and home — supported by better policies, infrastructure, and health safeguards.

Key Takeaways:

1. Desire vs Reality:

- Global workers want about 2.6 remote days/week but get only 1.27 (down from previous years).

- Asia lags behind due to cultural norms valuing office presence and poor home conditions.

2. Gender Dimensions:

- Women, especially mothers, want and do more remote work than men, often due to caregiving needs.

- This raises questions if remote work is empowerment or a necessity caused by unequal domestic burdens.

- Men without children want remote work more for personal freedom and wellbeing.

3. Employer Concerns:

- Employers worry remote work weakens team spirit, oversight, and innovation.

- Some industries lack tools for effective remote working.

4. Health Challenges:

- Remote workers face more physical issues (back pain, eye strain) and mental health challenges (isolation, burnout).

- Homes often lack ergonomic setups and clear boundaries for work-life separation.

5. The Hybrid Model:

- Hybrid work (office + home) is seen as the most practical approach moving forward.

- Requires investment in home office setups, healthy routines, and clear digital boundaries.

6. Policy Needs:

- Governments should ensure universal broadband, provide support for home office improvements, and enforce health standards.

- Developing countries need particular focus due to weaker infrastructure.

7. Broader Social Implications:

- Remote work reflects deeper tensions between freedom and control, trust and oversight.

- Gender roles and workplace identities continue to evolve amid these shifts.

24th July 2025

Vaccine hope in malaria fight-Indian Express Explained

Science

Easy Explanation

Malaria is a dangerous disease spread by mosquitoes. It causes fever, chills, and can even lead to death. Every year, nearly **4 lakh people** die from malaria around the world.

For many years, scientists tried to make a vaccine for malaria, but success was limited. Now, India's top medical research body – **ICMR** – has made a new vaccine called **AdFalciVax**. It works well in animals and could be a big step forward in stopping malaria.

This vaccine targets the deadliest malaria parasite (**Plasmodium falciparum**). It not only protects the person who gets the vaccine, but also helps stop the disease from spreading in the community. Human trials are yet to begin.

Key Takeaways:

1. **New Vaccine Developed**:

    - ICMR has developed a malaria vaccine candidate called **AdFalciVax** targeting *Plasmodium falciparum*.

2. **High Protection Rate**:
    - Shows **over 90% protection in mice**; human trials yet to begin.
3. **Dual Action Mechanism**:
    - Uses **CSP protein** to protect vaccinated individuals.
    - Uses **Pro6C protein** to stop spread of malaria via mosquitoes.
4. **Better Than Existing Vaccines**:
    - More effective and longer-lasting than RTS,S and R21.
    - Uses **full-length proteins** for stronger immune response.
5. **Safe and Stable**:
    - Contains **alum**, a safe and commonly used adjuvant.
    - Can remain **stable at room temperature** for 9 months – helps in transport.
6. **India's Malaria Decline**:
    - Deaths reduced from **1,151 (1995)** to **83 (2022)** – as per NVBDCP.
    - WHO's estimate for 2022: **5,511 deaths**.
7. **ICMR-Private Sector Collaboration**:

- ICMR to share tech, retain **IPR**, and earn **2% royalty** on vaccine sales.

- Clinical trials and scaling to be handled by private partners.

Paikas and the uprising against British-Indian Express Explained

History

Easy Explanation:

- The **Paikas** were traditional foot soldiers of Odisha who had military and landholding status under the Gajapati kings.

- After the **British conquest of Odisha in 1803**, the Paikas lost their privileges, land, and status.

- Their leader, **Bakshi Jagabandhu**, led a **violent uprising in 1817** against British policies like land revenue changes, salt monopoly, and the disrespect shown to local rulers.

- This **Paika Rebellion**, also known as *Paika Bidroha*, is considered by many in Odisha as the **first war of Indian independence**, even before the Revolt of 1857.

- Recently, **NCERT did not include the rebellion in its new Class 8 history textbook**, drawing criticism from former CM **Naveen Patnaik**, though NCERT clarified it will be added in **Volume 2** later.

- The rebellion has become a **symbol of Odia pride and sub-nationalism**, and multiple central leaders have recognized its importance in recent years.

Key Takeaways:

1. **Who were the Paikas?**

    - Traditional military retainers of Odisha; given land in return for service.

2. **What triggered the rebellion?**

    - British annexation of Odisha (1803), betrayal of land promises, land revenue reforms, and salt trade monopoly.

3. **Leadership:**

    - Led by **Bakshi Jagabandhu** and supported by **tribal Kondh fighters** and other disgruntled locals.

4. **Major Events:**
    - Attack on Banapur police station, burning of government buildings, killing of British officials; rebellion ultimately suppressed.
5. **Aftermath:**
    - Jagabandhu fled and remained underground till 1825; rebellion crushed but remembered as an early act of resistance.
6. **Contemporary Relevance:**
    - Odisha government wants it recognized as the **first war of independence**.
    - **Political and academic debates** around its place in school history curriculum.
    - Efforts to memorialize it: monuments, cultural recognition, and mentions by PM and President.
7. **Textbook Controversy:**
    - Not included in NCERT Class 8 textbook yet; expected in the second volume.

The silent epidemic-Indian Express Editorial

Sociology

Easy Explanation:

- While India still battles malnutrition, **obesity is rising rapidly**, especially in urban, affluent households.
- This is a **"silent epidemic"**—less visible but deeply dangerous, as it increases the risk of **at least 13 types of cancers**.
- **Whole families** are becoming obese together due to shared **unhealthy diets**, sedentary lifestyles, and environmental factors.

- Children growing up in such households are at greater risk of **lifelong health problems**, including **cancer**, diabetes, and heart diseases.

- Obesity is not just a personal issue—it is a **family and public health crisis**.

- The government's plan to set up **200 Day Care Cancer Centres** is a good step, but **prevention** must be prioritized.

- India urgently needs **household-focused health education**, **nutritional reforms**, and **urban design changes** to tackle this growing threat.

Key Takeaways:

1. **Rising obesity in Indian homes**
    - 20% of households have all adults overweight; 10% have all adults obese.
    - Urban areas and states like Tamil Nadu and Punjab are most affected.
2. **Direct link between obesity and cancer**
    - At least 13 cancers (like breast, colon, liver, pancreatic) are strongly linked to obesity.
    - Biological causes include chronic inflammation, hormonal imbalance, and insulin resistance.
3. **The issue affects entire families**
    - Children copy unhealthy patterns of diet and activity from adults.
    - This creates a long-term health risk across generations.
4. **Economic burden is rising**
    - Cancer treatment is expensive. If multiple members in one family fall ill, the financial impact can be devastating.

- Prevention is far cheaper and more sustainable.

5. **What must be done**
    - Shift focus from individual to **household-based interventions**
    - Strengthen **non-communicable disease control programmes**
    - Implement **junk food regulations**, sugar taxes, and clear food labeling
    - Educate families on **home-cooked, healthy meals**
    - Design cities for **walking, physical activity**, and access to fresh produce
    - Recognize that **dietary reform is primary**, exercise is only complementary
6. **Conclusion**
    - Obesity is already a major public health issue in India.
    - Without **urgent, preventive action**, it will escalate into a cancer crisis that the health system and economy cannot bear.

THE WATER FRONT-Indian Express Editorial

Economy

Easy Explanation:

- China has started building a **massive hydropower project** on the Yarlung Zangbo (upper Brahmaputra) just before it enters India as the Siang River.
- The project is expected to generate **60 GW** of power—**three times more than China's Three Gorges Dam**.
- This has raised **serious concerns in Arunachal Pradesh and Assam**, as it could lead to **floods, sudden water surges**, and **disruption of India's hydropower plans**.

- China's **lack of data sharing** and the **unknown water storage capacity** of the dam add to the unpredictability.

- India had earlier proposed its own **multipurpose dam on the Siang River** (2017), but **local opposition** and **slow progress** have delayed the project.

- The editorial argues that India **must urgently build its own storage facilities** to protect the Northeast and counterbalance China's strategic water control.

Key Takeaways

1. **Chinese Hydropower Project**
    - China's new dam on the Yarlung Zangbo (upper Brahmaputra) aims for 60 GW capacity—nearly three times Three Gorges.
    - Location just before the river enters Arunachal Pradesh raises downstream flood concerns.
2. **Flood Risk and Data Gaps**
    - Sudden water releases (planned or accidental) could inundate Assam and Arunachal Pradesh.
    - Despite a 2013 MoU for sharing flow data, China's hydrological information remains opaque.
3. **India's Strategic Response**
    - Niti Aayog in 2017 recommended a multipurpose Siang dam to both generate power and cushion flood peaks.
    - The project has moved slowly due to local fears of displacement and livelihood loss, and incomplete technical studies by NHPC.
4. **Regional Hydropower Potential**
    - India's Northeast holds nearly 50 percent of its untapped hydropower capacity, over 80 percent of which remains undeveloped.

- Without storage, downstream hydro schemes will be vulnerable to irregular flows from upstream dams.

5. **Call for Urgency**

- Experts and policymakers must address local concerns, complete investigations, and build storage facilities without delay.

- Strengthening flood defenses and hydropower infrastructure downstream is vital for both safety and energy security.

Vitamin D deficiency linked to neurodevelopmental issues-The Hindu Science

science

Easy Explanation

Vitamin D is known for helping bones grow strong. But now, a big study from Denmark shows that **vitamin D also helps in the early development of the brain**. Babies born with **low vitamin D levels** may have a **higher risk of brain-related disorders** like **ADHD, autism, or schizophrenia** later in life.

Even though India has lots of sunlight, **many pregnant women and babies are vitamin D deficient**, which could affect the baby's growth and brain. Doctors suggest giving **vitamin D supplements during pregnancy** to avoid future problems.

Key Takeaways:

1. **Vitamin D affects the brain**

- Low levels at birth linked to **higher risk** of autism, ADHD, schizophrenia.

2. **Big Denmark Study**

- Used data of **88,000+ babies**.

- Found that higher vitamin D levels reduce brain disorder risks.

3. **Why it matters in India**

- **Over 80%** of Indian mothers and newborns have **vitamin D deficiency**.

- Sunlight is not enough — diet and supplements are needed.

4. **Doctor's advice**

   - Vitamin D supplements in pregnancy help **baby's brain and body**.
   - Start supplements **early**, ideally from the **first or second trimester**.

5. **Vitamin D deficiency passes on**

   - If a mother is deficient, **baby is likely to be deficient too**.
   - It affects **both bones and brain** of the baby.

6. **Call for change**

   - More awareness and **routine vitamin D checks** in pregnancy are needed.
   - Vitamin D is a **simple nutrient that can make a big difference**.

Telescopes spot start of planet formation in Orion-The Hindu science

Geography

Easy Explanation

When planets like Earth form, tiny dust particles near a young star **get very hot**, turn into **rock vapour**, and then **cool down** to form solid crystals. This is the **first step** in building planets.

For the first time, scientists have actually **seen this process happening** around a young star named **HOPS-315** in the **Orion region** of space. Using powerful telescopes like the **James Webb Space Telescope** and **ALMA** in Chile, they observed **rock vapour turning into crystals** — just like how Earth may have started forming billions of years ago.

Key Takeaways

1. **Star & Disc:**

   - Observations focus on **HOPS-315** in Orion.

