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NOVEMBER 2025

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2nd November 2025

Internal Security

Easy Explanation

Around **500 Indians trapped in Myanmar's KK Park cybercrime hub** are being brought back home by the Indian government. Their ordeal highlights a growing global problem — the rise of **scam cities** in **Southeast Asia**, where thousands of people are trafficked, enslaved, and forced to commit online frauds.

KK Park, located in *Myawaddy township* near the Thailand border, is one of the most infamous of these scam centres. It is controlled by a warlord named **Saw Chit Thu**, who is allied with Myanmar's military junta. His group, the **Border Guard Force (BGF)**, runs the area like a private empire. Though Myanmar's military staged a "raid" on the compound and seized 30 Starlink satellite devices, reports suggest this was a **staged operation** to appease international pressure — especially from the U.S., which is investigating how Starlink is being used in such scams.

Thousands of trafficked workers — including Indians — took advantage of the chaos to escape during the raid, leading to the current wave of repatriations.

How These Scam Centres Work

According to the **Global Initiative against Transnational Organized Crime (GI-TOC)**, these scam compounds operate like **industrial prisons**. Victims are lured through **fake job offers** in IT or digital marketing, mainly via online ads. Once recruited, they are flown to countries like **Thailand or Cambodia**, then trafficked across borders into Myanmar. Their **passports are seized**, and they are **forced to run scams** for long hours under threat of torture.

Common scams include:

- **Pig Butchering (Sha Zhu Pan):** Victims are tricked into romantic or investment relationships and lured into fake cryptocurrency schemes before being scammed.
- **Impersonation scams:** Criminals pose as police or bank officials.
- **Extortion scams:** Using personal information or blackmail.

The **UN Office on Drugs and Crime (UNODC)** estimates these scams generate **billions of dollars annually**, targeting people from over **110 countries**, including India, the U.S., and Europe.

Myanmar's Role

The problem has flourished in Myanmar's **lawless border regions**, which are controlled by **ethnic militias** rather than the government. The **Border Guard Force** and other local groups were officially allowed to retain arms and run businesses in exchange for loyalty to the junta — a system created by **Min Aung Hlaing**, the current junta chief. After the **2021 coup**, these militias expanded their criminal empires, running human trafficking, drug smuggling, and cyber fraud rings to finance the junta's war.

When **China** realized that many of the scam victims were its citizens, it supported **Operation 1027**, a joint offensive by ethnic armed groups to shut down scam centres. This forced many scam networks to relocate further south — toward the **Thai border**, affecting India and other nations.

The Cambodian Connection

Another major hub is **Cambodia**, especially in **Sihanoukville** and **Bavet**, where repurposed casinos and special economic zones host scam networks. A company called **Huione Group** has been identified as a key financial enabler. It allegedly ran a global cybercrime marketplace, **Huione Guarantee**, on Telegram — offering stolen data, money-laundering services, and torture equipment.

Investigations show Huione-linked accounts handled **$91 billion in cryptocurrency** over five years. Despite U.S. sanctions in 2025, the network has adapted using new branding and its own **stablecoin (USDH)**.

Impact on India

India has been hit **both ways** — as a **source of victims** and a **target of scams**.

- Hundreds of Indians were lured to Southeast Asia by **fake job ads** promising high salaries. Many were later rescued, including **283 people airlifted from Thailand** in March 2025.
- Since July 2022, over **1,600 Indians have been repatriated** from such scam compounds.
- Indians are also increasingly targeted by scams like **crypto investments and impersonation frauds**.

The **Ministry of External Affairs** and **Indian embassies** in Myanmar and Thailand are now working with regional governments to bring back remaining victims. External Affairs Minister **S. Jaishankar** said India "shares deep concern" over the rise of cyber scam centres that exploit its nationals.

Key Takeaways

1. KK Park Overview

- Located in **Myawaddy, Myanmar**, near Thailand border.
- Controlled by **Border Guard Force (BGF)** leader **Saw Chit Thu**.
- A centre for **cyber scam operations** and human trafficking.

2. The Business Model

- Fake job ads lure victims → passports seized → forced online scams.
- Victims tortured if they resist.
- Major scam type: **"Pig Butchering"** (romance + crypto fraud).

3. Myanmar's Political Role

- Junta-backed militias profit from scam centres.
- **Operation 1027** (supported by China) tried to shut them down, pushing scams southwards.

4. Cambodia's Role

- **Huione Group** enabled global money flows; linked to $91 billion in crypto scams.

5. India's Situation

- Over **1,600 Indians rescued since 2022**; 500 more now returning.
- Victims include jobseekers trapped in compounds; India also a scam target.

6. Global Impact

- Victims across **110+ countries**.
- Cyber scam industry generates **billions annually**.
- Increasing scrutiny from **U.S., ASEAN, and UNODC**.

[Strange spider web 'decor' revealed to boost prey detection: TH Science](#)

Science Tech

Easy Explanation

For centuries, scientists have puzzled over the purpose of the **zigzag silk patterns** — called **stabilimenta** — found in the webs of certain spiders, like the **wasp spider (Argiope bruennichi)**. Some believed these silk decorations were **visual lures** that reflected UV light to attract insects. Others thought they helped **warn birds** to avoid crashing into webs or served as **camouflage**. But the real function remained unclear, especially since not all spiders build them.

A new study published in *PLoS One* by researchers from **Denmark, Italy, Sweden, and the U.K.** has now proposed a fresh explanation: these silk patterns may act as **vibration-tuning devices** that improve the spider's ability to detect prey.

Spiders rely heavily on **vibrations** to sense what's happening in their webs — it's how they know when prey has been trapped. The researchers created computer models of real webs with and without stabilimenta, simulating how vibrations travel through them. They discovered that while stabilimenta had **little effect** on vibrations moving directly toward the spider, they had a **significant effect** on sideways-moving vibrations.

In webs with stabilimenta, these lateral vibrations could **reach the spider more effectively**, helping it **pinpoint prey faster**. In other words, the "decorations" work like a **signal amplifier**, allowing spiders to detect faint or indirect movements.

The findings have wider implications. For biologists, it shows how spiders have evolved intricate strategies to balance **catching prey** and **avoiding predators**. For engineers, the study offers inspiration to design **materials that control vibration and wave energy**, such as soundproofing systems, sensitive microphones, or protective gear that directs impact forces away from vital areas.

Key Takeaways

1. The Mystery of Stabilimenta

- Zigzag silk patterns seen in webs of some spiders.
- Earlier theories: attract prey, warn birds, or provide camouflage.
- Not built consistently, adding to the mystery.

2. New Explanation – Vibration Control

- Study in *PLoS One* found stabilimenta may act as **vibration-tuning structures**.
- Researchers modeled how vibrations travel through webs.
- Found that stabilimenta improve detection of **sideways (lateral) vibrations**, helping spiders sense prey more accurately.

3. Biological Significance

- Enhances the spider's ability to find trapped prey quickly.
- Reflects a balance between sensitivity to vibrations and remaining hidden from predators.

4. Engineering Applications

- Insights can be applied to develop materials that **control wave flow**.
- Possible uses:
    - **Noise reduction** and acoustic dampening.
    - **Advanced sensors** that detect sound direction.
    - **Protective materials** that divert impact forces efficiently.

5. Broader Message

- Even simple natural patterns like a spider's silk "decoration" can embody **complex physical design principles**, showing how evolution creates solutions that can inspire modern technology.

[Scientists detect brain response to rhythm in preterm babies: TH Science](#)

Science

Easy Explanation

Scientists have always been curious about **when and how the human brain develops a sense of rhythm**, but it's difficult to study this inside the womb. So researchers turned to **premature babies**, whose brains are roughly at the same developmental stage as fetuses in the final weeks before birth.

In a new study published in *iScience*, scientists found that when these **preterm infants** heard rhythmic sounds, not only did their **hearing areas** in the brain activate, but so did regions related to **movement**. This means the brain begins connecting **sound and motion even before birth**.

The researchers used a non-invasive imaging method called **functional near-infrared spectroscopy (fNIRS)**, which measures brain activity through light sensors. They studied babies born at around **36 weeks of gestation**, exposing them to rhythmic and irregular sounds while they slept. Rhythmic sounds activated **more areas of the brain**, particularly those linked to planning and controlling movement.

This suggests that **even before birth, the brain is preparing for rhythm and coordination**, laying the groundwork for skills like **language and social interaction**, which depend heavily on rhythm and timing.

Experts note that fetuses already experience rhythmic patterns in the womb — such as the **mother's heartbeat and voice cadence** — which may help train the developing brain. Rhythm appears to play a key role in building **healthy neural connections**, supporting early learning and motor development.

While these babies can't yet recognise music or beats, their brains are **already wired to process rhythm**, which may help them understand patterns and sounds after birth. Doctors say this early rhythmic sensitivity may also indicate **brain health** — infants with smoother, more coordinated movements tend to have better neural development and are less likely to suffer from disorders like **cerebral palsy** later in life.

Key Takeaways

1. Study Details

- Published in *iScience* by researchers from **University of Picardy Jules Verne (France)** and others.
- Studied **premature infants (~36 weeks gestation)** using **fNIRS** imaging.
- Babies were exposed to **rhythmic and irregular sounds** while asleep.

2. Main Findings

- **Rhythmic sounds** activated both **hearing** and **motor control** regions of the brain.
- Shows that the **connection between sound and movement** begins **before birth**.
- The brain starts developing rhythm perception **earlier than previously thought**.

3. Biological Significance

- Exposure to rhythms like the mother's **heartbeat and voice** may help form neural pathways.
- Rhythm helps the brain learn **timing, coordination, and communication**.
- Indicates early development of **language and social skills foundations**.

4. Expert Insights

- Rhythm processing appears before voluntary movement — the brain's **motor system** helps shape perception from the start.
- **Smooth fetal movements** are linked to strong brain connections and healthy development.

5. Implications

- Rhythm may be a **core building block of learning** and sensory integration.
- Findings could help identify **early brain development issues** in premature babies.
- Could lead to therapies using sound or rhythm to support **neural growth** in newborns.

6. Broader Idea
Rhythm may be the brain's **first form of "music"** — a natural internal pattern that helps infants make sense of the world even before birth.

[Plant-based foods reduce the burden of cancer, diabetes: TH Science](#)

Science

Easy Explanation

Two major studies from Europe have highlighted how **diet and lifestyle choices directly affect long-term health** — particularly diseases like **cancer, diabetes, and heart problems** — and how **plant-based diets** can lower these risks while also helping the planet.

The first study (by **V. Viallon et al., 2024**) used a **Healthy Lifestyle Index (HLI)** to examine how habits such as **smoking, alcohol consumption, diet, body weight, and sleep** influenced risks of **type-2 diabetes, cancer, and cardiovascular diseases**. The results confirmed that **unhealthy lifestyle factors** — especially smoking, excess drinking, poor diet, obesity, and irregular sleep — were strongly linked to **early deaths** and chronic illnesses.

The second and more recent study (by **Reynaldo Cordova et al., 2025**, published in *The Lancet Healthy Longevity*) focused on **plant-based diets and "multimorbidity"** — a condition where a person has two or more chronic diseases at the same time (for example, diabetes and heart disease).

Researchers analysed data from over **4 lakh people** across Europe (EPIC database) and the **UK Biobank**, finding that those who followed **healthy plant-based diets** (rich in vegetables, fruits, legumes, and whole grains) had **significantly lower risks** of developing multiple chronic diseases.

They also pointed out that **plant-based diets** are **environmentally more sustainable**, producing fewer greenhouse gas emissions compared to diets heavy in **meat, fish, and eggs**.

In short, a **balanced plant-based diet** improves health, prevents multiple diseases, and supports sustainability.

Situation in India

In India, around **35% of the population is vegetarian**, while **10% follow vegan diets**. Yet, health problems are rising fast:

- **16.4% of urban Indians** are diabetic.
- **8% of rural Indians** are pre-diabetic.
- **26% of urban people** have **insulin resistance** (a sign of metabolic disorders).
- Around **29% of Indians smoke**, and many rural people also chew **betel nuts**, both of which increase the risk of **cancer**.
- **Older adults (60+)** face both diabetes and **age-related conditions** like **dementia** and **Alzheimer's disease**.

Experts warn that unless **governments, doctors, and society** act quickly, India could face a **health crisis** caused by poor diets, sedentary lifestyles, and tobacco use.

Key Takeaways

1. Study 1: Healthy Lifestyle Index (HLI)

- Published in *Scientific Reports (2024)*.
- Analysed how habits like **diet, alcohol, smoking, sleep, and weight** affect diseases.
- Found that unhealthy lifestyles increase risks of **cancer, diabetes, heart disease, and early death**.