- Its **protoplanetary disc** is tilted so we can see deep in.

2. **Telescopes Used:**
    - **James Webb (JWST):** Detected hot silicon monoxide gas and crystalline silicates near the star.
    - **ALMA:** Mapped cooler gases farther out.
3. **Temperature Zone:**
    - Around **1 AU** from the star, dust reaches ~**1,300 K**—hot enough to vaporize solid grains.
4. **Condensation Observed:**
    - Vaporized rock (silicon monoxide) **cooled and crystallized** into minerals.
    - Crystals found match those in **primitive meteorites** on Earth.
5. **Location of Crystals:**
    - They sit in the **disc's upper atmosphere**, not in stellar outflows, as shown by their blue-shifted signature.
6. **Significance:**
    - **First-ever** direct observation of the **condensation step** in planet formation.
    - Helps us understand how rocky planets like Earth begin to form around young stars.

Is the plastic industry trying to influence green policies?-The Hindu Text and Context

Environment

Easy Explanation

The **plastic industry**, much like the **tobacco industry**, has been using tactics to shift blame for pollution onto individuals while avoiding accountability. Despite promoting recycling, the industry has known for

decades that large-scale recycling of plastic is not practical. Now, as richer countries tighten regulations, plastic companies are targeting poorer nations, including India, to keep expanding.

In India, a large portion of plastic recycling is done by **informal waste pickers**, who often work in unsafe conditions. The government has started schemes like **NAMASTE** to bring them into the formal system and give them benefits and safety nets.

Key Takeaways:

1. **Plastic Industry Mirrors Tobacco Tactics:**
    - Both industries shift responsibility onto individuals — e.g., tobacco blames smokers, plastic blames consumers for not recycling.
    - They fund misleading PR/scientific studies to deny harmful effects.
    - Greenwashing is common — plastic is falsely marketed as 'biodegradable' or 'compostable' despite poor enforcement and infrastructure.
2. **Targeting the Global South:**
    - With stricter plastic regulations in developed countries, the industry is focusing on low- and middle-income countries to maintain growth.
    - Plastic consumption is expected to **triple in Asia** and **double in Sub-Saharan Africa** by 2060.
    - Lobbyists from fossil fuel and chemical industries had significant presence during global plastics treaty talks.
3. **India's Approach:**
    - **Informal sector recycles ~70%** of plastic but workers face poor health, safety, and lack of recognition.
    - **NAMASTE scheme (2024)** aims to formalize their role by providing:
        - Health insurance (Ayushman Bharat)

- Protective equipment
- Social security

  - Over **80,000 waste pickers** have been profiled under the scheme (as of May 2025).

4. **Regulatory Framework:**

   - **Plastic Waste Management Rules (2016, amended 2022)** place responsibility on producers to manage and reduce plastic waste.

Can Presidential Reference change a judgment?-The Hindu text and Context

Polity

Easy Explanation

What is the issue?

President Droupadi Murmu has asked the Supreme Court (SC) for legal advice on whether **Governors and the President must act within a fixed time** when dealing with Bills passed by State legislatures. This is done through a **Presidential Reference** under **Article 143** of the Constitution.

Why was it done?

In **April 2024**, the SC ruled that Governors **must not delay** giving assent to Bills and **set timelines** for them to act. The President now wants the Court's opinion on whether such timelines can legally be enforced by courts.

What is Article 143?

It gives the President power to **ask the SC for legal advice** on matters of public importance. The SC can choose to respond or not.

Is the Court's advice binding?

No. The Court's reply to a Presidential Reference is **not legally binding**, but it is taken seriously and can **guide future actions**.

Can a Reference change an earlier ruling?

No. A Presidential Reference **cannot undo** a past SC ruling (like the April 8 one). Only a **review** or **curative petition** can do that. However, the Court can use this opportunity to **clarify** or **refine** the law.

Key Takeaways

- **Presidential Reference Filed**: President Droupadi Murmu has referred 14 legal questions to the Supreme Court under **Article 143** regarding timelines for the President and Governors to act on State Bills.

- **Triggered by April 8 Judgment**: The SC had ruled that **Governors cannot delay assent** to Bills indefinitely and imposed **judicially enforceable timelines** for action.

- **Scope of Article 143**: Allows the President to seek SC's **advisory opinion** on questions of law/public importance. The SC **may accept or decline** to respond.

- **Advisory Opinion Not Binding**: SC's response to a Presidential Reference does **not carry binding force**, unlike regular judgments under Article 141.

- **Cannot Overturn Past Judgments**: A Reference **cannot reverse** an earlier SC decision. Only **review or curative petitions** can challenge final rulings.

- **Scope to Refine Law Exists**: While the April 8 ruling remains valid, the SC can **clarify or elaborate** on the legal position in its advisory opinion.

25th July 2025

WHY A STRONG ROUBLE IS A DOUBLE EDGED SWORD FOR RUSSIA-Indian Express Explained

Economy

Easy Explanation:

The Russian **rouble has risen 45%** against the US dollar this year, making it one of the world's top-performing currencies. But this sharp rise has mixed effects for Russia's heavily sanctioned economy.

Why did the rouble rise so much?

- **High interest rates** (above 20%) made rouble deposits attractive for savers and speculators.

- **Tight monetary policy** by the Russian central bank aimed at controlling inflation.

- **Lower imports** due to high borrowing costs reduced the demand for foreign currency.

- The **weaker US dollar** globally also contributed.

- The central bank supported the rouble indirectly by **selling Chinese yuan**, its main intervention tool.

Why is this not entirely good news?

- **Reduced export earnings**: Russian exports like oil and metals are priced in dollars, so a stronger rouble brings in fewer roubles.

- **Government revenue loss**: The 2025 budget was planned assuming 94.3 roubles per dollar, but the rate is around 78, leading to a possible **2.4% shortfall**.

- **Less competitive exports**: Russian goods become costlier for international buyers, hurting exporters.

- Business leaders prefer a **weaker rouble** (around 100 per dollar) to support trade.

What lies ahead?

- The central bank is expected to **cut interest rates** soon, which may weaken the rouble gradually.
- In **September**, a US deadline for Russia to show progress in Ukraine peace efforts expires. Failure could bring **new sanctions**, targeting Russian oil buyers.
- Past rate cuts (like in 2015) led to a **slow but steady fall** in the rouble's value.

Key Takeaways:

1. The rouble appreciated 45% due to high interest rates, tight monetary policy, reduced imports, and a weak US dollar.
2. A strong rouble reduces Russia's budget revenue and makes exports more expensive globally.
3. The government may face a 2.4% revenue shortfall if the rouble remains strong.
4. Exporters and businesses prefer a weaker rouble for better competitiveness.
5. Upcoming rate cuts and potential US sanctions in September could weaken the rouble gradually.

ICJ's climate ruling-Indian Express Explained

International relation

Easy Explanation

The **International Court of Justice (ICJ)** has delivered a major opinion saying that countries have a **legal obligation under international law** to take action against **climate change**.

This means:

- Countries **must reduce greenhouse gas emissions**.
- **Rich countries** must do more and help **developing countries** with finance and technology.
- If countries fail to act, they could be **legally responsible** for the harm caused by climate change.
- Governments may also be held responsible if **private companies** pollute and the government failed to regulate them.

This was an **advisory opinion**, which means it is **not legally binding**, but it is a powerful interpretation of international law and could influence future court decisions and climate action.

Key Takeaways

1. **Climate action is a legal duty**, not just a political choice.
2. **Developed countries** have a greater obligation to reduce emissions and assist poorer nations.
3. Failure to act can be seen as an **internationally wrongful act**, with legal consequences.
4. Countries that suffer climate damage (like small island nations) can demand **reparation** or **compensation**.
5. Governments can be held liable for **private sector pollution** if they fail to regulate it properly.
6. This ruling **strengthens the concept of "Loss and Damage"**, which calls for developed nations to pay for climate harms.
7. While **not binding**, the opinion can be used by courts and governments to push for stronger climate action.
8. The ruling criticises the current weak enforcement of climate treaties like the **Paris Agreement**, where countries face no penalties for non-compliance.

Unpacking National Sports Governance Bill, now in LS-Indian Express Explained

governance

Easy Explanation

The **National Sports Governance Bill**, introduced in the Lok Sabha, aims to bring major reforms in how sports are regulated and managed in India. It proposes two big changes:

1. **National Sports Board (NSB):**
   A powerful statutory body to set rules and monitor how sports federations function — including the BCCI (which so far operated outside government regulation).
2. **National Sports Tribunal:**
   A new dispute-resolution body with the powers of a civil court. It will hear cases like team selections or election disputes. Appeals will go directly to the Supreme Court.

These steps are meant to improve transparency, reduce court interference, and make governance of sports federations more accountable and professional.

Key Takeaways

1. Why the Bill Was Needed

- Many sports federations in India are poorly run and plagued by court cases.
- The current **2011 Sports Code** lacked legal teeth and wasn't enforced properly.
- The Bill gives **legal status** to regulation through the **National Sports Board**.

2. National Sports Board (NSB)

- It will act like a **regulatory watchdog**, similar to SEBI in the financial sector.
- The Board can hire legal and auditing experts, set governance standards, and register all affiliated sports bodies.
- It aims to increase **transparency, accountability, and coordination** across federations.

3. National Sports Tribunal

- Handles disputes involving players, selections, elections, etc.
- First level of complaint will be an internal dispute resolution body, followed by appeal to the Tribunal, and finally the Supreme Court.
- Follows global sports models (like FIFA or the Court of Arbitration for Sport).

4. Impact on BCCI

- Though BCCI hasn't been officially recognised as a National Sports Federation, the Bill seeks to bring it under the law's scope.
- Could affect BCCI's rules on age, tenure, and election of office bearers.

5. Raising Age Limit to 75

- Age and tenure limits for sports administrators have been relaxed to allow more experienced Indians to hold international positions.

- But this could lead to risks of **entrenchment** and **power concentration** if not carefully monitored.

6. Athletes' Right to Legal Redress

- The Bill does **not stop athletes** from seeking redress, but it requires that they first approach internal sports bodies and tribunals instead of going directly to regular courts.

- This system is common globally to ensure **quicker, sport-specific dispute resolution**.

What deters pilots from seeking help for mental health concerns -The Hindu Science

Sociology

Easy Explanation

Even though mental health awareness has grown after the pandemic, many **pilots avoid seeking help** for anxiety, depression, or burnout. This is not just because of **social stigma**, but mainly because:

- Pilots **fear being grounded** (not allowed to fly) if they admit to mental health struggles.

- This could lead to **loss of income or cancellation of their license**.

- Aviation medical rules often lack clarity and can result in long, unfair groundings, even for minor or treatable issues.

- Airlines also have **stressful schedules**, night flying, long hours, and frequent time-zone changes that affect a pilot's physical and emotional health.

After the **Air India crash in June 2024**, many crew members experienced trauma and PTSD. While support programs were offered, pilots still feared reporting symptoms due to job risks.

Regulators like India's **DGCA** have issued guidelines encouraging mental health support, but **lack of clear procedures and uncertainty** about consequences keep pilots from opening up.

Key Takeaways

1. **Fear of Losing Flying License**
   Pilots worry that admitting mental health issues may lead to grounding and reduced income.

2. **High-Stress Profession**
   Irregular schedules, night flights, and poor work-life balance increase risk of burnout and emotional fatigue.

3. **Stigma Is Reducing, But Fear Remains**
   Even though society is more accepting, pilots still avoid help because consequences are unclear and potentially harsh.

4. **Recent Incidents Intensified Trauma**
   The Air India crash triggered anxiety, sleeplessness, and PTSD among fellow crew, showing the deep emotional impact of aviation accidents.

5. **Regulatory Gaps**
   India's DGCA has introduced mental health screening and peer support rules, but the implementation is unclear and inconsistent.

6. **Global Comparison**
   Other countries like the US and EU have clearer, supportive systems—like peer programs, fitness guidelines, and lists of allowed medications—which reduce pilot fear and improve safety.

7. **Need for Reform**
   Better awareness, training of medical examiners, and clearer, non-punitive systems are needed to protect both **pilot health and aviation safety**.

Clean house-The Hindu Editorial

Sociology

Easy Explanation

Despite laws and schemes to end **manual scavenging**, over **150 workers died** in 2022–23 while cleaning sewers and septic tanks. Most of these deaths happened because local contractors hired workers without protective gear or proper equipment. Some were even public sector workers unofficially "loaned" to private contractors, making it hard to fix accountability.

Although India passed the **Prohibition of Employment as Manual Scavengers Act (2013)** and launched the **NAMASTE scheme** to mechanise cleaning, **implementation is extremely poor**. For example:

- Only a fraction of sanitation workers have received **PPE kits**, **health cards**, or **training**.
- Funds under NAMASTE have barely been spent.
- Government tenders still allow **manual cleaning**, which should be illegal.
- Most sanitation deaths are either ignored or wrongly treated as accidents.

Some states like **Odisha** and **Tamil Nadu** have made progress by introducing **mechanised vehicles and sewer-cleaning robots**. But most of India still uses outdated and unsafe practices.

Also, **Dalit workers** make up two-thirds of the sanitation workforce, but **rehabilitation schemes lack basic support** like housing, loans, or education. Women sanitation workers are even more neglected.

Key Takeaways

1. **Hazardous Business Model**
   – Of 54 contractors audited by the Ministry of Social Justice, only 5 directly employed workers; the rest were "loaned" from the public sector, hiding accountability.
   – Manual entry into septic tanks and sewers continues despite clear legal prohibitions.

2. **Inadequate Protection and Training**
   – Out of nearly 58,000 hazardous-cleaning workers, only about 16,800 received PPE kits.
   – Fewer than 14,000 have health cards; just 837 safety workshops were held across 4,800 urban local bodies.

3. **Successful Mechanisation Models**
   – In Odisha, identified workers now receive PPE and access to mechanised desludging vehicles.
   – Chennai piloted sewer-cleaning robots, handling over 5,000 manholes without manual entry.

4. **Enforcement Gaps**
   – Government tenders often still request manual-cleaning bids despite mechanisation mandates.
   – Only ₹14 crore has been disbursed under NAMASTE—far too little to cover even one major city.
   – Police investigations habitually target low-level supervisors or classify deaths as "accidents," while local bodies delay cancelling offending contracts.

5. **Social and Economic Inequities**
   – Two-thirds of validated manual-cleaning workers are Dalits, yet rehabilitation seldom includes housing, education or income-diversification support.
   – Women who sweep dry latrines receive almost no policy attention or resources.

6. **Recommended Measures**

   - **Mandatory Mechanisation:** Urban local bodies must adopt mechanised sewer-cleaning as a licensed service; operating without certification should be a cognisable offense.

   - **Financial Support:** Scale up capital subsidies and training; link loans for mechanisation equipment to guaranteed municipal service contracts.

   - **Rural Inclusion:** Cover septic-tank desludging under the rural Swachh Bharat budget and extend NAMASTE profiling to gram panchayats.

   - **Stronger Enforcement:** Enforce contract cancellations, impose monetary liabilities on principal employers, and ensure regular inspection and reporting.

Mechanising hazardous sanitation work, combined with clear rules, sufficient funding and robust enforcement, is the only way to prevent further deaths and indignity.

Decoding ECI's counter affidavit on SIR-The Hindu Text and Context

Polity

Easy Explanation

The Election Commission (EC) is conducting a **Special Intensive Revision (SIR)** of voter lists in Bihar, asking voters to **submit new documents to prove citizenship**. This process has been **challenged in the Supreme Court** for being **legally questionable, exclusionary, and unnecessary**.

The EC claims it has the authority under law to do this and says it will lead to cleaner voter rolls. But critics say:

- There's **no solid proof of illegal migrants** in voter lists to justify such a massive exercise.
- The **onus is wrongly put on existing voters** to prove their citizenship again.
- The process **privileges old records (from 2003)**, while newer legitimate entries may be scrutinised more harshly.
- The EC is **refusing to accept Aadhaar or ration cards**, even though it collects Aadhaar data.
- The law **does not mandate such citizenship testing** by the EC; that's the job of other government agencies.
- It risks becoming another **NRC-like failure**, like what happened in Assam.

Key Takeaways

1. **SIR lacks legal clarity**: There's no statutory basis for a citizenship-based voter re-verification; the Representation of People Act doesn't mention "intensive" revisions or a re-submission of citizenship documents for already registered voters.
2. **No evidence of illegal migrants**: EC's affidavit includes no data showing inclusion of foreign nationals in Bihar's electoral rolls, undermining its rationale.
3. **Process may be exclusionary**: Many voters — especially poor, migrants, and marginalised communities — may be left out if they fail to provide documents.
4. **Privileging 2003 voter rolls is questionable**: EC says names in 2003 rolls (and their children) need no other documents, but this arbitrary cut-off lacks legal support.
5. **Aadhaar and ration card rejection is inconsistent**: While EC collects Aadhaar details, it says Aadhaar isn't citizenship proof. This appears selective and legally weak.

6. **Lack of transparency in exclusions**: Over 53 lakh voters weren't found at their addresses, and about 21 lakh were marked as dead. Constituency-wise breakdown is missing.

7. **Execution is flawed**: Even after collecting over 90% forms, many are incomplete or missing documents. Final scrutiny will happen after draft rolls are published.

8. **High risk of disenfranchisement**: A faulty and document-heavy approach may disenfranchise lakhs, repeating the errors of Assam's failed NRC, which cost ₹1,600 crore and was abandoned.

26th July 2025

Three times the price of other oils:Why coconut oil is on fire-Indian Express Explained

Economy

Easy Explanation

Although overall food inflation in India has declined, **vegetable oils**—especially **coconut oil**—have become **much more expensive**. While imported oils like palm, soybean, sunflower, and mustard have also seen price rises, the **price of coconut oil has nearly doubled** in just a few months.

This **sharp rise** is mostly due to **El Niño-related droughts** in **Indonesia and the Philippines**, the world's top coconut oil producers. **Coconut production takes time to recover**, and there's no quick solution since trees take 3–5 years to start bearing fruit. At the same time, **policy decisions** in these countries (like blending coconut oil in biodiesel and export restrictions) are also tightening global supply.

In India, coconut oil is already **marginalized** in the cooking oil market, used more in **cosmetics and soaps** than in kitchens. Even in Kerala—traditionally a coconut-consuming state—**palm oil consumption is higher than coconut oil**. So, although prices are soaring, it may **not have a widespread impact** due to its **limited usage in food**.

Key Takeaways

1. **Coconut Oil Price Surge**
    - Retail price has doubled from **Rs 240–250/kg to Rs 460/kg** in 2024.
    - **Wholesale price** in Kochi market rose from Rs 22,500 to Rs 39,000 per quintal.
2. **Global Supply Shock**
    - **El Niño-induced drought** affected coconut production in **Indonesia and the Philippines** (top global producers).
    - Coconut flower and fruit development hit during 2024–25 marketing year.
3. **No Quick Recovery Possible**
    - Coconut trees (even hybrid/dwarf varieties) take **3–5 years** to bear fruit.
    - Supply response to high prices is structurally delayed.
4. **Policy-Driven Tightening**
    - **Philippines** to blend **3% coconut methyl ester (CME)** into diesel from Oct 2024 (rising to 5% by Oct 2026).
    - **Indonesia** considering restrictions on **raw coconut exports**.
5. **India's Domestic Situation**
    - India is a **minor coconut oil exporter**; domestic production is flat.

- Of 5.7 lakh tonnes coconut oil produced, only **3.9 lt used for food**; rest for **cosmetics, soap, hair oil** etc.

6. **Market Marginalisation of Coconut Oil**
   - Indigenous oils (coconut, mustard, sesame, groundnut) have lost market share to **imported oils** (palm, soy, sunflower).
   - Imported oils = **~72% of total edible oil consumption** in India (2023–24).
7. **Kerala's Decline**
   - Once the top producer and consumer, **Kerala now ranks 3rd** in production (after Karnataka, Tamil Nadu).
   - Kerala's annual consumption: **2 lt coconut oil**, compared to **4 lt palm oil**.
8. **Limited Impact on Inflation**
   - Despite price surge, coconut oil has **low share in food consumption**, so overall inflation impact is **marginal**.

Why renewables alone can't help-Indian Express Explained

Economy

Easy Explanation

The world is adding **renewable energy (like solar and wind)** faster than ever before — 582 GW was added in 2024 alone. But despite this, **fossil fuel use hasn't decreased**. In fact, it's still growing in **absolute terms**.

Why? Because the **demand for electricity is rising rapidly**, and renewables are only meeting the **new demand**, not replacing existing fossil fuel use.

Also, electricity is only a **small part (20–22%)** of total energy use. The majority of global energy — including transport, industry, heating — still runs on **coal, oil, and gas**. So even if renewable electricity increases, it only helps a little in reducing overall emissions.

To make things worse:

- **China dominates** renewable tech production.
- **Africa and poor nations** are left behind in the transition.
- And the **transition alone won't be enough** — the world needs **carbon removal technologies**, which are still not ready at scale.

So, while renewables are growing fast, **they are not enough on their own** to solve climate change.

Key Takeaways

1. **Big Growth in Renewables**
   - 582 GW added in 2024 (15% rise); global renewable capacity now 4,442 GW.
   - 30% of electricity comes from renewables.
2. **Fossil Fuel Use Still Increasing**
   - Fossil fuels still provide **70% of electricity** and **over 90% of all energy**.
   - More fossil fuels are being burned now than 10 years ago.
3. **Electricity = Small Part of Energy Use**
   - Only **1/5th of total energy** is electricity; rest is from transport, industry, etc., still fossil-fuel-based.
4. **Renewables Meet New Demand, Not Replace Old Energy**
   - Renewable energy is covering **rising electricity needs**, not cutting fossil use.
5. **Carbon Removal is Now Critical**
   - Climate targets (like limiting warming to 2°C) **can't be met** without **carbon capture technologies**.

6. **Inequality in Renewable Growth**
    - **China alone added 62%** of global capacity in 2024.
    - **Africa got <1%**, though it has most people without electricity.
7. **China's Dominance in Green Tech**
    - China controls solar panel, battery, and wind turbine production.
    - Other countries can't compete due to **low costs and state subsidies** in China.
8. **New Energy Security Challenge**
    - Countries fear overdependence on China for green tech, like the past reliance on OPEC for oil.
9. **Global Climate Goals in Danger**
    - At this pace, **limiting warming to below 2°C** is **increasingly unrealistic**.