2. Study 2: Plant-Based Diets & Multimorbidity

- Published in *The Lancet Healthy Longevity (2025)*.
- Used data from **EPIC** and **UK Biobank** (over 4 lakh people).
- Found that **plant-based diets** reduce risks of **multiple chronic diseases**.
- Also showed these diets are **eco-friendly**, reducing greenhouse gas emissions.

3. Indian Context

- **Rising diabetes and metabolic disorders** due to lifestyle and diet.
- High rates of **tobacco use** and **betel nut chewing** increasing cancer risk.
- **Older population** faces growing health burden from both chronic and age-related diseases.

4. Call to Action

India needs stronger health awareness campaigns, preventive lifestyle programs, and policies encouraging:

- Balanced plant-based diets.
- Reduced tobacco and alcohol use.
- Regular exercise and sleep hygiene.

3rd November 2025

[Engage the Taliban, don't recognise them: TH Editorial](#)

International Relations

Easy Explanation

The relationship between **India, Afghanistan, and Pakistan** has entered a complex phase since the **Taliban returned to power in 2021**. Earlier, the Taliban were supported by Pakistan when they were insurgents fighting against the U.S.-backed Afghan government. But now that they rule Afghanistan, **tensions between Pakistan and the Taliban have increased**, especially over their shared **2,640 km border**, which has led to several clashes.

Amid this friction, **India has cautiously reopened communication with the Taliban**. When Pakistan bombed parts of Kabul in October, the Taliban's Foreign Minister, **Amir Khan Muttaqi**, happened to be visiting India — signalling a shift in diplomatic dynamics. During his visit, India decided to **upgrade its technical mission in Kabul into a full embassy**, resuming earlier infrastructure projects, after the Taliban assured that **no terror group would use Afghan soil against India**.

India has three main goals in Afghanistan:

1. **Protect its $3 billion investments** made between 2001–2021 in infrastructure and aid.

2. **Prevent anti-India militants** (like Jaish-e-Mohammad or Lashkar-e-Taiba) from using Afghan territory.

3. **Stop Pakistan from controlling Afghan policy** through the Taliban.

However, **recognising the Taliban government formally** remains a delicate issue. While countries like **Russia and China** have recognised or exchanged ambassadors, India has adopted a **conditional engagement policy** — maintaining contact but withholding full recognition.

The Taliban claim they've changed, but their **policies remain deeply repressive** — especially toward women. Girls are **banned from education beyond primary level**, women are largely **barred from work**, and public life is strictly segregated. The **Afghan economy has shrunk by one-third**, and almost **half the population needs humanitarian aid**. These conditions raise doubts about the Taliban's stability and ability to govern in the long term.

Even though the Taliban say they've cut ties with terrorist groups like **al-Qaeda**, **UN reports** suggest otherwise. The **Haqqani Network** and several jihadist outfits, including **Jaish-e-Mohammad** and **Lashkar-e-Taiba**, still operate in Afghanistan with Taliban tolerance. The only group openly against the Taliban is **Islamic State-Khorasan (IS-K)**.

For India, this means that while it's practical to engage with the Taliban for regional stability, **formal recognition could be risky**. It might strengthen Taliban legitimacy and limit India's influence to press for reforms. Instead, India's best approach is **strategic engagement** — providing aid and cooperation, but urging the Taliban to respect **basic human rights** and ensure Afghanistan's **economic and political inclusion**.

Key Takeaways

1. Changing Equations in South Asia

- Taliban were once Pakistan's allies but now have strained relations over border issues.
- India, traditionally opposed to the Taliban, has cautiously re-engaged due to regional shifts.

2. India's Objectives in Afghanistan

- Safeguard **$3 billion investments** and previous goodwill.
- Ensure **Afghan soil isn't used for anti-India terrorism**.
- Limit **Pakistan's strategic influence** in Kabul.

3. Taliban 2.0 – Repressive Yet Strategic

- Continue to **ban girls' education and women's employment**.
- Afghanistan's **economy has collapsed**, with nearly **half its people needing aid**.
- Despite improved security claims, the Taliban remain **ideologically unchanged**.

4. Terror Networks Still Active

- UN reports indicate Taliban still allow **al-Qaeda, Haqqani Network, and other terror groups** to function quietly.
- Only **IS-K** opposes the Taliban regime.
- These groups could resurface if Taliban control weakens.

5. International Recognition

- **Russia** recognises the Taliban; **China** has exchanged ambassadors.
- India has not recognised them yet but maintains **conditional engagement**.

6. Risks for India

- Full recognition may legitimise Taliban repression and limit India's diplomatic leverage.
- Taliban instability could again turn Afghanistan into a **terror safe haven**.

7. India's Best Strategy

- Continue **engagement without recognition**.
- Use diplomatic channels to **push for reforms and human rights**.
- Focus on **long-term stability, inclusion, and regional cooperation** rather than short-term political gains.

[Cruising ahead: TH Editorial](#)

Economy

Easy Explanation

The **India Maritime Week**, inaugurated by **Prime Minister Narendra Modi**, marked a turning point in how the Indian government views the shipping industry. Earlier, shipping was seen mostly as a business activity. Now, it is being recognised as a **strategic sector** vital for national security, economic resilience, and global influence.

For nearly two decades, India's shipping sector weakened due to policies of **liberalisation and privatisation**, which reduced state involvement and allowed foreign dominance. The government's focus shifted mainly to **training Indian seafarers** for jobs on foreign ships rather than strengthening India's own fleet. The once-powerful **Shipping Corporation of India (SCI)** was allowed to decline after losing privileges such as priority rights to carry India's oil cargo. It even came close to privatisation.

However, the **COVID-19 pandemic exposed India's vulnerability** — with most trade dependent on foreign ships, the country had little control over its maritime logistics. This made policymakers realise that **shipping is not just commerce but a strategic lifeline**, especially during disruptions, wars, or protectionist global trends.

In response, the government began **rebuilding the SCI fleet** and launching **major investments** in port infrastructure and connectivity. The port sector now operates under the **"landlord model"**, where the government owns the port while private or foreign companies run specific terminals. This model has drawn massive investments, helping ports like **Chennai and Kolkata** plan **transshipment hubs in the Andamans** and expand under the **Sagarmala Project**.

The government is also trying to encourage **foreign shipping firms to register their vessels in India** through local subsidiaries. This would give India greater control over ships serving its trade routes and benefit associated sectors like **insurance and finance**.

However, one key area still lagging is **shipbuilding**. Indian shipyards have yet to demonstrate the capability to quickly produce **modern, eco-friendly ships** such as LNG carriers or green-fuel vessels. True maritime strength will come only when India can build and operate its own technologically advanced merchant fleet.

Key Takeaways

1. Strategic Shift in Policy

- Government now views **shipping as a strategic sector**, not just a business.
- The focus is on **self-reliance in trade logistics** after COVID-19 exposed overdependence on foreign fleets.

2. Decline of Indian Shipping (Past Two Decades)

- Policies under **liberalisation and privatisation** reduced state support.
- The **Shipping Corporation of India (SCI)** lost privileges and almost faced privatisation.
- Government interest was limited to **training seafarers**, not building fleets.

3. Post-Pandemic Realisation

- **Foreign dominance in shipping** left India vulnerable during global crises.
- India recognised the **strategic importance** of having its own fleet for trade security.

4. New Government Initiatives

- **Expansion of SCI's fleet** and new port development under the **Sagarmala Project**.
- Ports like **Chennai and Kolkata** are developing **transshipment hubs in the Andamans**.
- Efforts to attract **foreign companies to register ships in India**, ensuring better control and allied sector growth.

5. Port Infrastructure Model

- Ports now follow a **landlord model**: government owns ports, private players operate terminals.
- This has led to **high investor interest** and **financial strength** for expansion.

6. The Missing Link: Shipbuilding

- Indian shipyards still lag in building **LNG and green-fuel vessels**.
- Progress here would demonstrate **industrial and technological maturity**.

7. The Road Ahead

- India needs to focus on **domestic shipbuilding capacity**, **green technology**, and **strategic maritime autonomy**.
- Only when India can independently build and operate advanced ships will it achieve full maritime power.

Sociology

Easy Explanation

Over the past few years, most of the internet services we loved — YouTube, Twitter (now X), Instagram, Google, Amazon — have gradually become **worse for users**. Once free, open, and user-friendly, these platforms are now filled with **ads, paywalls, and manipulative algorithms**. This trend is explained by a concept called **"enshittification"**, coined in 2022 by author and tech critic **Cory Doctorow**.

Enshittification means the deliberate decline in quality of online platforms as they evolve. According to Doctorow, platforms go through three stages:

1. **They serve users well** to attract a large audience.

2. **They exploit users** to benefit business partners and advertisers.

3. **They exploit those partners** to extract maximum profit for themselves — and eventually collapse.

This explains why YouTube now forces unskippable ads, Instagram shows more suggested posts than your friends' photos, or Google prioritises AI summaries and sponsored links over genuine search results. In short, the user experience gets worse so the company can earn more.

Doctorow also identified **four key factors** that can limit or worsen enshittification — competition, regulation, user resistance, and unionisation of tech workers. When these are weak (for example, when big tech monopolies face no competition or oversight), companies can easily manipulate users and make profits at their expense.

Examples abound:

- **Facebook** shifted from connecting friends to promoting paid posts and advertisements.

- **Instagram** now prioritises algorithmic, commercial content and even AI-generated accounts over real friends.

- **X (Twitter)** degraded after Elon Musk made verification a paid feature, letting fake and harmful accounts spread easily.

- **YouTube and Spotify** force users to tolerate ads or pay for premium services, while quietly changing algorithms to promote more profitable content.

- **Amazon and Google** showcase paid or self-promoted listings first, rather than the best or most relevant ones.

Even subscription services are showing enshittification. Netflix and Prime Video have increased prices while adding ads, and YouTube blocks ad blockers. Spotify reportedly replaces real artists with "soundalike" tracks that cost less in royalties.

The root cause is **Big Tech dominance** — when only a few companies control the entire digital market, they prioritise profits, not users. Regulation is slow, users are trapped by convenience, and workers inside these firms have little power to resist unethical decisions.

In short, **enshittification** captures how digital platforms evolve from user-friendly to user-exploitative systems — a cycle that continues until users push back, regulators intervene, or the platform collapses under its own greed.

Key Takeaways

1. Meaning of Enshittification

- Coined by **Cory Doctorow (2022)** to describe how online platforms become worse over time.
- The process:
    1. Platforms serve users →
    2. Exploit users to serve advertisers →
    3. Exploit advertisers to maximise profit → collapse follows.

2. Key Factors That Affect It

- **Competition:** Lack of alternatives allows platforms to act unfairly.
- **Regulation:** Weak laws let Big Tech exploit users.
- **User Resistance:** Ad blockers, switching platforms, or consumer awareness can slow decline.
- **Unionisation:** Empowered workers inside tech firms can resist unethical business practices.

3. Examples of Enshittification

- **YouTube:** Forced ads, blocked ad-blockers, higher subscription costs.
- **Instagram:** Algorithmic videos replace posts from friends.
- **Twitter/X:** Paid verification lets fake and harmful accounts dominate.
- **Facebook:** Prioritises ads and corporate content over personal posts.
- **Spotify:** Limits free users' control; accused of replacing real artists with cheap soundalikes.
- **Amazon:** Promotes paid listings and its own products instead of the best results.
- **Google:** Displays AI-generated summaries and sponsored links before genuine information.

4. Broader Impacts

- Users lose **control, privacy, and quality experience**.
- Small creators and businesses are **pushed out** by algorithms favouring profit.
- Society becomes more **dependent on monopolised, manipulative tech ecosystems**.

5. The Way Forward

- Strengthen **competition and regulation** to check Big Tech power.
- Encourage **user awareness and digital literacy**.

- Support **ethical innovation and worker accountability** inside tech companies.

Economy

Easy Explanation

India's **urea consumption** — the most widely used fertiliser in the country — is expected to **touch 40 million tonnes (mt)** in 2024–25. This rise is driven by **strong monsoon rains**, which increased crop planting, and the fact that urea's **maximum retail price (MRP)** has remained unchanged for **over a decade**, making it extremely cheap compared to other fertilisers.

In 2023–24, urea use hit an all-time high of **38.8 mt**, and during the first half of this fiscal year, it rose by another **2.1% year-on-year**. Farmers are now using more urea for **rabi crops** like wheat, mustard, and potato — likely pushing total consumption to **nearly 40 mt**.

Why Consumption Keeps Rising

Urea consumption in India has **doubled since 1990–91**, going from 14 mt to over 30 mt by 2013–14. Even though the government tried to reduce excessive use by introducing **neem-coated urea (2015)** — which slows nitrogen release and prevents misuse — and smaller **45-kg bags (2018)**, consumption still grew.