More than a trade pact-Indian Express Editorial

Economy

Easy Explanation

India and the UK have signed a major trade deal called the **Comprehensive Economic and Trade Agreement (CETA).**

- It is the **UK's biggest trade deal since Brexit** and **India's first with a G7 country in over a decade**.
- The agreement took years to finalize, covering four Indian budget cycles and two British Prime Ministers.

What does India get?

- Easier access to the UK market for products like textiles, leather, pharmaceuticals, seafood, and gems.
- Strengthens India's export-focused "Make in India for the World" strategy.
- Early entry into European markets without having an EU trade deal.

What does the UK get?

- Access to India's massive market of 1.4 billion people.
- Big tariff cuts on premium British goods:
    - Scotch whisky: reduced from 150% to 40% over 10 years.
    - Luxury cars: duties cut to 10% within a quota.
    - Foods like cheese, chocolates, and salmon enter at near-zero tariffs.
- A strong example of the UK's "Global Britain" policy post-Brexit.

Why it's strategically important?

- Aligns with the India–UK Roadmap 2030 (climate, minerals, security).
- Integrates both countries into Indo-Pacific supply chains, reducing dependence on China.
- Flexible trade rules allow up to 60% of input materials from other countries while keeping "Made in India" or "Made in UK" labels.

What issues remain?

- India wanted easier movement (visas) for IT professionals, which was not agreed.
- Indian agricultural goods still face tough sanitary rules in the UK.
- Investment treaty still pending.
- India didn't get exemption from the UK's upcoming carbon tax on polluting exports.
- The deal needs legal approval in both countries before it takes effect.

Key Takeaways

Point	Details
Deal Name	Comprehensive Economic and Trade Agreement (CETA)
Signed By	PMs Keir Starmer (UK) and Narendra Modi (India)
Importance	Largest UK trade pact post-Brexit; India's first with a G7 nation in 10+ years
India Gains	Easier export access for textiles, pharma, gems, seafood
UK Gains	Lower Indian tariffs on whisky, cars, salmon, chocolates, cheese
Tariff Reductions	India cuts duties on 90% of UK goods; UK removes most tariffs on Indian exports
Strategic Angle	Connects to Indo-Pacific supply chains, diversifies away from China
Rules of Origin	60% third-country inputs allowed without losing origin label
Pending Issues	No visa liberalisation, tough checks on Indian food, no final investment protection
Status	Still needs approval from UK Parliament and Indian Cabinet
EconomicImpact	UK: +£4.8 billion by 2040; India: +$34 billion in trade over 5 years

Kargil, Pahalgam and a revamp of the security strategy-The Hindu Editorial

Internal security

Easy Explanation

The article reflects on India's evolving **national security strategy**, comparing the **Kargil War (1999)** with the **recent Pahalgam terror attack (2025)** and India's military response.

- **Kargil War (1999)** was a turning point that exposed serious weaknesses in India's intelligence, military readiness, and coordination.

- It led to major reforms like creation of new intelligence agencies, modernization of armed forces, and the **Cold Start Doctrine**.

- The **Pahalgam attack (April 2025)**, where 26 Indian tourists were killed by Pakistan-based terrorists, drew a **massive and swift military response**—**Operation Sindoor**. India struck deep into Pakistani territory, including suspected **nuclear facilities**.

- This shift shows that **India has moved from a defensive to a proactive and offensive counter-terror strategy**.

The article argues that India has learned hard lessons from the past, built strong military capabilities, and is now better prepared to prevent or retaliate against future threats.

Key Takeaways

1. **Kargil War (1999): Turning Point in India's Military History**
    - First **"live televised" war** in India.
    - Exposed **intelligence failures**, lack of high-altitude preparedness, and poor coordination.
    - Prompted major reforms in defence and intelligence architecture.
2. **Post-Kargil Reforms**
    - Creation of **Defence Intelligence Agency (DIA)** (2002), **NTRO** (2004).
    - Strengthened **National Security Council Secretariat**.
    - Permanent post of **National Security Adviser (NSA)** introduced.
    - Laid groundwork for **Chief of Defence Staff (CDS)** (2019) and **integrated theatre commands**.
3. **Cold Start Doctrine**
    - Strategy developed post-Kargil for **rapid, limited military response** without crossing the nuclear threshold.
4. **Shift from Restraint to Retaliation**

- Earlier terror attacks (Parliament 2001, 26/11 in 2008) saw **no military response**.
- Change began post-Uri (2016) and Pulwama-Balakot (2019) strikes.

5. **Pahalgam Attack (2025) and Operation Sindoor**
   - Terrorists killed 26 Indian tourists in Kashmir.
   - India launched **Operation Sindoor** (May 2025), striking 9 terror camps and 11 military airbases in Pakistan within 96 hours.
   - Allegedly hit a **nuclear facility** at Nur Khan Base.
6. **New Strategic Doctrine**
   - Clear message: **India will not tolerate cross-border terrorism**.
   - Rapid, precise, and overwhelming retaliation is the new norm.
7. **Self-Reliance and Modernisation**
   - Focus on **indigenous weapons platforms** under 'Make in India'.
   - Deployment of Rafale jets, BrahMos missiles, Apache and Chinook helicopters, S-400 systems.
8. **Lessons for the Future**
   - Vigilance is essential to prevent another Kargil or Pahalgam.
   - Continued strengthening of military and intelligence is vital.

[The scientist who made 'mangroves' a buzzword-The Hindu Editorial]

Environment

Easy Explanation

Until the late 1980s, **mangroves were undervalued**, mostly known only to coastal communities. That changed because of **Dr. M.S. Swaminathan**, who highlighted their importance in **climate resilience**, **disaster protection**, and **carbon storage**.

At a 1989 Tokyo conference, he warned that **climate change** would lead to sea level rise, salinity, and food insecurity. His solution? Use **mangroves** — not just for protection but also for **genetic research** (like salinity-tolerant rice).

He helped form the **International Society for Mangrove Ecosystems (ISME)** in 1990, influenced global charters, and developed tools like **GLOMIS** for mangrove data. He also led efforts in India for **scientific and community-based mangrove restoration**, especially through the **fishbone canal method**.

These efforts led to **policy shifts**, more **government investment**, and recognition of mangroves as **natural coastal shields**, especially after the **1999 Odisha cyclone** and the **2004 tsunami**.

Key Takeaways

1. **Pioneer of Mangrove Advocacy**
    - **M.S. Swaminathan** was the first to propose (1989 Tokyo Conference) using **mangroves** for climate resilience, disaster mitigation, and sustainable coastal development.
2. **Scientific Vision for Climate Adaptation**
    - Linked **sea-level rise, salinity, and cyclone risk** to the need for **mangrove restoration**.
    - Proposed use of **mangrove genes** to develop **salt-tolerant crops** like rice.
3. **Institutional Impact**
    - Founded the **International Society for Mangrove Ecosystems (ISME)** in **1990**, Okinawa; served as **Founding President** till 1993.
    - Drafted **Mangrove Charter**, later included in the **World Charter for Nature (1992 UNCED)**.
4. **Global Knowledge Infrastructure**
    - Helped develop **GLOMIS**: Global Mangrove Database & Information System.
    - Supported global mangrove mapping and creation of **Mangrove Genetic Resource Centres** (now Protected Areas).
5. **India's Policy Transformation**
    - Exposed flaws in the **British-era "clear-felling" method** of mangrove management.
    - Led participatory research with TN and other states to pilot the **"fishbone canal method"** for hydrological restoration.
6. **Joint Mangrove Management (JMM)**
    - Method scaled up into a **national programme** with MoEFCC support in 2000.
    - Integrated **local communities** into restoration and sustainable use.
7. **Disaster Mitigation Role**
    - Post-**1999 Odisha super cyclone** and **2004 tsunami**, mangroves gained global recognition for **protecting life and property**.
8. **Recent Growth in India's Mangrove Cover**
    - As per **ISFR 2023**:
        - Total mangrove cover: **4,991.68 km²** (0.15% of India's area).
        - Increase of **16.68 km²** since ISFR 2019.

27th July 2025

What makes NASA-ISRO NISAR satellite special?: TH FAQ

Science

EASY EXPLANATION

ISRO, in collaboration with NASA, is preparing to launch a powerful satellite named NISAR (NASA-ISRO Synthetic Aperture Radar) from Sriharikota on July 30. This satellite is designed to observe Earth's surface in great detail. It can monitor natural disasters like earthquakes, floods, landslides, and track changes in forests, crops, ice sheets, and more.

NISAR is unique because it uses two types of radar (L-band and S-band) which allow it to see through clouds, smoke, and dense forests. It works in all weather conditions and both day and night. The mission is expensive—costing over $1.5 billion—and is among the most advanced Earth-observation satellites built so far.

The data from NISAR will be freely available to everyone, usually within a few hours. This data will help governments, scientists, and disaster response teams make better decisions. It can also track groundwater, biomass, crop changes, and infrastructure like dams.

Instead of taking pictures like a camera, NISAR sends radar waves to the ground and measures how they bounce back. This technique helps create very detailed 3D maps. It can scan 240 km at once with a resolution as sharp as 3 meters and will revisit each spot every 12 days.

Over India, ISRO will focus on using the S-band radar to monitor agriculture and soil, while NASA will use the L-band for global research. The radar system uses different wave directions (polarisation) to identify various materials like snow, crops, and wood.

ISRO built the satellite body and S-band system, while NASA built the L-band radar and the large antenna. The data will be received by NASA's ground stations in Alaska, Norway, and Chile, as well as by ISRO's stations in Shadnagar and Antarctica. In India, the data will be processed and distributed by the National Remote Sensing Centre.

KEY TAKEAWAYS

What is NISAR

- NASA-ISRO Synthetic Aperture Radar satellite.
- Joint Earth observation mission by NASA and ISRO.
- Scheduled to launch on July 30 from Sriharikota using GSLV Mk-II.

Purpose and Uses

- Observes earthquakes, floods, volcanoes, landslides, forests, crops, ice, and land changes.
- Helps in disaster response, climate monitoring, and agricultural planning.
- Can track groundwater, biomass, infrastructure, and land deformation.
- Provides free, high-resolution data globally within a few hours.

Working Mechanism

- Uses Synthetic Aperture Radar (SAR) instead of normal photos.
- Sends radar waves to Earth, measures return time and changes.
- Combines:
    - L-band SAR (NASA) for deep penetration and tracking ground movement.
    - S-band SAR (ISRO) for surface-level monitoring of crops and soil moisture.
- Swath width of 240 km; resolution between 3–10 meters.
- Each location is scanned every 12 days.
- Uses a 12-meter-wide antenna and advanced sweep technology.

Indian Use Case

- ISRO will regularly use the S-band radar over India.
- Data will help in agriculture, disaster warning, and forestry.
- Useful for monitoring biomass and mapping flooded vs dry regions.
- Disaster damage maps can be produced within 5 hours.

Limitations

- Certain areas above 60° latitude may not be scanned in every cycle.
- Around 10 percent of Earth's surface may be missed in a given 12-day scan.