The launch of **nano urea (2021)**, a liquid fertiliser developed by IFFCO, also failed to reduce use significantly. Consumption has now crossed **35 mt (2020–21)** and continues to rise.

The main reason is **price distortion**. Urea is sold at `₹5,628 per tonne`, while other fertilisers such as DAP, MOP, or complex fertilisers cost `₹26,000-38,000 per tonne`. Even if the government **doubles** urea's price, experts believe the demand will barely decline because it remains far cheaper and nitrogen-rich (46% nitrogen).

Shortages Emerging

Because of high demand and limited production, **shortages** have begun appearing. During the **kharif season**, farmers in many states waited in long queues to get urea. Opening stock for the **rabi season (Oct 1)** was only **3.7 mt**, compared to **6.3 mt last year**.

Domestic production, which **peaked at 31.4 mt in 2023–24**, is now stagnating. This has been partly offset by **six new plants** built between 2019 and 2022 — including Gorakhpur, Barauni, Sindri, Ramagundam, Panagarh, and Gadepan-III — which raised capacity from **24.5 mt (2019–20)** to **31.4 mt (2023–24)**.

However, not all new units operate at full capacity, and two major plants — **Nagarjuna Fertilizers (Andhra Pradesh)** and **Kanpur Fertilizers (U.P.)** — have shut down. The Kanpur unit will be converted into a **green hydrogen–ammonia plant**, reducing traditional urea output further.

The Road Ahead

Because urea is **cheap, easy to apply, and vital for crop growth**, its demand is unlikely to fall. With growing irrigated area and nitrogen-demanding crops (like maize and leafy vegetables), demand could **cross 45 mt by 2030**.

To control this, experts suggest:

1. **Rationalising the MRP** — gradually increasing prices.
2. **Rationing subsidised urea** — limiting each farmer to 25 bags.
3. **Adding urease and nitrification inhibitors** — to slow nitrogen release and improve efficiency.

On the supply side, domestic capacity (around **30–31 mt**) must increase by **at least 5 mt** to reduce import dependency, which currently stands at about **10 mt annually**.

India's growing **LNG import infrastructure** — with terminals in Gujarat, Kerala, Maharashtra, Tamil Nadu, and Odisha — enables local gas-based urea production. For western and southern coastal states, importing **urea directly** might still make sense, but for interior regions, importing **natural gas and producing urea domestically** is more economical.

Key Takeaways

1. Record Demand:

- 2024–25 consumption likely to hit **40 mt**, the highest ever.
- Driven by **cheap prices** and strong crop acreage.

2. Government Measures That Failed:

- **Neem-coated urea (2015)** and **Nano Urea (2021)** haven't curbed use.
- Price difference between urea and other fertilisers remains too wide.

3. Supply Issues:

- Domestic output **peaked at 31.4 mt**, but stagnation continues.
- Some new plants underperform; two major units shut down.
- Imports and shortages expected to persist.

4. Future Strategy:

- **Cap consumption at 45 mt** using rational pricing and rationing.
- **Add 5 mt of new capacity** to limit imports.
- **Shift to gas-based production** for inland plants; import urea only for coastal use.

[BEHIND TRUMP'S CALL TO END U.S. LEGISLATIVE TOOL,THE FILIBUSTER: IE Explained](#)

Polity

Easy Explanation

The **filibuster** is a rule in the U.S. Senate that allows a small group of senators to **delay or block legislation** by refusing to end debate on a bill. Normally, the Senate can't move forward on most legislation unless **60**

out of 100 senators agree to end debate — this is called *cloture*. This rule gives the minority party significant power, since it forces the majority to seek bipartisan support.

In recent weeks, U.S. President **Donald Trump** has grown frustrated with a **government shutdown**, which happened because Democrats refused to support the Republican funding bill. Trump urged his party to **abolish the filibuster** — a move he called the "**nuclear option**" — so that Republicans could pass the bill with a simple majority (51 votes). However, most Republicans have **rejected** this idea. They argue that removing the filibuster would **backfire** when they are no longer in power, since it would allow Democrats to easily push through their own agenda later.

The filibuster has a long history. In the 19th century, it meant senators could **speak endlessly** to delay a vote — famously depicted in the 1939 film *Mr. Smith Goes to Washington*. Today, senators no longer need to speak for hours; they can simply **declare an intention to filibuster**, which automatically triggers the 60-vote threshold.

Currently, Republicans have only **53 Senate seats**, so they need at least **seven Democrats** to join them to pass the funding bill. Democrats are demanding extensions for **healthcare subsidies** under the **Affordable Care Act**, which Republicans reject. This deadlock has prolonged the shutdown and increased tensions.

Despite Trump's pressure, **most Republican senators** — including leaders such as **John Thune** — want to keep the filibuster. They believe it encourages **compromise and bipartisanship**, preserving the Senate's unique role as a deliberative body rather than a partisan battleground. As newer Senator **John Curtis** put it: "The filibuster forces us to find common ground. Power changes hands, but principles shouldn't."

Key Takeaways

1. What is a Filibuster?

- A **Senate rule** that allows extended debate to block or delay a bill.
- Requires **60 votes** to proceed to final passage (called "cloture").
- Initially meant long speeches, but now senators can simply **announce** a filibuster.

2. The Current Context

- The U.S. government is facing a **shutdown** due to a funding dispute.
- President Trump wants to **end the filibuster** ("nuclear option") so Republicans can pass their bill without Democratic support.
- Republicans control **53 seats**, not enough to meet the 60-vote threshold.

3. Democrats' Demands

- They want **extended healthcare subsidies** under the Affordable Care Act in exchange for funding votes.
- Republicans consider that **too expensive** for a short-term funding bill.

4. Why Republicans Resist Ending the Filibuster

- It **protects minority rights** in the Senate.
- Without it, when Democrats regain control, they could easily pass their own agenda.

- Senior senators like **John Thune** and others view it as essential for maintaining Senate balance and tradition.

5. Broader Implications

- The filibuster encourages **bipartisanship** but also causes **gridlock**.
- Ending it would make lawmaking faster but far more **partisan and unstable**.
- The debate reflects a larger tension between **majority rule** and **checks and balances** in U.S. democracy.

[Cloud seeding in winters to reduce pollution is bad science. Here is why: IE Explained](#)

Science

[Cloud seeding in winters to reduce pollution is bad science. Here is why](#)

Science

Easy Explanation

Delhi's government recently turned to **cloud seeding** — an artificial rain-making experiment — to tackle its severe air pollution. The idea is that if you can make it rain, the rainfall will help **wash away pollutants like PM2.5** from the air. However, experts warn that this method has very limited scientific value when applied to pollution control.

How cloud seeding works:
 It involves dispersing chemicals like **silver iodide or sodium chloride** into clouds. These particles act as **condensation nuclei**, around which water vapour condenses, leading to the formation of raindrops. But this method only works if there are **suitable clouds** — specifically *hygroscopic (warm-rain) clouds* that contain a lot of moisture.

The main problem:
 Such clouds are **rare in winter**, which is exactly when Delhi's pollution peaks. From November to January, the chances of having suitable clouds drop to **5–10%**. In contrast, during the pre- or post-monsoon months, the probability is about **50%**. So, scientifically, cloud seeding has very little chance of working when it's most needed.

Even if it does "work," a **light drizzle** doesn't clean the air effectively. On cooler days, drizzles can even **worsen pollution** by creating microdroplets that attract fine particles, leading to the formation of **secondary aerosols** — which make the air quality worse again. Moreover, since **pollution is produced every day**, even heavy rain can only give **temporary relief**; the pollutants return quickly as emissions continue.

The experiment, however, was valuable from a **scientific research perspective**, as it helped test the limits of such interventions. Like the **smog towers** Delhi once installed, it may show that temporary fixes can't replace long-term planning.

Experts now argue that Delhi's pollution cannot be solved by city-level quick fixes. Instead, we need an **airshed approach**, which means managing air quality over a larger regional area, since **air doesn't respect state boundaries**. Institutions such as **NARFI (National Air Quality Resource Framework of India)** and **NIAS** have advocated for such integrated efforts.

The biggest and most persistent contributor remains **vehicular emissions**, which account for **over 40% of Delhi's PM2.5 load** according to SAFAR. Poor traffic management, growing vehicle numbers, and fossil fuel dependence have offset gains made from cleaner technologies.

Real progress will require **long-term, coordinated action** — transitioning to **electric vehicles**, enforcing **better fuel standards**, and **cutting fossil fuel use**. Air pollution is not just a winter or Delhi problem — it is a **national health crisis** that affects productivity, dignity, and life expectancy.

Key Takeaways

1. What is Cloud Seeding?

- Artificial rain-making by injecting chemicals like **silver iodide** or **sodium chloride** into clouds.
- Works only with **hygroscopic (warm-rain) clouds** that already contain moisture.
- Aims to trigger rainfall to wash pollutants from the air.

2. Why It Fails for Pollution Control

- Suitable clouds are **rare in winter (5–10%)**, when Delhi's pollution is worst.
- Light drizzle can **worsen PM2.5** by creating **secondary aerosols**.
- Even successful rain gives only **short-term relief**, as emissions quickly rebuild pollution.

3. Findings from the Delhi Experiment

- Air quality improved slightly (from "Very Poor" to "Poor") but **PM2.5 levels remained high**.
- It served more as a **scientific test** than a real pollution solution.
- Similar to **smog towers (2021)** — offered limited, temporary benefits.

4. The Real Causes of Delhi's Pollution

- **Vehicular emissions** are the biggest source (over 40%).
- Other contributors: **construction dust, fossil fuels, poor traffic management**, and **industrial activities**.
- Crop burning and fireworks are **temporary** causes — not the main problem.

5. The Way Forward

- Adopt an **airshed-based approach** — coordinate pollution control across regions.
- Focus on **year-round emission control**, not seasonal fixes.
- Accelerate shift to **electric vehicles** and **clean energy**.
- Enforce **scientifically sound, long-term strategies** instead of short-term experiments.

Restraint has a half-life: IE Editorial

International Relations

Easy Explanation

When former U.S. President **Donald Trump** suggested that America might **resume nuclear testing**, it reopened a sensitive global debate that had been largely settled since the **end of the Cold War**. For nearly 30 years, most countries have followed a **voluntary moratorium** on nuclear testing — not because they were legally bound, but because it was seen as **politically responsible and morally right**. However, this restraint is now weakening.

The **U.S.**, **Russia**, and **China** are all expressing doubts about the reliability of their nuclear weapons without physical testing. Russia has revived test-site activities, and China is expanding its facilities at Lop Nur. This trend shows that the world's major powers are once again preparing for a future where nuclear tests might return — breaking a long period of mutual restraint.

For **India**, this changing landscape raises important questions. Since its last tests in **1998**, India has maintained a **voluntary moratorium** on nuclear testing. This restraint earned it **global legitimacy**, ended international sanctions, and enabled **civil nuclear cooperation** agreements. But, as global conditions shift, India must ensure that restraint doesn't turn into **strategic rigidity**.

India's **credible minimum deterrence** and **No First Use (NFU)** policy have served it well — balancing moral restraint with security preparedness. But deterrence depends on the **reliability** of weapons, which were last tested over 25 years ago. Technology, materials, and delivery systems have evolved since then — including the **Agni-V missile**, **submarine-launched missiles**, and the development of **multiple independently targetable re-entry vehicles (MIRVs)**. These advancements may require **new verification** to ensure performance accuracy.

While **computer simulations** and **subcritical tests** (non-explosive) can help, they cannot fully replace the assurance of real data from physical tests. Even the U.S., despite its advanced technology, doubts simulations alone are enough.

India doesn't need to test immediately, but it must **prepare for a world where others might**. If testing becomes unavoidable, it can be **scientific, limited, and responsible**, aimed at validation — not showmanship. This would reinforce confidence in India's deterrent without appearing aggressive.

At the same time, India must preserve its **diplomatic credibility** as a responsible nuclear power. It must balance **readiness with restraint**, keeping the **option to test** open but without being the one to **break the silence first**. If the global order shifts toward renewed testing, India should be ready to **adapt strategically**, not remain stuck in past policies.

Ultimately, India's **moratorium was a promise to itself**, not to others. Strategic maturity today lies in **readiness and flexibility** — maintaining credibility while ensuring peace through preparedness.

Key Takeaways

1. Global Context Changing

- For 30 years, the world followed a **voluntary moratorium** on nuclear testing.
- The **U.S., Russia, and China** are now expressing doubts and reviving activities.
- The **Comprehensive Nuclear-Test-Ban Treaty (CTBT)** remains unratified by major powers.