How It Was Built

- ISRO contributed: satellite body (I-3K bus), S-band radar, communication systems, and launch services.
- NASA contributed: complete L-band radar, large deployable antenna, electronics, and data systems.
- Final integration and testing done in Bengaluru.
- Launch to be handled by ISRO; data operations led by NASA's JPL with daily control from ISRO.

Data Management

- Data received by NASA stations (Alaska, Norway, Chile) and ISRO stations (Shadnagar, Antarctica).
- India's NRSC will handle Indian data distribution, similar to NASA's pipeline.

Mission Duration

- Operational life of 3 years, with a design life of at least 5 years.

How do internal complaints committees work?: TH FAQ

Polity

EASY EXPLANATION

A tragic incident in Odisha, where a young student took her own life, has brought attention to the Internal Complaints Committee (ICC) in her college. She had accused her Head of Department of sexual harassment, but her complaint wasn't taken seriously. Her family says the committee was poorly trained and biased in favor of the accused.

The idea of such committees first came up in 1997 after a horrific incident in Rajasthan involving social worker Bhanwari Devi. She was gang-raped for trying to stop child marriage. The Supreme Court issued guidelines (Vishaka Guidelines) for protecting women from sexual harassment at workplaces. These guidelines said every workplace should have a committee led by a woman, with at least half of its members being women, and one external member to avoid internal pressure.

In 2013, after the Nirbhaya case in Delhi, these guidelines became law through the Sexual Harassment of Women at Workplace Act (POSH Act). Now, every workplace with more than 10 employees must have an ICC. For smaller workplaces or informal jobs, complaints can be filed with Local Committees created by the district administration.

An ICC must have:

- A senior woman employee as its head.
- Two internal members with legal or social work experience.
- One external member from an NGO or expert on sexual harassment.
- At least 50% women members.

Any woman can complain within 3 months of facing harassment. The committee must complete its inquiry within 90 days. It can try for a settlement if the woman requests, or carry out a full investigation. It also has powers like a civil court to call for documents and witnesses.

If the complaint is proven, the ICC recommends action against the accused. The employer must also help the woman if she wants to file a criminal complaint. The law ensures privacy—details of the complaint, the people involved, and proceedings must remain confidential.

However, in the 10 years since the law was passed, many workplaces still haven't fully implemented it. In 2024, the Supreme Court criticized the poor enforcement and asked all organizations to follow the law strictly. Experts say there is no proper monitoring. Different ministries are involved—Women and Child Development is in charge of the law, but workplaces come under Labour and Industry Ministries, which leads to confusion and lack of accountability.

Even when ICCs exist, they often don't work properly due to poor training, power imbalance, or failure to maintain privacy, as seen in the Balasore case.

KEY TAKEAWAYS

Background

- A student in Odisha died by suicide after her sexual harassment complaint wasn't taken seriously by her college's ICC.
- Family alleged that ICC members were untrained and biased.

Origin of ICC

- Originated from the 1997 Vishaka Guidelines by the Supreme Court.
- Response to Bhanwari Devi's case in Rajasthan.
- Called for proper complaint mechanisms for sexual harassment at workplaces.

POSH Act, 2013

- Enacted after the Nirbhaya case.
- Full name: The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act.
- Mandated ICCs in workplaces with more than 10 employees.
- Local Committees for smaller or informal workplaces.

Structure of ICC

- Headed by a senior woman employee (Presiding Officer).
- Includes:
    - Two internal members with legal/social work experience.
    - One external member from NGO or expert.
- At least 50% members must be women.

Complaint Process

- Complaints must be filed within 3 months.
- ICC may try conciliation (if victim agrees) or start inquiry.
- Inquiry to be completed in 90 days.
- ICC recommends action if complaint is proved.
- Employer must support criminal complaint if victim chooses.
- Confidentiality of all proceedings is mandatory.

Legal Powers

- ICC has civil court-like powers (calling documents, summoning witnesses).
- Recommendations to employer must be followed.

Implementation Issues

- Poor implementation even after 10 years.
- Supreme Court (Dec 2024) flagged serious gaps and asked for immediate compliance.
- District officers are supposed to collect reports, but there's little follow-up.

- Lack of coordination among Ministries (WCD, Labour, Industry).
- Experts highlight lack of training, misuse of power, and broken confidentiality.

Conclusion

- The Balasore incident highlights that simply having ICCs is not enough.
- Proper training, unbiased functioning, and strict enforcement of privacy are essential to protect victims.

What does the new U.K.-India trade deal entail?: TH FAQ

International Relations

EASY EXPLANATION

India and the U.K. have signed a major trade agreement called CETA, after negotiating for over three years. This deal aims to improve trade in goods and services between the two countries.

What does the deal include?

The U.K. will remove import taxes (tariffs) on 99% of its goods, and India will remove or reduce taxes on 90% of its goods. For India, this means that products like textiles, footwear, seafood, cars, and fruits will now enter the U.K. without tax. However, some items India already exports, like petroleum and pharmaceuticals, were already tax-free.

In return, India will lower import taxes on many British goods. For example, whisky and British-made cars will become cheaper in India.

What about services?

The deal also focuses on services, which are very important for India's economy. India will let U.K. firms offer services in areas like accounting, telecom, and financial services, without needing to open offices in India. The U.K., in return, will let Indian firms in areas like IT and consulting set up offices there.

Also, Indian workers in the U.K. on short-term assignments won't need to pay into the U.K.'s social security system if they're already contributing in India. This avoids double payment and is a big help to Indian professionals.

What's unique in this deal?

India has, for the first time, agreed to reduce import duties on foreign cars. Big luxury cars will have their taxes reduced from 110% to 10% over 15 years, but only for a limited number of cars. Smaller cars and mid-sized vehicles also get similar reductions, but electric and hybrid vehicles are protected — there will be no duty cuts for them for the first five years.

Another special feature is that British companies can now bid for contracts in Indian government projects in areas like transport and green energy. Around 40,000 such projects will be open to them.

What happens now?

The deal still needs approval from both countries' Cabinets, which could take 6–12 months. Once approved, the deal will not only help boost India-U.K. trade but also serve as a model for India's future trade agreements with the U.S. and EU.

KEY TAKEAWAYS

Background

- India and the U.K. signed the Comprehensive Economic and Trade Agreement (CETA).
- Negotiations began in January 2022; concluded in May 2025.

Goods Trade

- U.K. removes tariffs on 99% of its product lines.
- Around $6.5 billion worth of Indian exports (textiles, footwear, cars, seafood, fruits) will enter duty-free.
- The remaining exports (petroleum, pharma, diamonds) were already duty-free.
- India cuts tariffs on 90% of product lines (covering 92% of U.K. exports to India).

- British alcohol (especially whisky), cars, and engineering goods to become cheaper in India.

Current Trade Snapshot

- In 2024–25:
  - 3.3% of Indian exports went to the U.K.
  - 1.2% of Indian imports came from the U.K.

Services Trade

- India opens sectors like:
  - Accounting, auditing, telecom, finance, environmental services.
- U.K. firms can operate in India without local presence and still be treated equally.
- India will recognize U.K. qualifications in law and accounting (excluding legal services).
- U.K. allows Indian firms in IT, consulting, environmental services to set up offices.
- **Double Contribution Convention (DCC)**: Indian workers on short assignments in the U.K. won't need to pay into the U.K. social security system.

Unusual Features

- **Auto Tariff Reductions** (first time in any Indian trade deal):
  - Large petrol cars: duty drops from 110% to 10% over 15 years (with quotas).
  - Mid-sized and small cars: duty falls to 10% by Year 5.
  - Electric, hybrid, hydrogen cars: no duty cut for first 5 years.
- **Government Procurement Access**:
  - British firms can now bid for 40,000 high-value Indian government contracts.
  - Sectors include infrastructure, green energy, transport.

Next Steps

- Deal must be ratified by both Cabinets (may take 6–12 months).
- CETA may become a model for India's upcoming trade agreements with the U.S. and EU.

Android phones brought early quake warnings to 98 countries: TH Science

Science

EASY EXPLANATION

Android smartphones have quietly become powerful tools for earthquake detection. Between 2021 and 2024, they helped send earthquake warnings to people in 98 countries, including during major earthquakes in Turkey, Nepal, and the Philippines.

How do they work? Most smartphones have a sensor called an accelerometer, which detects sudden movements. When many phones in an area feel the same vibration, they send this data to Google's servers. If the server confirms an earthquake is happening, it quickly sends alerts to users before the damaging shockwaves hit.

This system, called the Android Earthquake Alert (AEA), was launched in 2020 in the U.S., then expanded worldwide. It detects the faster but less dangerous "P-waves" and sends alerts before the more destructive "S-waves" arrive. This warning time can range from 10 to 60 seconds — enough to help people move to safety.

So far, it has detected over 18,000 earthquakes and sent 79 crore alerts. A recent survey found that 79% of users found the alerts very useful.

The system uses an algorithm to estimate how far the earthquake is and how strong it might be. It sends two types of alerts: "Be Aware" for lighter shaking and "Take Action" for stronger ones, the latter even overriding "do not disturb" settings.

While the system is helping a lot more people than traditional warning systems ever did, it's not perfect. Sometimes, the alert comes after shaking starts, or the strength of the quake is misjudged. The team has

made improvements to fix these issues, including faster response and more accurate magnitude estimates.

Overall, AEA is a major step in using everyday technology to help save lives during natural disasters.

KEY TAKEAWAYS

What is AEA?

- The Android Earthquake Alert (AEA) is a smartphone-based earthquake detection and alert system.
- It uses a phone's in-built accelerometer sensor to detect early tremors.

Coverage and Timeline

- Launched in the U.S. in 2020; expanded to New Zealand, Greece in 2021, and then globally.
- Active in 98 countries; issued alerts for 11,231 earthquakes, including major ones in 2023 (Turkey-Syria, Nepal, Philippines) and in Turkey (2025).

Functioning of the System

- Detects fast-moving **P-waves** (initial shock) and sends alerts before the more destructive **S-waves** arrive.
- Does not monitor **surface waves**, which cause the most visible damage but are the slowest.
- Smartphones send vibration data to Google, which verifies it using nearby phones.

Impact and Statistics

- Detected over 18,000 earthquakes.
- Issued 79 crore alerts.
- Survey of 1.5 lakh users: 79% found alerts very helpful.
- Expanded early warning access from 25 crore people (2019) to 250 crore (2024).

Technical Details

- The algorithm estimates epicentre distance based on timing difference between P- and S-waves.
- For deep earthquakes, extra calculations are done to account for wave travel through Earth's mantle.
- Two alert types:
    - **Be Aware**: Light shaking expected.
    - **Take Action**: Strong shaking expected (comes with sound alert even on silent mode).

Limitations and Fixes

- Sometimes sends alerts after shaking begins.
- Early magnitude estimates had 0.5-point error — now improved to 0.25.
- Recorded three false positives (caused by hurricanes and unrelated phone vibrations).
- Fixes now in place to improve speed and accuracy.

Significance

- Shows how widespread consumer tech like smartphones can help create dense, global disaster alert networks.
- Demonstrates the use of low-cost sensors for real-time physical observations at a global scale.

The virtues of the tomato, a healthy vegetable: TH Science

Science

EASY EXPLANATION

Tomatoes are a common part of our everyday meals today, but their journey to our plates is full of surprising twists. In ancient times, tomatoes were considered bad — even poisonous. People in Europe believed they were "sinful" or "stinky" and even called them "poison apples" because they reacted with

lead in copper dishes and made people sick. However, when farmers in New Jersey used better cooking vessels, public opinion started changing in the U.S.

In India, tomatoes didn't grow naturally. They were brought by Portuguese traders in the 15th century and later grown more widely by British colonisers in the 16th century. Still, most Indians were not comfortable using them. Even in 1938, Indian doctors tried to promote tomatoes to fight diseases like scurvy and iron deficiency, but people didn't take it seriously.

The big change came when travelers and nutrition experts began praising tomatoes for their health value. The National Institute of Nutrition in India highlighted their richness in vitamins and minerals.

Scientifically, tomatoes are fruits. They are rich in antioxidants, which are good for heart and brain health. They also help reduce blood pressure, prevent constipation due to their fiber, and may protect elderly people from Alzheimer's because of a compound called lycopene.

India is one of the world's largest producers of tomatoes, just behind China. We grow several special varieties like *Arka Rakshak* (which resists diseases) and *Arka Shreshta* (which lasts longer after harvest). Tomatoes are mainly grown in states like Madhya Pradesh, Odisha, Karnataka, West Bengal, Andhra Pradesh, Gujarat, and Tamil Nadu.

Today, tomatoes are used in almost every Indian dish — from soups, curries, and chutneys to rasam, ketchup, and pizzas. What was once feared has now become a beloved part of our meals — and it's actually very healthy!

KEY TAKEAWAYS

Historical Journey

- Tomatoes were once considered poisonous in Europe, called "poison apples."
- Their bad image was due to their reaction with lead in copper utensils.
- In India, they were introduced by Portuguese traders in the 15th century.
- British colonisers popularized their cultivation in the 16th century.
- Public acceptance in India was slow, even until the 1930s.

Change in Perception

- In 1938, Indian doctors promoted tomatoes for curing scurvy and iron deficiency.
- Shift happened as travelers and nutritionists highlighted their health value.
- National Institute of Nutrition stressed their importance in a balanced diet.

Health Benefits

- Rich in **antioxidants** — good for heart and brain.
- Help reduce **high blood pressure** — especially helpful for the elderly.
- Contain **fiber (cellulose)** — prevents constipation.
- The red pigment **lycopene** may protect seniors from Alzheimer's.
- Should be washed thoroughly before cooking.

Botanical & Agricultural Details

- Botanically a **fruit**, though used as a vegetable in cooking.
- India produced **210 lakh tonnes (2022–23)** — second only to China.
- Special hybrid varieties include:
    - *Arka Rakshak* — disease resistant.
    - *Arka Shreshta* — longer shelf life.
- Top producing states: Madhya Pradesh, Odisha, Karnataka, West Bengal, Andhra Pradesh, Gujarat, Tamil Nadu.
- Average wholesale price: ~₹1,700 per quintal.

Cultural and Culinary Use

- Now an essential part of Indian cuisine.

- Used in: soups, curries, chutneys, rasam, ketchup, and even pizzas.
- Accepted and loved across the country for taste and nutrition.

28th July 2025

China's mega dam on Brahmaputra,and concerns in India-Indian Express Explained

International relations

Easy Explanation

China has started building the world's largest hydropower dam on the Yarlung Zangbo river (called Brahmaputra in India), very close to the India border near Arunachal Pradesh. This project is huge — it costs nearly $168 billion and aims to generate 60,000 MW of electricity.

India is worried because this dam is being built in a region that is prone to earthquakes and landslides. Arunachal Pradesh Chief Minister called it a "water bomb," fearing it could cause flash floods or even reduce the long-term flow of the river in India. Experts warn that if China ever decides to suddenly release water (intentionally or due to dam failure), it could seriously harm downstream regions like Arunachal and Assam.

Assam's Chief Minister, however, said he is not very worried. He believes most of the Brahmaputra's water comes from Bhutan, Arunachal, and rain — not just from China.

India has been watching Chinese projects closely and has raised concerns earlier. Experts suggest India should be better prepared: build its own dams like the Upper Siang project, create water storage systems, and work diplomatically with China to get reliable river data. India should also coordinate with other neighbouring countries like Bhutan and Bangladesh for early warnings and disaster preparedness.

Key Takeaways

- **What has China started building?**
  A massive dam on the Yarlung Zangbo (Brahmaputra) river at the Great Bend in Tibet, near Arunachal Pradesh.

- **Why is it significant?**
  It will be the **world's largest hydropower project**, with a capacity of 60,000 MW.

- **Why is India concerned?**
  Because the dam could disrupt river flow, cause flooding, or dry up the Brahmaputra in the long run. The region is also earthquake-prone.

- **What did Arunachal Pradesh say?**
  CM Pema Khandu called it an **existential threat** and a potential "**water bomb**."

- **What is Assam's view?**
  CM Himanta Biswa Sarma downplayed the threat, saying **China only contributes 30–35%** of the Brahmaputra's water.

- **What is India's response?**
  India has not officially reacted after the July 19 ceremony but has **previously raised concerns** with China based on its lower riparian rights.

- **What can India do to mitigate risk?**
    - Build buffer storage like the **Upper Siang dam**.
    - Improve internal water channels.
    - Seek detailed hydrological data from China.
    - Work with neighbours (Bangladesh, Bhutan, Myanmar) on **shared disaster response protocols**.

A WELCOME NUDGE-Indian Express Editorial

Environment

Easy Explanation

The **International Court of Justice (ICJ)** has issued an **advisory opinion** saying that all countries have a **legal obligation to prevent harm from climate change**. This opinion was requested by the **UN General Assembly**, with strong backing from **small island nations** that are most vulnerable to rising sea levels and climate disasters.

The ICJ's verdict is **not legally binding**, but it could still have a big influence on global climate action. It reinforces the need to limit global warming to **1.5°C**, and says countries must make **"adequate contributions"** to achieve that. This strengthens the legal and moral case for vulnerable countries to **demand more support** from richer, historically high-emitting nations.

Although the ICJ hasn't imposed penalties or consequences for countries failing to act, its opinion may open the door to **climate-related litigation** for damages. It also reaffirms the principle of **"Common But Differentiated Responsibilities (CBDR)"**, which says **rich countries must do more** to tackle climate change due to their historical emissions.

This comes at a time when **climate negotiations are struggling**, major emitters like the **US have pulled out of agreements**, and many developed countries are **not fulfilling financial promises** made under the Paris Agreement. The ICJ ruling acts as a **moral and diplomatic push** to revive genuine climate commitment, especially from wealthier nations.

Key Takeaways

- **What has the ICJ done recently?**
  Issued a **non-binding advisory opinion** that countries are **obligated to prevent climate harm** and contribute adequately to limit global warming to 1.5°C.
- **Why is it important?**
  Although not enforceable, it could influence **future climate negotiations**, enable **climate litigation**, and **pressure developed countries** to meet their financial and mitigation commitments.
- **Who requested this opinion?**
  The **UN General Assembly**, following a resolution led by **small island developing states (SIDS)**.

- **What legal principles did the ICJ affirm?**
    - Countries must **limit global warming to 1.5°C**
    - Nations have **climate obligations under international law**
    - Reaffirmation of **Common But Differentiated Responsibilities (CBDR)**
- **How does it relate to global climate politics?**
  It challenges rich countries' tendency to **shift responsibility** onto developing nations like India. It highlights the **historic emissions** and moral obligations of the developed world.
- **Could this lead to real change?**
  Possibly — the ICJ's opinion **strengthens the case for climate justice**, can fuel **legal claims** for compensation, and **reenergize stalled negotiations**, even though it's not legally binding.

How is India preparing against GLOF events?-The Hindu Text and Context

Environment

Easy Explanation

Nepal recently faced major floods due to **Glacial Lake Outburst Floods (GLOFs)** — when water suddenly bursts out of a glacial lake. One such event on **July 8, 2025**, destroyed a bridge and power plants in Nepal. These floods happen more frequently now because rising global temperatures are melting glaciers rapidly, increasing the risk of such disasters in the Himalayas.

India faces similar danger. The Indian Himalayas have over **7,500 glacial lakes**, many of them high up in remote, hard-to-reach areas. Some of these lakes are growing in size and could burst suddenly. India's earlier GLOF disasters include the **Kedarnath tragedy in 2013** and the **Sikkim flood in 2023**.

To prepare, India's **National Disaster Management Authority (NDMA)** has shifted focus from only responding after disasters to **preventing them**. It launched a **national programme** to identify and monitor high-risk lakes using remote sensing, drones, and early warning systems. It has already identified **195 risky glacial lakes** and is working with local communities, scientists, and state agencies to reduce risks.

Some lakes in Sikkim are now monitored every 10 minutes. In areas where automation isn't possible, even **ITBP jawans** are being trained to give early warnings. These efforts aim to prevent another large-scale disaster and build long-term resilience.

Key Takeaways

- **What happened recently?**
  Nepal suffered major damage on **July 8, 2025**, from a **GLOF** event that destroyed bridges and power plants.

- **How many GLOF events in Nepal recently?**
  At least four major GLOFs in 2024–25, including Mustang, Humla, Solukhumbu, and Lende river floods.

- **Why are GLOFs increasing?**
  Due to **rising temperatures**, **glacial melt**, and fragile **moraine dams** holding the lakes.

- **Types of glacial lakes in Indian Himalayas:**
  - **Supraglacial lakes** – form on glaciers, melt in summer
  - **Moraine-dammed lakes** – held by loose rocks/ice, prone to collapse

- **How is India preparing?**
  - NDMA launched a **national GLOF mitigation programme**
  - **195 high-risk lakes** identified
  - Use of **drones, bathymetry, ERT, SAR satellite data**
  - **Early Warning Systems (EWS)** in lakes like in Sikkim
  - Local communities and **ITBP** involved for support

- **Main goal of NDMA's programme:**
  To shift from **post-disaster relief** to **scientific risk assessment and prevention**, backed by state participation and technology.

New microscope reveals molecular jostling faster than ever before-The Hindu science

Science

Easy Explanation:

Scientists at Caltech have created a revolutionary microscope that can **film molecules in real-time**, something older microscopes couldn't do. Molecules are incredibly tiny — billions of times smaller than a meter — so they're too small to see directly.

This new microscope doesn't need to "see" the molecules directly. Instead, it watches how **molecules move and interact with light**. Smaller molecules move faster and change light more; larger ones move slower. This is based on **Brownian motion**, the random movement of particles explained by Einstein.

By using **ultrafast lasers**, **digital mirrors**, and a **streak camera**, this microscope captures incredibly detailed images at **hundreds of billions of frames per second** — the fastest ever. It can observe molecules in liquids **and even in gases** like smoke or flame, without damaging the sample.

This breakthrough can help in **medical research, drug design, and studying chemical reactions** in real-time.

Key Takeaways:

1. **Breakthrough Innovation**:
   Caltech researchers developed the **world's fastest single-shot microscope**, capable of observing **molecular motion in real-time** at the **angstrom scale**.

2. **Principle Used – Brownian Motion**:
   The microscope uses **Brownian motion** — random movement of particles — and their **interaction with light** to infer molecular size.

3. **Imaging Speed**:
   Achieves **hundreds of billions of frames per second**, enabling **slow-motion visualization** of ultrafast molecular interactions.