2. India's Position Since 1998

- India's **voluntary moratorium** symbolised maturity and restraint.
- Helped end sanctions and allowed **civil nuclear cooperation** with major countries.
- But over time, restraint risks becoming **inflexibility** amid changing global realities.

3. Deterrence and Modernisation Needs

- India's nuclear arsenal is still based on **1998-tested designs**.
- New systems like **Agni-V**, **submarine-launched missiles**, and **MIRVs** demand higher reliability verification.
- **Computer simulations** help but cannot replace **empirical testing data**.

4. The Strategic Dilemma

- India must **not rush to test**, but it also **can't ignore global shifts**.
- If testing becomes necessary, it should be **scientific, underground, and limited**.
- Goal: **Validation, not escalation** — maintaining deterrence credibility without provocation.

5. Balancing Restraint and Readiness

- India's credibility comes from both **technological strength** and **moral restraint**.
- It must preserve **strategic autonomy** — the flexibility to act when conditions demand.
- Being overly rigid could leave India **outside future arms control frameworks**.

6. The Way Forward

- India needs **informed national debate** on deterrence and testing.
- Restraint must evolve with changing global realities.
- True strategic maturity lies in **adapting**, not merely preserving the past.

[Red Corridor to green shoots: IE Ideas Page](#)

Sociology/Internal Security

Easy Explanation

India — home to religions that preach **non-violence and compassion** — still struggles with an internal movement built on **violence and fear**: the **Naxalite (Left Wing Extremism) insurgency**. This movement, claiming to fight for justice for the poor, has ironically **harmed the very people it claims to defend**. In an era of rising global tensions and wars, India can't afford a domestic insurgency that drains its **moral, economic, and human strength**.

The popular belief that **poverty and underdevelopment** are the main causes of Naxalism is only partly true. Data shows that Naxalites often destroy schools, railways, and telecom towers — **the same infrastructure**

meant to reduce poverty. Between **2010 and 2024**, such attacks fell from **365 to just 25**, proving both improved government operations and growing public awareness that violence only blocks progress.

Academic studies (by NBER, UNC, and EPW) also find that **poverty alone doesn't explain political violence**. Instead, the real triggers are **ideology, weak state presence, poor governance**, and **identity-based grievances**. Forested and inaccessible areas with little government presence — such as **Jharkhand, Chhattisgarh, and Odisha** — have been more prone to Naxalism, even though other poor regions did not witness the same.

Recognising this, the government has shifted its strategy from just policing to a **comprehensive governance-based approach** aimed at a *Naxal-Mukt Bharat* (Naxal-free India). The central government now coordinates with states by sharing **intelligence, logistics, and security forces**, while focusing on **development, education, and jobs**.

Initiatives like **Skill Development Centres, ITIs, and Eklavya Model Residential Schools** are giving tribal and rural youth **employment opportunities and hope**, reducing the appeal of extremist ideology. Infrastructure projects — especially **roads, telecom towers, and rural connectivity** — have reestablished the **presence and legitimacy of the state** in remote areas.

The results have been remarkable:

- Civilian deaths have dropped from an **average of 480 per year (2004–2013)** to **152 (2014–2024)**.

- Affected districts have reduced from **126 (2014)** to **18 (2024)** — only **6 remain severely affected**.

However, India cannot afford to relax. The **roots of Naxalism** — governance failures, lack of accountability, and poor justice delivery — still need attention. The final victory against Naxalism lies not in bullets but in **building trust, fairness, and opportunity**.

As India marches toward becoming a **$5 trillion economy**, ensuring **internal harmony** is as crucial as external security. The idea of a **Naxal-Mukt Bharat** is not merely a law-and-order achievement — it's a **moral goal**. It reaffirms that in India, true transformation happens not through **terror**, but through **trust and good governance**.

Key Takeaways

1. The Contradiction:

- India, land of peace-loving philosophies, still faces violence through Naxalism.
- Internal insurgency weakens both moral and material foundations of the nation.

2. Poverty Myth Disproved:

- Poverty is not the main cause — **ideology, governance failure, and weak state presence** matter more.
- Naxalites have destroyed infrastructure meant to uplift people, contradicting their stated goals.

3. Data Trends:

- Attacks on infrastructure dropped from **365 (2010)** to **25 (2024)**.
- Civilian deaths reduced from **480/year (2004–13)** to **152/year (2014–24)**.
- Affected districts reduced from **126 (2014)** to **18 (2024)**.

4. Government's Multi-Pronged Strategy:

- Central–State coordination on intelligence, finance, and operations.
- Skill and education programs (ITIs, EMRS) to empower youth.
- Infrastructure expansion (roads, telecom, connectivity) to integrate remote regions.

5. The Way Forward:

- Continue governance reforms to ensure **justice, transparency, and inclusion**.
- Tackle ideological roots by strengthening **faith in democracy and rule of law**.
- Build trust-based peace rather than coercive peace.

6. The Core Message:

- Peace in India must be **built, not enforced**.
- A **Naxal-Mukt Bharat** is both a **security** and **moral mission** — reaffirming that India's strength lies in **justice, trust, and inclusion**, not fear.

4th November 2025

[Heavy metals found in Cauvery fish; study advises reducing consumption: TH Science](#)

Environment

Easy Explanation

A new study by **Bharathidasan University, Tiruchirappalli** has found that **heavy metals are contaminating the Cauvery River** and the fish living in it. The findings are alarming because they show that consuming fish from the river could pose **serious health risks** if eaten regularly or in excess.

The researchers studied **18 sediment sites** and **10 fish sites** along the river between **August 2023 and February 2024**, testing for **chromium, cadmium, copper, lead, and zinc**. They found that **cadmium and lead** were the most concerning metals, as their levels in several fish species **exceeded safe limits** and could cause both **non-cancerous and cancerous health effects**.

The study revealed that **urbanisation, industrial effluents, and agricultural runoff** are the main sources of contamination. Factories near Erode, especially **textile and electroplating units**, release waste containing heavy metals. Agricultural runoff (from fertilizers and pesticides) and untreated city sewage also add to the pollution. Though some natural mineral sources exist upstream, most contamination is **human-driven**.

To measure pollution, the scientists used indices such as the **Geoaccumulation Index (Igeo)** and **Pollution Load Index (PLI)**. These help determine whether contamination is from **natural** or **anthropogenic (human)** sources. Results showed clear human contribution, particularly in the buildup of cadmium, chromium, and lead.

The study also compared its findings with earlier research from the **Vellore Institute of Technology**, which had found similar heavy metal accumulation in **tilapia fish**. Together, these studies show that **heavy metal pollution in the Cauvery River is widespread**, affecting multiple fish species and posing a risk to human consumers.

Experts advise that eating fish from the Cauvery occasionally is safe, but **regular consumption (more than twice a week)** can increase the risk of health problems due to **bioaccumulation** — the gradual buildup of metals in the body.

Researchers have called for **continuous monitoring**, **stricter industrial regulation**, and **public awareness** campaigns. They warn that without immediate action, the contamination could worsen, affecting not only **human health** but also **fisheries, drinking water, and agriculture** in southern India.

Key Takeaways

1. Study Details

- Conducted by **Bharathidasan University**, published in *Environmental Earth Sciences* (Aug 2024).
- Covered **18 sediment sites** and **10 fish sites** along the Cauvery (Aug 2023–Feb 2024).
- Metals studied: **Chromium, Cadmium, Copper, Lead, Zinc**.

2. Major Findings

- **Cadmium and lead** levels in many fish species exceeded safe limits.
- Pose both **carcinogenic (cancer-causing)** and **non-carcinogenic** risks.
- Fish tissues (especially liver and gills) showed high contamination levels.

3. Sources of Contamination

- **Human-driven** causes: industrial effluents (especially textile & electroplating), agricultural runoff, urban sewage.
- Minor **natural contribution** from upstream mineral zones (iron deposits).

4. Health Implications

- Occasional fish consumption is **safe**, but regular or excessive intake can cause **serious health risks**.
- Safe limit: **up to 250 g twice a week** (as per study's estimation).
- Metals can **bioaccumulate** in the human body, affecting organs over time.

5. Scientific Importance

- Used pollution indices like **Igeo**, **Contamination Factor**, and **Potential Ecological Risk Index**.
- Helped distinguish **natural vs. human** sources of heavy metals.
- Offers a **region-specific health-risk assessment** for local authorities.

6. Broader Context

- Confirms earlier findings by **VIT researchers** on tilapia contamination.
- Similar contamination patterns found in other Tamil Nadu rivers (like **Noyyal**).

7. Recommendations

- **Continuous monitoring** of river water, sediments, and fish.
- **Stricter enforcement** of effluent discharge laws.
- **Public awareness** about safe fish consumption.
- **Policy interventions** to regulate industries near rivers.

India's IT dream is at a crossroads: TH Editorial (Shashi Tharoor)

Economy

Easy Explanation

For the last thirty years, India's **Information Technology (IT)** sector has been a source of pride and progress — it transformed the country's global image, created millions of middle-class jobs, and became a key part of the economy. Though it employs only about **1% of India's workforce**, it contributes nearly **7% to the GDP**. For young engineers, getting a job at **Infosys or TCS** once symbolised success. But that dream is now fading.

Recently, **TCS announced 20,000 layoffs**, the biggest in its history, with other companies also reducing staff quietly. This doesn't mean the IT industry is collapsing — it means it's **transforming**. The reasons include **automation, changing global markets, and new skill demands**.

Artificial Intelligence (AI) is automating tasks like basic coding, reporting, and coordination. New systems — especially **Agentic AI** — can perform multi-step tasks without human help, reducing the need for large teams of engineers. Meanwhile, **U.S. visa restrictions** and higher **H-1B fees** have made it harder for Indian firms to send mid-level professionals abroad. Add to that **tightening budgets** in the U.S. and Europe, and companies now prefer **small, specialised teams** over large outsourced workforces.

The **old "assembly line" model** of the Indian IT industry — hiring thousands of coders for repetitive work — no longer fits. Clients now want **cloud computing, cybersecurity, AI solutions**, and quick delivery. Many mid-career professionals, trained in outdated skills like **SAP ECC and mainframes**, find themselves unprepared.

This mismatch has led to what experts call **"silent layoffs"** — where companies quietly reduce staff through performance reviews or delayed promotions. Industry insiders predict that **over 50,000 IT jobs** may be lost this year. The government may need to **mandate 6–9 months' salary as compensation** and help workers re-skill for new jobs.

However, India's IT story is not over — it's evolving. The industry still employs **6 million people**, contributes **$280 billion**, and drives global digital transformation. But the **definition of success has changed** — it's no longer enough to know coding or Java; now professionals must learn **AI, cloud, data science, and cybersecurity** and constantly upgrade their skills.

To stay competitive, **India must invest in AI upskilling**, **revamp engineering curricula**, and **support tech startups**. Programs like TCS's internal AI training for over **550,000 employees** are steps in the right direction. The government and private sector must collaborate to promote **AI literacy**, **innovation**, and **product development**, not just IT services.

India's IT sector is shifting from **manpower to mindpower** — from routine outsourcing to high-end innovation. The change may be painful, but it's necessary. The focus should now be on **quality, creativity, and problem-solving** — ensuring that India continues to lead in the global technology landscape.

Key Takeaways

1. Current Crisis

- **TCS laid off 20,000 employees** in one quarter — the sharpest in its history.
- Other IT majors are conducting "**silent layoffs**" linked to automation and restructuring.
- Over **50,000 IT jobs** may be lost by year-end.

2. Major Reasons for Transformation

- **AI and automation** replacing routine work like coding and coordination.
- **Restrictive U.S. visa policies** and rising H-1B fees.
- **Reduced client spending** in the U.S. and Europe due to economic slowdown.
- Shift from **scale-based outsourcing** to **specialised AI-driven projects**.

3. Obsolete Skills and Job Mismatch

- Old skills like **SAP ECC and mainframes** losing relevance.
- Demand for **AI, cloud, data science, and cybersecurity** experts growing.
- Many mid-level managers lack updated technical depth.

4. Future Solutions

- **AI Upskilling:** TCS already trained 550,000 employees in basic AI; this must expand across the industry.
- **Education Reform:** Introduce courses in **machine learning, AI ethics, product design, and critical thinking** in engineering colleges.
- **Startup Support:** Encourage **AI and deep-tech startups** through funding and incubation.
- **Government Role:** Policies to ensure **job transition support**, **visa cooperation**, and **data sovereignty**.

5. Protecting Workers

- Introduce **mandatory 6–9 months' severance pay** for large-scale layoffs.
- Provide **mental health and retraining support** for displaced employees.