4. **Non-Invasive & Real-Time**:
   Unlike traditional techniques, this method is **non-destructive**, requires **minimal sample preparation**, and provides **in-situ measurements**.

5. **Technological Components**:
   Incorporates a **streak camera**, **ultrashort laser pulses**, and a **digital micromirror device (DMD)** to capture molecular-scale events.

6. **Wide Applications**:
   Useful in **biomedical research**, **disease diagnostics**, **drug delivery**, **nanomaterials**, and potentially in **chemical reaction tracking**.

7. **Gas-Phase Success**:
   Successfully applied to **gas-phase environments**, including observing **black carbon particles in flames**, proving versatility in dynamic systems.

8. **Validation & Accuracy**:
   Measurements of molecular size matched **existing data**, confirming **high accuracy and reliability**.

9. **Inspired by Ahmed Zewail's Work**:
   Builds on the legacy of **Nobel laureate Ahmed Zewail**, known for ultrafast chemical reaction imaging.

[Understanding Russia's Taliban gauntlet-The Hindu Editorial]

International relations

Easy Explanation:

- On **July 3, 2025**, Russia officially **recognized the Taliban government** (called the Islamic Emirate of Afghanistan, or IEA). This means Russia now has full diplomatic ties with them, including allowing their ambassador and flag in Moscow.

- **This is a big change.** Back in the 1990s and early 2000s, Russia was strongly **against the Taliban**, supported their enemies (Northern Alliance), and even helped the US-led war after 9/11.

- **Why the U-turn?**
  Russia now believes the **Taliban are the only force** that can control Afghanistan and **fight common enemies** like the terrorist group **IS-K (Islamic State–Khorasan)**.

- Even though Russia recognized the Taliban, they are still technically on **Russia's terrorist watch list**, which shows Russia still has doubts about them.

- In recent years, Russia had already started **talking to the Taliban quietly** (via Pakistan), attending peace talks, and even keeping its embassy open in Kabul after the Taliban took over in 2021.

- **Security remains a big concern** — IS-K has carried out deadly attacks, including in **Moscow (2024)** and at the **Russian embassy in Kabul (2022)**.

- Russia hopes that this relationship may help it **increase influence in Central and South Asia** and use Afghanistan for **trade routes**.

- **Other countries like China or Central Asian states may follow** Russia's example, but this may also lead to **less pressure** on the Taliban to improve rights for **women and minorities**.

- **India's stand?** India hasn't officially recognized the Taliban, but it **keeps talking** to them and **cooperates** on things like terrorism and trade. India prefers **engagement without full recognition**.

Key Takeaways:

1. **Russia Recognises Taliban Government (IEA):**
   On **July 3, 2025**, Russia became the **first major power** to **officially recognise** the Taliban regime, accrediting their ambassador and allowing the IEA flag at the Afghan Embassy in Moscow.

2. **Shift from Past Policy:**
   This marks a **sharp reversal** from Russia's hostile stance in the 1990s, when it backed the **Northern Alliance** against the Taliban and condemned their support for **Chechen separatists**.

3. **Taliban Still a Terrorist Organisation (Technically):**
   Despite recognition, the **Russian Supreme Court only suspended the ban** on Taliban activities; the group remains on Russia's **unified list of terrorist organisations**.

4. **Motivations Behind Russia's Move:**

   - To counter **Islamic State-Khorasan (IS-K)** alongside the Taliban.
   - To safeguard **security interests** in Central Asia and at home.
   - To explore **regional connectivity and trade routes**, especially toward **South and Southeast Asia**.

5. **Strategic Outreach via Pakistan & 'Moscow Format':**
   Since early 2010s, Russia used Pakistan as a bridge to build **unofficial ties** with the Taliban and hosted **intra-Afghan talks** under the **Moscow Format**, aiming to displace US influence.

6. **Risks & Setbacks:**

   - **Terrorist attacks** in Kabul (2022) and Moscow (2024) claimed by IS-K underline **instability and risk**.
   - **Economic projects** with Taliban haven't materialised; security situation remains fragile.

7. **Implications for Regional Diplomacy:**
   Russia's move may push **Central Asian states** and **China** to follow suit.
   It also **lowers the bar** for expectations on **inclusivity, women's rights, and minority protection** in Afghanistan.

8. **India's Position Remains Cautious:**
   India maintains **non-recognition** but continues **diplomatic and humanitarian engagement**, especially on **counter-terrorism (Kashmir)** and **trade**.

9. **New Diplomatic Template Emerging:**
   Russia's recognition could signal a broader shift towards **pragmatism over values** in regional dealings with the Taliban.

31st July 2025

The Kamchatka quake-Indian Express Explained

Geography

Easy Explanation:

- A **massive earthquake** of **8.8 magnitude** hit the **Kamchatka Peninsula**, located in far eastern Russia.
- It happened in the **"Ring of Fire"**, the most active earthquake and volcano zone around the **Pacific Ocean**.
- The earthquake caused **tsunami waves** (3–4 meters in Kamchatka, 5 feet in Hawaii, 2 feet in Japan) but luckily **no deaths** occurred.
- This was one of the **strongest earthquakes in recent history**, after the 2011 **Japan earthquake** (9.1 magnitude) which led to the Fukushima nuclear disaster.
- Kamchatka is part of a **very active seismic zone** because of **subduction** — when one tectonic plate slides under another.
- Earthquakes like this happen when **stress builds up along plate boundaries** and is suddenly released.

Key Takeaways – Kamchatka Earthquake

Point	Details
Event	A powerful **8.8 magnitude earthquake** struck the **Kamchatka Peninsula** in Russia's far east on July 30, 2025.
Epicentre	Located in the **Circum-Pacific Seismic Belt** (Ring of Fire), the most earthquake-prone zone on Earth.
Tsunami Triggered	Waves up to **3–4 meters** hit parts of Kamchatka; also reached **Hawaii** (5 ft) and **Japan** (2 ft).
Casualties	**No loss of life** reported due to **low population density** in the region (~0.62 persons/sq km).
Historical Comparison	Strongest earthquake since **2011 Japan quake (9.1)**, which caused the **Fukushima nuclear disaster**.
Geological Cause	Result of **subduction** — Pacific Plate moving beneath continental plates, building stress and causing quakes.

Ring of Fire	- Encircles Pacific Ocean - Includes countries like Japan, Chile, US, Russia, Indonesia - Accounts for **80%** of world's large earthquakes.
Seismic History	The Kamchatka–Kuril region has had **130+ quakes of ≥7 magnitude** since 1900; a **magnitude 9** quake occurred here in 1952.
Other Major Earthquake Belts	1. **Alpide Belt** (15–17%): Indonesia → Himalayas → Turkey 2. **Mid-Atlantic Ridge**: Underwater; causes milder quakes.
Magnitude Limit	Theoretically, **9.5 is the upper limit** for earthquake magnitude (Chile, 1960); **magnitude 10** is highly unlikely due to lack of sufficiently long fault lines.

TEN STRONGEST EARTHQUAKES IN THE LAST 20 YEARS

DATE	MAGNITUDE	LOCATION*
March 11, 2011	9.1	Tohoku region, Japan
July 30, 2025	8.8	Kamchatka Peninsula, Russia
February 27, 2010	8.8	Maule, Chile
April 11, 2012	8.6	Northern Sumatra, Indonesia
September 12, 2007	8.4	Bengkulu, Indonesia
September 17, 2015	8.3	Illapel, Chile
May 24, 2013	8.3	Okhotsk Sea
November 15, 2006	8.3	Kuril Islands
July 29, 2021	8.2	Alaska Peninsula
August 19, 2018	8.2	Levuka, Fiji

*The epicentre of the quakes was near these locations

Source: USGS

Judicial discretion & bail in POCSO cases-Indian Express Explained

Polity

Easy Explanation:

- A special POCSO court in Mumbai recently **granted bail** to a 40-year-old woman accused of sexually assaulting a teenage boy, considering that their relationship seemed **consensual**.

- The **POCSO Act** (Protection of Children from Sexual Offences) is a **strict law** meant to protect anyone under 18 from sexual offences. It **does not recognize consent** below 18 — even if both are teenagers and the relationship is voluntary.

- In **POCSO cases**, it's usually hard to get bail early, because the **burden of proof is reversed** — the **accused must prove innocence**, unlike normal criminal law where the prosecution proves guilt.

- Even though POCSO cases are non-bailable, courts use **judicial discretion** (case-by-case decisions) to give bail, especially if the relationship looks voluntary.

- Recent court rulings (like by the Supreme Court in 2024) show that courts are **more open to considering adolescent relationships** and have granted bail when the victim confirms the relationship was voluntary.

- A debate is ongoing on whether the **age of consent** should be lowered from 18 to 16. Some lawyers argue this will protect young people in consensual relationships; the government disagrees, saying it could weaken protection for children.

Key Takeaways

1. Nature of the Law under POCSO

- The **Protection of Children from Sexual Offences (POCSO) Act** criminalises all sexual activity involving minors (below 18).

- It **reverses the presumption of innocence** — the accused must prove their innocence, unlike in most criminal cases.

- All POCSO offences are **cognizable and non-bailable**, with no clear statutory rules for granting bail.

2. Judicial Discretion in Bail Decisions

- Courts consider factors like:
    - **Age of victim and accused**
    - **Age difference**
    - **Whether the relationship was consensual**
    - **Conduct of the accused**
    - **Time already spent in custody**

- These are **non-binding guidelines** developed over time through judicial precedents.

3. Important Judicial Precedents

- **Dharmander Singh (Delhi HC, 2020)**: Emphasised age gap, nature of relationship, and absence of coercion.

- **Deshraj @ Musa v. State of Rajasthan (SC, 2024)**: Bail granted to 18-year-old accused in a seemingly consensual relationship with 16-year-old girl.

4. Consent under POCSO

- Consent is **not recognised** under 18 years of age.

- Courts may, however, consider **apparent consensual relationships** when granting bail.

- Still, **bail is often delayed** until victim's statement is recorded and evidence collected.

5. Debate on Age of Consent

- **Senior Advocate Indira Jaising** urged SC to **reduce the age of consent to 16**, arguing that:
    - Current law **criminalises teenage relationships**.
    - It violates **fundamental rights and adolescent autonomy**.
- **Government's stand**: Lowering age would **weaken child protection** and **increase abuse risk**.

VIRAL INFECTIONS IN LUNG CAN ROUSE DORMANT CANCER CELLS:STUDY-Indian Express Explained

Science

Easy Explanation

A new scientific study has found that **respiratory viral infections** like **flu and Covid-19** can **reactivate dormant breast cancer cells**, especially in the **lungs** of survivors. These cells had previously been inactive but were "awakened" and started multiplying rapidly after infection.

Scientists tested this in mice with human-like breast cancer. After infecting them with **SARS-CoV-2 or influenza**, the **dormant tumour cells in their lungs started growing aggressively**, forming **metastatic lesions** (i.e., new cancer growths).

Importantly, it wasn't the virus itself but an **immune molecule called IL-6** (Interleukin-6) that triggered this reactivation. IL-6 is part of the body's immune response to infection.

The effect was **temporary** — within two weeks, the cancer cells went dormant again. But the research suggests that **infections can make future cancer relapse more likely**, even if they don't directly cause cancer.