6. The Broader Shift

- India's IT story is moving from **outsourcing to innovation**.
- The sector must measure success by **solutions created**, not headcount.
- The IT industry remains strong, but **constant learning and adaptation** are essential to sustain its future.

[The case for energy efficiency: TH Editorial](#)

Environment

Easy Explanation

India has made impressive progress in expanding **clean energy capacity**, yet the **electricity people use today is dirtier than it was five years ago**. This strange situation arises because even though renewable energy (like solar and wind) now makes up **half of India's installed power capacity**, the actual **carbon emissions per unit of electricity (grid emission factor or GEF)** have **increased** — from **0.703 tonnes of CO$_2$ per megawatt-hour (tCO$_2$/MWh)** in 2020–21 to **0.727 tCO$_2$/MWh** in 2023–24.

The key reason lies in the difference between **installed capacity** and **actual power generation**. While solar and wind farms have been built in large numbers, they generate electricity only when the sun shines or the wind blows — meaning they operate only **15–25% of the time**, compared to **65–90%** for coal or nuclear plants. So even if renewable capacity has risen, **coal still produces most of India's electricity** because demand is increasing faster than renewables can deliver.

India's **peak electricity demand** occurs at night or early evening — when solar power is unavailable. As a result, **coal-fired plants** are used to meet the shortfall, increasing overall carbon emissions. Simply adding more renewable capacity without ensuring flexibility in the grid (through storage or round-the-clock renewables) does not automatically make electricity cleaner.

One major way to bridge this gap is **energy efficiency** — reducing the demand itself. By using **efficient appliances, lighting, air conditioners, and motors**, India can cut its evening power peaks and reduce dependence on coal. The **Bureau of Energy Efficiency (BEE)** reported that from 2017–18 to 2022–23, India saved **200 million tonnes of oil equivalent**, avoided **1.29 billion tonnes of CO$_2$**, and saved nearly ₹7.6 `lakh crore` through energy-efficient initiatives.

Other countries like **France, Norway, and Sweden** have much lower grid emission factors (0.1–0.2 tCO$_2$/MWh) because of their heavy reliance on **nuclear and hydro** power. India, starting from a coal-heavy base and with fast-growing demand, has a much tougher path — which is why **energy efficiency is essential**, not optional.

To genuinely clean up its grid, India must combine **renewable expansion with flexibility and efficiency**. It needs to encourage battery integration, time-based electricity pricing, incentives for efficient appliances, and scrappage of outdated equipment. The **Central Electricity Authority** projects that if these measures are implemented, India's GEF could fall to **0.548 by 2026–27** and **0.430 by 2031–32**.

Key Takeaways

1. The Paradox

- Despite growth in clean energy, India's **electricity is more carbon-intensive** than five years ago.
- Grid Emission Factor (GEF) rose from **0.703 tCO$_2$/MWh (2020–21)** to **0.727 (2023–24)**.

2. Capacity vs Generation

- Renewables make up **50% of capacity** but produce only **22% of total electricity**.
- Coal still dominates actual power generation due to higher reliability and round-the-clock operation.
- Solar and wind operate only **15–25% of the time**, while coal/nuclear run **65–90%**.

3. Peak Demand Problem

- Electricity demand peaks in the **evening**, when **solar energy drops**.
- Coal plants fill this gap, increasing emissions.
- Renewable expansion alone won't clean the grid — **storage and flexibility** are required.

4. Energy Efficiency — "The First Fuel"

- Reduces demand before supply is needed.
- Helps flatten peak load and align demand with renewable availability.
- From 2017–18 to 2022–23, India saved:
    - **200 million tonnes of oil equivalent energy**
    - **1.29 billion tonnes of CO_2**
    - **₹7.6 lakh crore** in costs

5. What Needs to Be Done

- **Integrate batteries** into homes and offices as virtual power plants.
- **Strengthen appliance efficiency standards** (move toward 4- and 5-star ratings).
- Help **small and medium industries** adopt energy-efficient machines.
- Introduce **time-based electricity tariffs** that reward off-peak use.
- **Scrap old inefficient equipment** through incentives.
- Allow discoms to buy **"electricity services"** like green cooling and RTC clean power.

6. The Road Ahead

- CEA projects GEF could drop to **0.548 (2026–27)** and **0.430 (2031–32)** with proper action.
- Achieving this needs **renewable energy + flexibility + efficiency**.
- India cut emission intensity by **33% (2005–2019)** but must now focus on **cleaner generation hours**.

7. Core Message

- Clean energy alone won't decarbonise the grid — **efficiency must be central to India's strategy**.
- The real goal: a power system driven by **flexibility, not fossil fuels**.

[Has cloud seeding been effective?: TH Text&Context](#)

Environment

Easy Explanation

For the first time in nearly 50 years, **Delhi carried out cloud seeding trials** in collaboration with **IIT Kanpur** to try and induce artificial rain. The aim was to clear the thick smog and particulate matter that had worsened air quality in the city.

Cloud seeding is a technique where **salts like silver iodide or calcium chloride** are sprayed into clouds (usually from aircraft). These particles act as **nuclei** around which water vapour condenses, forming larger droplets that may eventually fall as rain.

This method has been used globally for over 70 years. It began in the **1940s** when U.S. scientists at **General Electric** discovered that dry ice could create ice crystals in clouds, leading to rainfall. It inspired several experiments such as **Project Cirrus** and **Project Skywater** in the U.S., while the **Soviet Union** and later **China** used cloud seeding to ensure clear skies for events.

In **India**, cloud seeding experiments began in the **1950s** under **S.K. Banerji**, the first Director General of the **India Meteorological Department (IMD)**. Early trials in **Kolkata** and later in **Delhi (1962)** were inconclusive, mainly because it was difficult to prove whether rain occurred naturally or because of the seeding. In later decades, several states experimented with it to fight droughts, but results remained **sporadic and costly** due to the high expense of aircraft, chemicals, and experts.

A major scientific project — **CAIPEEX (Cloud Aerosol Interaction and Precipitation Enhancement Experiment)** — was started in **2009** by the **Indian Institute of Tropical Meteorology, Pune**. Conducted over drought-prone **Solapur (Maharashtra)**, it showed measurable success. Between **2017–2019**, the project found that **cloud-seeded regions received 46% more rainfall** and an additional **867 million litres of water** compared to unseeded areas.

The **Delhi trials in October 2025**, however, did not show similar success. IIT Kanpur carried out two flights on **October 28**, but no significant rainfall followed — only a **light drizzle** in some areas. Scientists explained that **Delhi's post-monsoon clouds lack sufficient moisture**, unlike monsoon clouds over regions such as Maharashtra.

While IIT Kanpur plans to continue testing, most experts remain skeptical about the usefulness of **cloud seeding in Delhi's winter**. The atmospheric conditions during this season simply do not support the kind of cloud formation required for successful artificial rainfall.

Key Takeaways

1. What is Cloud Seeding?

- Technique that **sprays salt compounds** (silver iodide, sodium chloride, calcium chloride) into clouds to trigger rainfall.
- Conducted using **aircraft fitted with flares** that release the salts into moisture-bearing clouds.
- Works only on **specific types of clouds** that already contain adequate moisture.

2. Global Background

- Discovered in **1940s** by U.S. scientists at **General Electric**.
- Major experiments: **Project Cirrus**, **Project Skywater (U.S.)**, **Soviet Union** (for May Day parades), **China (2008 Olympics)**.
- Mixed results worldwide — success depends heavily on cloud type and atmospheric conditions.

3. India's Early Efforts

- First experiment in **1952** under **IMD Director S.K. Banerji**.
- Attempted again in **Delhi (1962)** — failed due to unsuitable weather.
- Later decades saw **sporadic state-led experiments** during droughts, often with inconclusive outcomes due to cost and unpredictability.

4. The CAIPEEX Project

- Initiated in **2009** by **IITM, Pune**.
- Conducted over **Solapur, Maharashtra (2017–2019)** using radar and aircraft-based seeding.
- Reported **46% more rainfall** in seeded clouds and **18% more rain** downwind compared to unseeded areas.
- Used **calcium chloride** instead of silver iodide.

5. Delhi's 2025 Trials

- Conducted with **IIT Kanpur** on **October 28, 2025** — two flights released seeding flares.
- Results: **no significant rainfall**, only light drizzle in isolated spots.
- **Main reason:** lack of suitable monsoon-type clouds during post-monsoon period.
- Scientists have long cautioned that **Delhi's winter atmosphere** is not conducive for effective seeding.

6. Broader Implications

- Cloud seeding remains **experimentally uncertain** — success depends on timing, cloud conditions, and moisture levels.
- In dry or polluted regions like Delhi, **it cannot be a reliable pollution-control tool**.
- The trials, however, help build scientific understanding and may guide future strategies during suitable weather conditions.

[What are the challenges with the High Seas Treaty?: TH Text&Context](#)

International Relations

Easy Explanation

The **High Seas Treaty**, officially called the **Biodiversity Beyond National Jurisdiction (BBNJ) Agreement**, was ratified by more than **60 countries in September 2025** and will take effect in **January 2026**. It aims to **protect marine biodiversity** in international waters — areas that lie **beyond any country's exclusive economic zone (EEZ)** — and ensure that ocean resources are used **fairly and sustainably**.

The treaty fills a long-standing gap in the **United Nations Convention on the Law of the Sea (UNCLOS, 1982)**, which did not clearly explain how to protect or manage marine life beyond national boundaries. Work on this agreement began in **2004**, and after years of negotiations, countries agreed on key principles in **March 2023** and formally adopted the treaty in **June 2023**.

The treaty covers four main areas:

1. **Marine Genetic Resources (MGRs):** These include genetic materials from marine organisms that could be used for medicines, biotechnology, and research. The treaty calls these the **"common heritage of humankind"**, meaning all nations should share their benefits equally — not just the countries with advanced technology.

2. **Area-Based Management Tools (ABMTs):** This includes **Marine Protected Areas (MPAs)** that aim to conserve ecosystems, improve climate resilience, and ensure food security.

3. **Environmental Impact Assessments (EIAs):** Any activity that could harm these areas — such as mining, fishing, or research — must undergo an EIA, especially if it has **transboundary (cross-border)** effects.

4. **Capacity Building and Technology Transfer:** Developed countries should help developing ones with training, funds, and access to marine research technologies.

However, there are challenges. The treaty struggles to balance two principles:

- **"Common heritage of humankind"** — which promotes equal sharing of ocean resources.

- **"Freedom of the high seas"** — which allows countries to use international waters freely for navigation, research, and resource extraction.

The agreement applies the common heritage principle **only partially**, especially regarding MGRs, leading to confusion about **who owns what** and **how benefits will be shared**. Developing countries also worry about **biopiracy**, where wealthy nations might exploit genetic material from the oceans for profit, leaving poorer nations excluded.

Key Takeaways

1. What is the High Seas Treaty?

- Also called the **BBNJ Agreement**, it governs **marine biodiversity in international waters**.
- Will come into force in **January 2026** after ratification by 60+ nations.
- Complements the **UNCLOS (1982)**, filling gaps in protecting areas beyond national jurisdiction.

2. Main Objectives

- Ensure **sustainable use** of ocean resources.
- Protect marine ecosystems from **climate change, pollution, and overfishing**.
- Establish a system for **fair sharing of benefits** from marine genetic resources.

3. Key Components

- **Marine Genetic Resources (MGRs):** Declared as the **common heritage of humankind**; profits from their use should be shared fairly.
- **Area-Based Management Tools (ABMTs):** Includes **Marine Protected Areas (MPAs)** to safeguard ecosystems and support food security.
- **Environmental Impact Assessments (EIAs):** Mandatory for any potentially harmful activity, especially those crossing borders.
- **Capacity Building & Technology Transfer:** Developed countries to assist developing ones in research, conservation, and monitoring.

4. Timeline of Development

- **2004:** UN began discussions on protecting high-seas biodiversity.
- **2011:** Nations agreed to negotiate on four main topics.
- **2018–2023:** Four rounds of intergovernmental conferences held.
- **June 2023:** Treaty officially adopted.
- **September 2025:** Ratified by 60+ countries.
- **January 2026:** Enters into force.

5. Major Challenges

- Conflict between **"freedom of the seas"** (unrestricted use) and **"common heritage"** (shared ownership).
- **Unclear benefit-sharing rules** for marine genetic resources.
- Fears of **biopiracy** by developed nations exploiting ocean resources without fair returns to others.

6. Importance for the Future

- Marks a major step in **global ocean governance**.
- Aims to make international waters a shared responsibility.
- Encourages **scientific cooperation**, **equitable use**, and **long-term sustainability** of marine life.

[Rethinking scientific publishing in the age of AI: TH Text&Context](#)

Science

Easy Explanation

In India, as in most countries, **scientific research is largely funded by public money**. The government spends huge amounts on laboratories, equipment, and salaries for scientists. But when these researchers publish their findings, they often do so in **commercial journals** owned by a few big international publishers. These publishers **don't pay the authors or reviewers**, yet they charge very high subscription fees for others to read the papers. This means **the public pays twice** — once to fund the research, and again to access its results.

To challenge this, the **Budapest Open Access Declaration (2002)** began a global movement demanding that research funded by the public should also be **freely available to everyone**. However, over 20 years later, full open access is still far from reality. Publishers have adapted — they now allow "open access" but charge **Article Processing Charges (APCs)** that can range from **$2,000 to $10,000 per paper**, making publishing unaffordable for many researchers, especially in developing countries.

In India, the government launched the **"One Nation One Subscription" (ONOS)** initiative in 2025 to provide **nationwide access to journals** from 30 major publishers for all researchers in publicly funded institutions. While this expands access, it raises important questions — why should India pay foreign publishers large sums for access to research created with **Indian taxpayers' money**? Shouldn't this knowledge be freely available to all citizens, in the true spirit of **Atmanirbhar Bharat** (self-reliant India)?

Another key issue is **copyright ownership**. When authors publish in most journals, they must **transfer copyright** to the publisher, giving up control over their own work. Publishers like **Elsevier, Springer, Wiley,**

and Taylor & Francis then make money by selling subscriptions or licensing this content — even to **Big Tech companies** to train AI models, often without the authors' consent. For example, **Taylor & Francis signed a $10 million deal with Microsoft** for such data use.

This has led to calls for researchers to **retain ownership of their work**. Initiatives like **Plan S** urge authors to publish under **Creative Commons (CC) licences**, especially **CC-BY**, which allows reuse with attribution. Other forms like **CC-BY-NC** and **CC-BY-NC-ND** limit commercial or derivative use but can restrict knowledge sharing.

To take back control, authors are encouraged to:

1. **Self-archive** their papers (preprints or accepted versions) in institutional repositories.
2. **Add clauses** to publishing contracts that let them keep certain rights (using templates like the **SPARC Author Addendum**).
3. **Advocate for rights-retention policies** at their institutions.

The broader message is that **knowledge created with public funds should remain public**. The idea of "who owns our knowledge" is not just a question of publishing models — it is about **intellectual sovereignty**. True scientific progress requires **open, equitable access**, where authors and the public, not corporations, benefit from the knowledge they create.

Key Takeaways

1. The Problem with Current Research Publishing

- Most research in India is **publicly funded**, but results are locked behind **expensive paywalls**.
- Publishers **don't pay** authors or reviewers but charge high subscription fees — the public effectively **pays twice**.

2. The Open Access Movement

- Began with the **Budapest Declaration (2002)** calling for **free access to publicly funded research**.
- Today, many publishers offer open access but demand high **Article Processing Charges (APCs)** ($2,000–$10,000).
- This makes publication **unaffordable for researchers** in developing countries.

3. India's Initiative — One Nation One Subscription (ONOS)

- Launched in **2025** to give all publicly funded institutions access to journals from 30 major publishers.
- Aims to make access more inclusive beyond elite universities.
- However, critics question paying huge amounts to foreign publishers for Indian-funded research.
- Raises issues about **Atmanirbhar Bharat** and **self-reliance in knowledge**.

4. The Question of Ownership

- **Copyright transfer** forces authors to give up ownership of their research to publishers.
- Publishers like **Elsevier, Wiley, Springer, Taylor & Francis** profit by selling access and licensing data.
- Example: Taylor & Francis sold research data to Microsoft for **$10 million** to train AI models.
- The **AI dataset licensing market** is worth nearly **$486 million (2025)**.

5. Licensing Options for Authors

- **CC-BY:** Allows free reuse with credit to the author (most open).
- **CC-BY-NC:** Restricts commercial reuse.
- **CC-BY-NC-ND:** Forbids both commercial use and modifications (most restrictive).
- Publishers prefer restrictive licences, limiting educational and technological reuse.

6. What Authors Can Do

- **Self-archive** papers in institutional or preprint repositories.
- Use **SPARC Author Addendum** to retain certain rights.
- Promote **rights-retention policies** within institutions.
- Prefer **CC-BY** licence for wider accessibility.

7. The Larger Message

- Publicly funded knowledge should be **publicly accessible**.
- Researchers must reclaim **intellectual sovereignty** and resist exploitative publishing systems.
- The future of fair and inclusive science lies in **authors, not corporations**, owning and sharing knowledge.

[An Indian way for G2: IE Editorial](#)

International Relations

Easy Explanation

The idea of a **"G2" — a group of two nations, the United States and China —** is not new. It first appeared around **2005**, when American economist **Fred Bergsten** proposed that the U.S. and China could act together to ensure **global economic stability**. His idea was not about power politics but about **geo-economics** — how the two biggest economies could cooperate to manage global growth.

The concept gained importance after the **2008–09 Global Financial Crisis (GFC)**. Western economies, including the U.S., U.K., and Europe, were struggling, while **China played a key role in stabilizing the world economy** by injecting money, protecting the U.S. dollar (where it held large reserves), and maintaining global trade. In short, **China helped the U.S. recover**, proving how deeply connected the two economies had become.

However, this growing interdependence also made some American strategists uneasy. They feared China's rise and began advocating **"geo-economic containment"** — policies to limit China's influence. Former U.S. President **Donald Trump** strongly supported this idea during his first term, launching a **trade war** against China (and even other countries). His successor, **Joe Biden**, initially wanted to **"delink"** the U.S. economy from China but later settled for **"de-risking"**, meaning reducing dependency rather than total separation.

Now, as Trump returns to office, he seems to have realized that the **trade war has failed**. Countries like **China, India, and Brazil** have resisted U.S. pressure, and China has even retaliated successfully. Recently, Trump's tweet — **"THE G2 WILL BE CONVENING SHORTLY"** — signaled that he now acknowledges the U.S. and China must **work together again**, effectively **reviving the G2 concept**.

This shift also reflects Trump's **lack of interest in the G20** (the group of 20 major economies). By focusing on the G2, he recognizes that **global economic management today depends largely on how the U.S. and China cooperate**.

For **India**, this situation is complex. Traditionally, India sought to **"engage America to manage China."** But now, the dynamic has reversed — **India must manage America while engaging China**. This requires a delicate balance, as outlined by **External Affairs Minister S. Jaishankar** in his book *The India Way* (2020). He explained that India's **multi-alignment policy** involves simultaneously engaging the U.S., managing China, reassuring Russia, and cultivating ties with Europe and Japan.

In today's changing world, India's **influence in Asia** will be key to its global standing. Earlier, good relations with the U.S. were seen as a gateway to global influence. Now, building **strong regional partnerships across Asia** — with neighbors and partners alike — is more crucial for India to handle both **the West and China**. As Jaishankar recently said, "Change has a life of its own… new opportunities will emerge." India must therefore adapt to this **new geopolitical reality** with flexibility and strategic patience.

Key Takeaways

1. What is the G2 Concept?

- Proposed in **2005** by economist **Fred Bergsten**.
- Envisions **U.S. and China** as a "caucus of two" cooperating to manage global economic recovery.
- Focused on **economic cooperation**, not political dominance.

2. How the Idea Gained Strength

- The **2008–09 Global Financial Crisis (GFC)** exposed Western economic weaknesses.
- **China rescued global trade** by investing heavily and supporting the U.S. dollar.
- China's role made it clear that the two economies were deeply interlinked.

3. U.S. Reactions Over Time

- Strategists like **Kissinger**, **Brzezinski**, and **Luttwak** promoted policies to **contain China**.
- **Trump (2017–2021):** Started a **trade war** with China, aiming to reduce dependence.
- **Biden:** Shifted from **"delinking"** to **"de-risking"** — acknowledging full separation is impossible.
- **Trump (2025):** Now revives the **G2 idea**, signaling a return to cooperation.

4. Why the Trade War Failed

- Countries like **India, China, and Brazil** refused to bow to U.S. pressure.
- **China retaliated effectively**, proving it could withstand economic confrontation.
- The U.S. realized **cooperation is more beneficial than conflict**.

5. Implications for India

- India's **multi-alignment strategy** now faces new challenges.
- Earlier: "Engage the U.S. to manage China."
- Now: "Manage the U.S. while engaging China."
- India must maintain balance among **U.S., China, Russia, Europe, and Asian neighbors.**

- Success will depend on **India's regional influence in Asia**, not just Western ties.

6. The New Global Reality

- The **world order is shifting** from Western dominance to a more balanced power structure.
- **Asia's role** in global politics is expanding.
- India must remain **strategically flexible**, proactive, and regionally focused to navigate this transformation.

[RBI isn't getting inflation right: IE Ideas](#)

Economy

Easy Explanation

In October, the **RBI's Monetary Policy Committee (MPC)** decided to keep interest rates unchanged and maintain a **neutral stance**, even though inflation had fallen sharply and the economy was expected to slow down in the coming months. This decision seemed puzzling because typically, when inflation falls and growth weakens, central banks cut interest rates to support the economy.

Let's break down the situation. The **repo rate** (the rate at which RBI lends to banks) is **5.5%**, while inflation for the coming year is projected to be around **2.6%**. This means the **real interest rate** (interest rate minus inflation) is around **3%**, which is quite high. High real interest rates usually discourage borrowing and investment, suggesting that there's **room to cut rates** — unless inflation is expected to rise.

However, the RBI's inflation forecast of **4.5% for 2026–27** seems **too high** compared to current trends. Last year, it had also overestimated inflation: it had expected 4.3% in early 2025–26, but the actual figure turned out to be just **2.7%**. This shows that the RBI has been **too cautious** in its inflation projections.

Food prices were the main driver of inflation last year, but those pressures proved **temporary** — vegetable prices spiked briefly and then dropped sharply. By late 2025, **food inflation even turned negative**, and **core inflation** (which excludes food, fuel, gold, and silver) stayed low at around **3.2%**, showing no sign of strong price pressures.

With inflation under control, other factors — such as protecting the rupee's value — seem to have influenced the RBI's reluctance to cut rates. But with global deflationary trends (like **China exporting surplus goods**, pushing prices down further), India could safely **lower interest rates** to stimulate demand and investment.

The government has already reduced **GST and income taxes**, boosting consumer spending temporarily — especially on high-end goods during the festive season. However, it's unclear if this boost will last. To make growth more sustainable, **investment demand** must rise — and lower borrowing costs would help that happen.

The RBI's own projections show that the economy's growth momentum is **slowing**, and the impact of **U.S. tariffs** is outweighing the benefits of tax cuts. While GDP is expected to grow **6.8% this year** (slightly above last year's 6.5%), this is **below India's potential**. If the economy is growing below potential, monetary policy should be **accommodative** (supporting growth), not neutral.

In short, the RBI appears to be **too conservative**. Inflation is under control, growth is slowing, and the rupee is stable — all signs that India can afford to **cut interest rates**. However, sustainable long-term growth will require not just monetary and fiscal support but also **structural reforms** to boost productivity and investment.

Key Takeaways

1. RBI's October Decision

- The **MPC kept repo rate unchanged at 5.5%** and retained a **neutral stance**.
- This move surprised many as **inflation had eased** and **growth was slowing**.

2. Inflation Outlook

- RBI expects inflation to rise from **2.6% (2025–26)** to **4.5% (2026–27)**.
- Actual data shows inflation has been much **lower than RBI projections**.
- **Core inflation** (true price pressures) remains **flat at 3.2%** — no demand-driven inflation.

3. Why RBI May Be Wrong

- Food inflation, which drove prices earlier, has now turned **negative**.
- The **base effect** may make inflation look higher even when it's not.
- With **China exporting excess capacity**, global prices are likely to stay soft.

4. Space for Rate Cuts

- High real interest rates (3% or more) indicate **tight monetary policy**.
- There is **room to cut rates** to spur demand and investment.
- Lower rates could **boost private consumption and capacity expansion**.

5. Impact of Fiscal Measures

- **GST and income tax cuts** have temporarily increased demand, especially for consumer durables.
- Sustained growth, however, depends on **higher capacity utilisation and new investments**.

6. Growth Potential

- RBI projects **6.8% growth** in FY2025–26 — slightly better than 6.5% last year but still below aspirations.
- If growth is below potential, RBI should adopt an **accommodative stance**, not a neutral one.

7. Broader Implications

- The current policy may be **too tight for current economic conditions**.
- India needs to **stimulate investment** while keeping inflation expectations anchored.
- Over the long term, **structural reforms** — not just monetary easing — will determine sustainable high growth.