Key Takeaways

1. What the Study Found

- **Respiratory infections** like **Covid-19 and influenza** can **reactivate dormant breast cancer cells** in the lungs.

- These cells start **rapidly multiplying**, leading to **metastatic cancer growth**.

2. Where It Was Published

- The findings were published in the journal **Nature** on a study titled *"Respiratory viral infections awaken metastatic breast cancer cells in lungs."*

3. Methodology

- Mice were **genetically engineered** to have human-like breast cancer.
- **Dormant cancer cells** were seeded into various organs, including lungs.
- The mice were then infected with **SARS-CoV-2 or flu** viruses.

4. Role of Interleukin-6 (IL-6)

- **IL-6**, a molecule released during immune response to infection, was the **key trigger**.
- It **revved up** the immune system, indirectly causing **dormant cancer cells to reactivate**.

5. Temporary Activation

- After about **two weeks**, the cells became **dormant again**.
- This shows that **infections don't directly cause cancer**, but they **increase the risk of reactivation**.

6. Implication for Survivors

- For **breast cancer survivors**, especially those with **dormant cancer cells**, **infections can be a risk factor** for recurrence.
- The study opens doors for **monitoring IL-6 levels** and **exploring preventive strategies** during infections.

Why were the 2006 Mumbai blasts accused freed?-The Hindu text and Context

Internal security

Easy Explanation

On **July 21, 2024**, the **Bombay High Court acquitted all 12 accused** in the **2006 Mumbai train blasts case**, overturning the 2015 verdict by a special anti-terror court that had sentenced 5 of them to **death** and 7 to **life imprisonment**.

The court said the **Anti-Terrorism Squad (ATS)** had **mishandled the investigation**:

- Confessions were taken through **torture** and thus not valid.
- **Eyewitnesses** were unreliable and came forward **months later**.
- **Evidence was tampered** or mishandled.
- The strict anti-terror law **MCOCA** was used **illegally** without proper approval.
- Some **important records were destroyed**, which could have proven the innocence of the accused.

The High Court called it a case of **"false closure"**, where innocent people were jailed while the real culprits may still be free. All 12 accused had spent **up to 19 years in jail**, and one died in custody during the COVID-19 pandemic.

The **Supreme Court** has **put a temporary stay** on the High Court verdict, but allowed the released accused to remain free for now.

Key Takeaways

What happened in 2006?

- Date: July 11, 2006
- Event: Coordinated serial blasts in Mumbai local trains
- Casualties: 189 killed, 824 injured
- Bombs were made using pressure cookers, targeting peak-hour commuters

What did the 2015 MCOCA court rule?

- 5 accused were sentenced to **death**
- 7 received **life imprisonment**
- 1 accused, Wahid Shaikh, was **acquitted** after 9 years due to lack of evidence

Why did the Bombay High Court acquit all 12 in 2024?

1. **Tortured Confessions**
    - Confessions were obtained through **physical abuse**
    - All confessions had **similar wording**, suggesting they were scripted
    - Legal safeguards were violated — no access to lawyers, no proper documentation
2. **Unreliable Eyewitnesses**
    - Witnesses reported incidents **months later**
    - Identification parades were **illegally conducted**
    - Testimonies were not corroborated
3. **Invalid Use of MCOCA**
    - Law requires **prior sanction** from a senior officer
    - Approval was given without checking documents
    - The sanctioning officer was **not called as a witness**
4. **Missing or Mishandled Evidence**
    - **Call Detail Records** were destroyed despite repeated requests
    - Physical evidence (RDX, detonators, circuit boards) lacked **proper custody chain**
    - Court called it a **violation of fair trial rights**

What did the Supreme Court say?

- Temporarily **stayed** the High Court's acquittal verdict
- Allowed the already released accused to **remain free**
- Issued notices to the acquitted individuals on the state's appeal

Restoring mangroves can turn the tide on India's coastal security-The Hindu Science

Environment

Easy Explanation

Mangroves are **coastal forests** that grow in salty waters and act as **natural protectors** for coastal regions. They **reduce the impact of cyclones, tsunamis, and sea erosion**, while also **supporting biodiversity** and storing **blue carbon** (carbon captured in coastal ecosystems).

India has around **4,900 sq. km** of mangroves, mostly in **West Bengal, Odisha, Tamil Nadu, Gujarat, and Karnataka**. But mangroves are under threat from **urbanisation, pollution, aquaculture, and climate change**.

Despite this, there are **successful restoration efforts** happening across states:

- **Tamil Nadu** has nearly **doubled its mangrove cover** between 2021 and 2024.
- **Mumbai** launched a major corporate-backed project in 2025 to restore mangroves in Thane Creek.
- **Gujarat** has planted **over 19,000 hectares** of mangroves since 2023 and is leading at the national level.

These efforts combine **scientific planning, community involvement, and policy support**, showing that **mangrove conservation is not only possible but actively progressing**.

Key Takeaways

1. Importance of Mangroves

- Act as **natural barriers** against cyclones, tsunamis, tidal surges, and erosion.
- Store large amounts of **blue carbon**, helping **fight climate change**.
- Support **fisheries, migratory birds, and marine biodiversity**.
- Linked to the **livelihoods of coastal communities**, especially fishers and honey gatherers.

2. Threats to Mangroves

- **Urban expansion**, **aquaculture**, **industrial pollution**, and **altered water flows**.
- **Climate change** poses a major threat globally; over half of the world's mangroves may collapse by 2050 (IUCN report).

3. Tamil Nadu's Success

- Under **Green Tamil Nadu Mission**, mangrove cover increased from **4,500 ha to 9,000 ha** (2021–2024).
- In **Muthupettai**, over **4.3 lakh Avicennia seeds** and **6,000 Rhizophora propagules** planted to restore tidal flow and forest.
- In **Chennai**, 12,500 mangrove seedlings planted after removing invasive weeds, aiming to strengthen coastal defence.

4. Mumbai's Restoration Project (2025)

- Funded by **Amazon's Right Now Climate Fund**.
- Focus on **Thane Creek**: planting **3.75 lakh mangrove saplings** and removing **150 tonnes of plastic** using biodegradable barriers.
- Also creates **jobs for local women** and supports **bird habitats** like those of flamingos.

5. Gujarat's Leadership

- Leads under the **MISHTI scheme (Mangrove Initiative for Shoreline Habitats and Tangible Incomes)** launched in 2023.
- **Planted over 19,000 hectares** of mangroves in just 2 years.
- Focus on **Kutch and Saurashtra**, promoting **resilience, ecotourism**, and **blue carbon goals**.
- Holds **23.6%** of India's total mangrove area.

6. Larger Message

- India shows that with **community support, government policy, and scientific input**, mangrove restoration is not only achievable but scalable.
- As climate threats increase, **protecting and restoring mangroves is urgent and essential** for **coastal security, biodiversity, and climate resilience**.

UN in urgent talks on COP30 summit costs-The Hindu Science

International relations

Easy Explanation

The UN climate conference (COP30) will be held in November 2025 in Belém, Brazil, a city in the Amazon region. However, there is a major concern: **accommodation prices have shot up**, making it hard for **poor**

countries to attend. A meeting was held by the UN's climate bureau on July 29 to urgently address this issue.

Some hotels in Belém are charging up to **$700 per night**, while the UN gives poorer countries only **$149 per day** to cover their expenses. Brazil has promised to provide more affordable housing options, including **cruise ships for extra beds**, and to revisit the matter by **August 11**.

Both **developing and rich countries** have raised concerns, fearing they may have to **send fewer delegates** or **not participate at all** — which could affect the fairness and inclusiveness of global climate negotiations.

Key Takeaways

1. What's the issue?

- The upcoming **COP30 climate summit** will take place in **Belém, Brazil**.
- **Accommodation prices have skyrocketed**, making it difficult for **developing countries** to afford participation.
- Some hotels are charging **$700 per person per night**.

2. Who raised concerns?

- **African Group of Negotiators** called an emergency meeting on July 29.
- Concerns were shared by **both poor and wealthy nations**.
- Countries like the **Netherlands** and **Poland** may **cut delegations** due to cost.

3. What steps is Brazil taking?

- Promised to **report back** on affordable lodging solutions by **August 11**.
- Secured **two cruise ships** for **6,000 extra beds**.
- Offered **cheaper rooms** at up to **$220 per night**, still **above the UN daily allowance** of $149.

4. Why does this matter?

- High costs **threaten inclusive participation** in climate talks.
- Risk of **limited or absent delegations** from the Global South could undermine equity in climate negotiations.
- Shows the **logistical challenges** of hosting such a large global event in a **remote location**.

5. Larger Implication

- The issue highlights the **intersection of climate justice and access**.
- If not resolved, it may affect the **credibility and legitimacy** of COP30 negotiations.

Arrest and unrest-The Hindu Editorial

Sociology

Easy Explanation

Two Catholic nuns from Kerala were arrested in **Chhattisgarh** on July 25 while taking three tribal girls to a convent in Agra for jobs. A **Bajrang Dal** member accused them of **human trafficking and forced religious conversion**. However, the girls' families later clarified there was **no force or inducement** involved.

These arrests have sparked protests by political parties and church groups, who view this as **communal targeting**. Many point out that **anti-conversion laws** are being misused across several states to harass religious minorities, especially Christians and Muslims, even though the **Constitution guarantees freedom of religion**.

In tribal regions, there's also tension between different religious and cultural groups, with demands like a **Sarna religious code** for Adivasis and debates about **delisting Christian tribals** from Scheduled Tribe benefits. The article argues that governments should focus on **welfare and rights** rather than fanning communal tensions.

Key Takeaways

1. The Incident

- Two nuns from Kerala were arrested in **Chhattisgarh** on charges of **human trafficking and religious conversion**.
- They were accompanying **three tribal girls** to a convent in Agra for employment.
- Complaint was filed by a **Bajrang Dal** member.
- The families of the girls **denied any forced conversion**.

2. Legal Provisions Used

- Booked under:
    - **Section 4 of Chhattisgarh Freedom of Religion Act, 1968** (conversion).
    - **Section 143 of the Bharatiya Nyaya Sanhita (BNS)** (trafficking).

3. Wider Reactions

- **Protests by MPs** from both ruling and opposition parties in Kerala.
- **Condemnation by the Catholic Church** and Christian organizations.
- Seen as part of a **pattern of communal vigilantism**.

4. Anti-Conversion Laws: Misuse and Concerns

- Several states (e.g., **U.P., M.P., Chhattisgarh, Odisha**) have laws to **prevent forced conversions**.
- However, these are often **misused** to:
    - Target **interfaith marriages**.
    - Harass **Christian missionaries**.
    - Suppress **minority rights**.

5. Tribal and Religious Tensions

- In tribal areas like Jharkhand and Chhattisgarh:
    - Adivasi groups are resisting both **Hindutva and Christian missionary influence**.
    - There is a **push for a separate Sarna religious code**.
    - Debate over whether **Christian tribals should retain Scheduled Tribe status**.

6. Larger Constitutional Context

- The **Indian Constitution** guarantees:
    - **Freedom of religion** (Article 25).
    - Right to **propagate religion**.
- Misuse of laws to curb these freedoms is **unconstitutional**.

7. Expert view

- Political and religious groups should **focus on welfare, jobs, and rights**.
- Government must **uphold constitutional protections**, not violate them.