Polity

Easy Explanation

The Supreme Court of India recently gave an important ruling to **protect the confidentiality between lawyers and their clients**. It said that **police or investigating agencies cannot summon lawyers to disclose communications made while advising their clients**.

This decision came from a **three-judge Bench** led by **Chief Justice B. R. Gavai**, which took up the case on its own (suo motu) after a few incidents where lawyers were summoned by agencies like the **Enforcement Directorate (ED)**.

The court looked at two main questions:

1. Can a lawyer be summoned by an investigating agency if they were involved in a case only as a professional?
2. If a lawyer's role goes beyond giving legal advice, can such summons be monitored by courts?

What the Law Says

Under **Section 132 of the Bharatiya Sakshya Adhiniyam (BSA), 2023** — which replaced the Indian Evidence Act, 1872 — communications between an **advocate and their client** are **"privileged"**. This means the lawyer cannot disclose what the client told them, **even after the professional relationship ends**.
 There are only **three exceptions**:

- If the client **consents** to disclosure.
- If the communication was made for an **illegal purpose**.
- If the lawyer saw a **crime being committed** during the employment.

This privilege exists to **protect the client's right to a fair defence**, not to shield lawyers who may be engaged in criminal activity themselves.

Why the Case Arose

It began when a **lawyer in Gujarat** was summoned by the police in a loan fraud case. The High Court upheld the summons, saying the lawyer was not cooperating. Around the same time, the **ED summoned two senior advocates — Arvind Datar and Pratap Venugopal —** in another case related to **Religare Enterprises**, which caused outrage among the legal community.

Bar associations argued that such summonses **violate lawyers' constitutional rights** under **Article 19(1)(g)** (freedom to practise a profession) and **Article 21** (right to life and liberty). They proposed a **committee review system** before summoning any lawyer, but the government opposed this, saying it would **discriminate against other citizens**, violating **Article 14** (equality before law).

Supreme Court's Final Decision

The court firmly said **"No"** — lawyers cannot be summoned by police or investigative agencies **just for doing their professional duties**. It ruled that:

- The **privilege under Section 132 of the BSA must be respected**.
- A lawyer **cannot be bullied or victimised** simply for representing an accused person.
- If a summons is issued, it must clearly state the **specific facts** justifying it and have **written approval from a senior officer (SP rank or above)**.
- The right to confidentiality is protected by **Articles 19(1)(g)** and **21**, and echoes the **right against self-incrimination** under **Article 20(3)**.
- The court declined to create new procedures, saying **judicial oversight already exists** under **Section 528 of the Bharatiya Nagarik Suraksha Sanhita (BNSS)**, which allows people (including lawyers) to challenge illegal summonses.

However, the judgment clarified that **in-house lawyers working as company employees** do **not get full privilege protection**, because they are salaried staff and not independent legal professionals. They get only **limited protection** under Section 132 of the BSA.

Key Takeaways

1. Protection of Lawyer-Client Confidentiality

- Communications between a lawyer and client are **privileged** under **Section 132 of BSA (2023)**.
- Lawyers cannot be forced to reveal such information, even after the case ends.
- Exceptions: client consent, illegal purpose, or crime committed in front of lawyer.

2. Trigger for the Case

- Lawyers were being **summoned by investigative agencies**, including ED and police, for cases where they were only legal representatives.
- Legal bodies protested, saying it violated their professional independence and constitutional rights.

3. Supreme Court's Verdict

- Clear "**No**" to summoning lawyers for client-related communications.
- **Summons must be justified** and **approved by a senior police officer**.
- Confidentiality protected under **Articles 19(1)(g)**, **21**, and **20(3)** of the Constitution.
- **Judicial review** available under **Section 528 of BNSS** to challenge improper summonses.

4. On In-House Counsel

- **Company-employed lawyers** are **not covered** under full privilege protection, as they are not independent advocates.
- They have only **limited legal protection** under Section 132 of BSA.

5. Broader Implication

- Strengthens **rule of law** and **right to legal representation**.
- Ensures lawyers can defend clients **without fear of harassment** by investigating agencies.
- Reinforces that justice requires **trust and confidentiality** between lawyer and client.

WHAT MAKES AFGHANISTAN SO PRONE TO EARTHQUAKES?: IE Explained

Geography

Easy Explanation

A **6.3-magnitude earthquake** recently hit **northern Afghanistan near Mazar-e-Sharif**, killing at least seven people and injuring about 150. It comes just months after another series of earthquakes in August that killed more than 2,200 people. This tragedy highlights how **Afghanistan frequently faces strong quakes** due to its geographic location.

Afghanistan sits at the **collision zone of three major tectonic plates** — the **Indian**, **Eurasian**, and **Arabian plates**. The **northward push of the Indian plate** against the Eurasian plate constantly builds up stress underground, which is released as earthquakes. Because of this, **Afghanistan is one of the most earthquake-prone countries in Asia**.

Since 1990, more than **350 earthquakes above magnitude 5** have struck Afghanistan. The **eastern and northeastern regions**, especially areas bordering **Pakistan, Tajikistan, and Uzbekistan**, are the most vulnerable. The capital city **Kabul** also faces high risk, with annual damages estimated around **$17 million**.

Earthquakes are especially deadly in **mountainous regions**, where they can trigger **landslides**, cutting off aid and rescue efforts. Weak infrastructure, unplanned urban growth, and poor access to emergency services make disasters even more devastating.

Historically, Afghanistan has faced several deadly quakes:

- In **1998**, two quakes within three months killed nearly **7,000 people**.
- In **2015**, a **7.5 magnitude** quake killed nearly **400 people** across Afghanistan, Pakistan, and India.
- In **2022**, a **6.0 magnitude** quake killed **1,000 people**.
- In **2023**, multiple quakes in one month killed another **1,000 people**.

Experts recommend that **new buildings be made earthquake-resistant** and that old structures be **retrofitted** to reduce collapse risks. They also call for **better early warning systems**, **fault-line mapping using satellite technology**, and **relocation of people** from high-risk zones. These measures can significantly reduce casualties in future disasters.

Key Takeaways

1. Frequent Earthquakes

- Afghanistan faces **hundreds of quakes**; over **355 above magnitude 5** since 1990.
- Earthquakes kill about **560 people annually** and cause **$80 million** in damages.

2. Geological Reasons

- Lies at the **collision zone of the Indian, Eurasian, and Arabian plates**.
- Constant movement of these plates creates intense underground stress, leading to quakes.

3. High-Risk Areas

- **Eastern and northeastern regions** — especially near **Pakistan, Tajikistan, and Uzbekistan** — are most vulnerable.
- **Kabul** suffers highest average annual earthquake damage.
- **Mountain regions** face added danger from **landslides** and delayed aid.

4. Past Major Earthquakes

- **1998:** Two quakes killed ~7,000 people.
- **2015:** 7.5-magnitude quake killed 399 in Afghanistan, Pakistan, India.
- **2022:** 6.0-magnitude quake killed 1,000 people.
- **2023:** Multiple quakes killed 1,000 more and destroyed villages.

5. Steps Toward Resilience

- **Earthquake-resistant construction** and **retrofitting old buildings**.
- **Early warning systems** and **geospatial mapping** of fault lines.
- **Relocating people** from highly active seismic zones.
- **Improved monitoring**, emergency response, and awareness programs.

5th November 2025

[How Bill Gates is reshaping discourse on climate action-The Indian Express Explained](#)

Environment

Easy Explanation

Bill Gates has recently sparked debate with a memo on climate change where he questions the current global focus on "doomsday" predictions and strict emission targets. Instead of putting all efforts into *mitigation* (reducing emissions), Gates argues for more attention on *adaptation* — improving human health, prosperity, and resilience so societies can better cope with climate impacts.

He believes that:

1. Climate change is a serious problem but **not an existential threat** (it won't end human civilisation).

2. Meeting temperature targets like **1.5°C or 2°C** is not the only way to deal with the crisis.

3. **Improving health, agriculture, and infrastructure** — especially in poorer countries — will make people safer and better prepared for climate impacts.

This view contrasts sharply with climate scientists and activists, who say **reducing fossil fuel use immediately** is essential. Critics argue Gates' approach might weaken global climate action and be misused by climate deniers to justify inaction.

However, many developing countries, including **India**, find Gates' reasoning practical. India's **Economic Survey 2024** had made a similar argument — that rapid development and rising incomes are the best shields against climate impacts and that the focus should not only be on emission cuts but also on enabling growth and adaptation.

In reality, global emissions are still rising, making temperature goals harder to meet. Adaptation offers **immediate, local benefits** (like saving lives via early warnings for floods or heatwaves), yet **only about 20% of international climate finance** goes to such projects. Hence, Gates' stance aligns with the concerns of developing nations seeking more funding for resilience measures.

Key Takeaways

- **Main idea:** Bill Gates urges a shift in focus from pure emission reduction (mitigation) to improving resilience and development (adaptation).

- **Rationale:** Emission reduction efforts have shown limited results; accumulated CO_2 will keep affecting climate for decades.

- **Criticism:** Scientists warn this approach could downplay the urgency of cutting emissions.

- **Support:** Developing countries, including India, agree that adaptation and development are vital for protecting people.

- **India's parallel:** The Economic Survey 2024 argued that development, not arbitrary temperature targets, is the real solution to climate vulnerability.

- **Global finance issue:** Less than 20% of climate funds go to adaptation — a major grievance for poorer nations.

- **Broader implication:** Gates' influential stance may redirect climate funding priorities and reshape global discourse on climate action balance.

[In trump'stariff war,whytheUS SupremeCourtis abattlefield-The Indian Express Explained](#)

International relations

Easy Explanation

The **US Supreme Court** is hearing a major case to decide whether **Donald Trump exceeded his powers** under the **International Emergency Economic Powers Act (IEEPA)** when he imposed wide-ranging **reciprocal tariffs** on various countries, including India.

These tariffs were part of Trump's strategy to pressure nations into **signing trade deals** that favored the US. If the Court rules against Trump, it could **invalidate these tariffs**, forcing the US government to **refund up to $100 billion** to importers and **reshape several trade agreements**, including ongoing negotiations with India.

For India, the US is its largest export market but now imposes **50% total tariffs (25% reciprocal + 25% on Russian oil)**. A Supreme Court verdict striking down Trump's tariffs could **benefit India**, creating a chance to **renegotiate for better terms** and reduce its export burden.

However, most experts believe the **conservative-leaning Court (6-3 majority)** might uphold Trump's use of presidential power, since recent judgments have often **expanded executive authority**.

If the IEEPA tariffs are struck down, Trump plans to rely on **Section 232** of US trade law — which allows tariffs on imports deemed a **"national security threat."** These tariffs are narrower but more legally secure, as courts have rarely interfered with national security arguments.

Currently, India isn't significantly affected by Section 232 tariffs because they're applied **uniformly** across countries, not selectively.

Key Takeaways

- **Issue:** The US Supreme Court is reviewing whether Trump misused emergency powers under IEEPA to impose sweeping tariffs.

- **Possible outcome:** If struck down, tariffs become invalid, the US may refund ~$100 billion, and many trade deals—including with India—could be reopened.

- **Impact on India:** India faces high tariffs (up to 50%); a Court ruling against Trump could help it negotiate better trade terms.

- **Lower court rulings:** Three lower courts have already ruled that Trump's tariffs exceeded presidential powers.

- **Wider implications:** The decision could affect trade ties with the EU, Japan, South Korea, and the UK — all of which made deals under tariff pressure.

- **Trump's backup plan:** Use of **Section 232** tariffs citing "national security" — more limited in scope but legally stronger.

- **Likely verdict trend:** Conservative justices may **uphold presidential powers**, preserving Trump's tariff policy.

- **Big picture:** The case is a **test of presidential trade powers** and could reshape US–India trade negotiations and global trade dynamics.

[Movie on its way,revisiting the Supreme Court's Shah bano verdict-The Indian Express Explained](#)

Polity

Easy Explanation

The upcoming Bollywood movie *Haq*, starring Yami Gautam and Emraan Hashmi, is inspired by the real-life **Shah Bano case (1985)** — one of India's most debated Supreme Court judgments concerning **divorced Muslim women's right to maintenance**. The film has stirred controversy after Shah Bano's daughter alleged that her mother's identity was used without permission.

The **Shah Bano case** began when **Shah Bano Begum**, a 62-year-old Muslim woman from Indore, was divorced by her husband, advocate **Mohammed Ahmad Khan**, after 43 years of marriage. When he stopped paying maintenance, she approached the court under **Section 125 of the Code of Criminal Procedure (CrPC)**, which allows any destitute person to claim maintenance from someone with means, regardless of religion.

Khan argued that under **Muslim personal law**, he was only obliged to support her during the *iddat* period (around three months after divorce). But in **1985**, a **five-judge Constitution Bench** of the Supreme Court rejected his claim and ruled that **Section 125 applies to all citizens**, including Muslims. The Court said that even the **Quran** requires husbands to provide for divorced wives and that maintenance beyond *iddat* was consistent with both secular and religious principles.

The verdict triggered **strong protests** from conservative Muslim groups who saw it as interference in their **personal laws**. Facing political backlash, the **Rajiv Gandhi government** passed the **Muslim Women (Protection of Rights on Divorce) Act, 1986**, which limited maintenance to the *iddat* period. This reversal angered Hindu groups, who accused the government of appeasement — a sentiment that also contributed to the rising **Ayodhya movement** (Babri Masjid issue).

In **2001**, the Supreme Court upheld the 1986 Act but clarified that the husband must make a **"reasonable and fair provision" within the iddat period** that could cover the woman's future maintenance.

Finally, in a **2024 Supreme Court ruling**, the Court settled the ambiguity:
 A **divorced Muslim woman can seek maintenance under both the 1986 Act and Section 125 of the CrPC**. This reaffirmed her right to financial security beyond the iddat period.

Key Takeaways

- **Case Origin (1978–1985):** Shah Bano, a 62-year-old Muslim woman, sought maintenance under Section 125 CrPC after her husband divorced her.

- **1985 SC Judgment:** Section 125 applies to all citizens irrespective of religion; Muslim women can claim post-iddat maintenance.

- **Backlash & 1986 Law:** Political pressure led to the *Muslim Women (Protection of Rights on Divorce) Act, 1986*, limiting maintenance to iddat.

- **Broader Impact:** Triggered national debate on secularism vs. personal law; indirectly linked to rising communal tensions (Babri Masjid episode).

- **2001 Ruling:** The husband's payment during iddat must cover long-term maintenance.

- **2024 Clarification:** Muslim women can now seek maintenance under either or both laws (1986 Act and Section 125 CrPC).

- **Cultural link:** The film *Haq* revisits the legacy of the Shah Bano case — symbolizing the intersection of law, religion, gender justice, and politics in modern India.

[A tale of two populisms:maGa mines resentment,mamdani hope-The Indian Express Ideas](#)

International relations

Easy Explanation

The article compares two kinds of populism shaping modern America — **Donald Trump's MAGA (Make America Great Again) populism** driven by resentment, and **Zohran Mamdani's socialist populism**, rooted in hope and inclusivity.

Zohran Mamdani, a 34-year-old Indian-origin, Ugandan-born politician, is leading in New York's mayoral race and could become the city's **first Muslim, Indian, and South Asian mayor**. His rise reflects a **left-wing populist wave** in American politics that focuses on welfare measures such as **free bus rides, rent freeze, public grocery stores, and free childcare**.

Mamdani is part of the **Democratic Socialists of America (DSA)**, a group that has grown since the 2010s amid rising inequality. Like Bernie Sanders, he represents young Americans disillusioned with capitalism, growing inequality, and political elitism. His campaign is based on **grassroots mobilisation**, **multilingual outreach**, and **direct voter contact**, echoing Trump's communication style — but with a completely different message: **economic justice and inclusion**.

While critics call his socialist agenda "unrealistic," it has resonated strongly among **urban working-class voters** — Black, Latino, Asian, Arab, and young white professionals. Mamdani's success poses a challenge to the **Democratic Party's centrist wing**, which fears that his radicalism and identity might be exploited by Republicans.

In essence, America's political battlefield is witnessing a contest between:

- **MAGA populism**, which thrives on grievance and anti-immigrant sentiment, and

- **Mamdani's progressive populism**, which channels hope for a fair, inclusive, and diverse America.

Key Takeaways

- **Zohran Mamdani** may become New York's first Muslim and Indian-origin mayor; his campaign symbolizes a **left-wing populist rise**.

- His platform includes **free public services, rent control, and higher taxes on the rich** — reflecting **Democratic Socialist** ideals.

- The **Democratic Socialists of America (DSA)** has grown since the 2010s, fueled by inequality and the failures of neoliberal policies.

- Mamdani's success draws from **grassroots organisation**, **community outreach**, and **youth mobilisation**.

- His populism **contrasts Trump's MAGA populism** — Mamdani's is about hope and inclusion, Trump's about resentment and nationalism.

- **For Democrats**, Mamdani represents both opportunity (energising the left) and risk (alienating moderates).

- **Broader meaning:** The contest between MAGA-style resentment and Mamdani-style hope mirrors the struggle for **America's political soul** — between exclusionary nationalism and inclusive progressivism.

[How BRICS is challenging SWIFT-The Hindu Text and Context](#)

International relations

Easy Explanation:
For over a decade, the BRICS countries (Brazil, Russia, India, China, South Africa — now also including Iran and others) have been trying to reduce their dependence on the **US dollar-dominated financial system**. This effort began seriously after the **2014 Fortaleza Summit**, where they created two key institutions — the **New Development Bank (NDB)** and the **Contingent Reserve Arrangement (CRA)** — as alternatives to Western-led financial systems like the IMF and World Bank.

After **Western sanctions on Russia (2014)**, BRICS nations started working on using their **own currencies** for trade and transactions. Over the years, they explored **currency swaps**, **local currency settlements**, and **direct investments**. These efforts culminated in the **BRICS Payments Task Force**, leading to the idea of **BRICS Pay**, a cross-border payment system intended to **rival SWIFT** — the Western-dominated international money transfer network.

At the **2024 Kazan Summit**, the BRICS nations launched the **BRICS Cross-Border Payments Initiative** (or BRICS Pay) and even unveiled a **symbolic BRICS banknote**, signalling their intent to challenge the dollar's global dominance. The move angered Donald Trump, who threatened **100% tariffs** on BRICS members if they created a new currency to rival the dollar.

The BRICS Pay system plans to link the members' existing **domestic payment systems** —

- Russia's **SPFS**,

- China's **CIPS**,

- India's **UPI**, and

- Brazil's **Pix**.

However, each country's differing ambitions could slow progress. Still, **Trump's aggressive stance** may push them to cooperate faster. A **prototype** of BRICS Pay was already demonstrated in **Moscow in October 2024**.

Key Takeaways:

1. **Goal:** BRICS aims to build financial independence and reduce reliance on the **US dollar and SWIFT**.

2. **Origins:** The process began with the **2014 Fortaleza Summit** and strengthened after **Western sanctions on Russia**.

3. **BRICS Pay:** A cross-border payments system linking national platforms (SPFS, CIPS, UPI, Pix) to enable **local currency settlements**.

4. **Symbolic Banknote:** A **BRICS banknote** unveiled at the **2024 Kazan Summit** signaled intent to move beyond the dollar.

5. **Challenges:** Differing national priorities (China's CIPS vs India's UPI) could slow the process.

6. **Geopolitical Push: Trump's threats** against BRICS could ironically **accelerate cooperation**.

7. **Significance:** BRICS Pay represents the **most concrete challenge yet to Western financial dominance** and **SWIFT's monopoly** on global transactions.

India's forests hold the future-The Hindu Editorial

Environment

Easy Explanation:
India's forests are being placed at the centre of the country's climate and development agenda. The **revised Green India Mission (GIM)** aims to **restore 25 million hectares of degraded forest and non-forest land by 2030**, in line with India's goal to create a **carbon sink of 3.39 billion tonnes of CO_2 equivalent**. But the focus now is on **quality of restoration**, not just increasing tree cover.

Recent studies (like one by IIT Kharagpur in 2025) show that while India's forest cover is rising, their **ability to absorb carbon is declining** due to higher temperatures and soil drying. Thus, the new GIM stresses **ecological resilience**—using native species, ensuring biodiversity, and including local communities in restoration efforts.

Between 2015 and 2021, 11.22 million hectares were afforested and ₹575 crore was disbursed to 18 states. The new plan targets biodiversity-rich areas like the **Aravalli Hills, Western Ghats, mangroves, and Himalayas**, linking GIM with other programmes like **CAMPA** and **Agroforestry Policy**.

However, challenges persist —

- **Lack of community involvement** despite the Forest Rights Act (2006),

- **Ecologically poor monoculture plantations** (like eucalyptus, acacia),

- **Underutilised funds,** especially the ₹95,000 crore **CAMPA corpus** (Delhi used only 23%).

Encouraging models include Odisha's joint forest management, Tamil Nadu's mangrove revival, and Himachal Pradesh's carbon-credit-linked biochar programme.

To succeed, GIM must ensure **local participation**, **scientific restoration**, **transparency**, and **efficient financing**. Public dashboards to track plantation survival, species diversity, and fund use can enhance accountability.

Ultimately, forests must be treated as **national assets**, vital not only for ecology but also for **livelihoods and climate resilience**.

Key Takeaways:

1. **Goal:** Restore **25 million hectares** by 2030 to meet India's climate commitments.

2. **Shift in Focus:** From quantity (tree count) to **quality restoration** ensuring biodiversity and resilience.

3. **Problem:** Forests' **carbon absorption efficiency is declining** due to heat and soil dryness.

4. **Integration:** GIM links with **CAMPA**, **Agroforestry**, and **watershed programmes**.

5. **Challenges:** Weak community participation, monocultures, and poor fund utilisation.

6. **Positive Models:**

   - Odisha's community-based forest management.

   - Tamil Nadu's mangrove expansion.

   - Himachal's carbon-credit biochar project.

7. **Financing Gap:** ₹95,000 crore CAMPA funds exist, but many states underuse them.

8. **Way Forward:**

   - Empower local communities.

   - Use **native species** and scientific methods.

   - Improve **accountability through public dashboards**.

9. **Big Picture:** Forests are not just environmental assets — they are **economic and climate capital** central to India's **Viksit Bharat 2047** vision.

12th November 2025

K4:Old friend of India, Bhutan's guiding hand-The Indian Express Explained

International relations

Easy Explanation

Prime Minister Narendra Modi visited Bhutan to attend the 70th birthday celebrations of King Jigme Singye Wangchuck — the Fourth King of Bhutan, popularly called **K4** and father of the current King Jigme Khesar Namgyel Wangchuck.

K4 is remembered as a **visionary monarch and a close friend of India**, who transformed Bhutan into a modern, democratic, and prosperous nation while keeping India as its most trusted partner.

He became king in **1972 at just 16 years old**, after the death of his father. From his early years, he understood governance and economics through Bhutan's Planning Commission (which was modeled on India's five-year plans). He built deep trust and personal ties with Indian leaders — from Indira Gandhi to Manmohan Singh — and helped institutionalize strong cooperation between the two countries.

K4's reign was marked by several key developments:

- **Economic partnership**: He initiated and expanded **hydropower cooperation** with India, starting with the Chukha project (1974) and later the Tala and Kurichhu projects. Bhutan earns large revenues from selling surplus electricity to India.

- **Security cooperation**: In 2003–04, he personally led "**Operation All Clear**," with India's support, to drive out Indian insurgent groups (ULFA, NDFB, KLO) who had camps inside Bhutan.

- **Foreign relations**: He cautiously opened Bhutan to the world, joining the **UN** and establishing diplomatic ties with many countries, while keeping India informed — including about Bhutan's contacts with China.

- **Political reforms**: In 2006, he **abdicated the throne** to his son and guided Bhutan's **transition to democracy**.

- **Treaty modernization**: He worked with India to revise the **1949 India–Bhutan Treaty**, resulting in the **2007 Friendship Treaty**, replacing the clause that Bhutan would be "guided by India" with a mutual cooperation framework reflecting equality and sovereignty.

Even after abdicating, K4 remains a **"guiding hand"** in Bhutan's governance and India–Bhutan relations. His advice is valued by both governments, especially on strategic and regional matters.

Key Takeaways

1. **Historic Figure:** Jigme Singye Wangchuck (K4) ruled Bhutan for over 30 years (1972–2006) and is considered the architect of modern Bhutan.

2. **India–Bhutan Partnership:** Deepened bilateral ties through hydropower projects, border security cooperation, and diplomatic coordination.

3. **Operation All Clear (2003):** Major joint effort with India to eliminate insurgent camps from Bhutanese soil, strengthening trust and security ties.

4. **Economic Integration:** Pegged the Bhutanese currency (Ngultrum) to the Indian Rupee for seamless trade and stability.

5. **Democratic Transition:** Transformed Bhutan from a monarchy to a constitutional democracy by 2008.

6. **2007 Friendship Treaty:** Modernized the India–Bhutan relationship, emphasizing mutual respect and cooperation instead of guidance.

7. **Continued Influence:** K4 remains an influential figure and trusted advisor for both the Bhutanese leadership and Indian policymakers.

In essence, **K4 embodies Bhutan's deep friendship and enduring strategic partnership with India**, making him a respected "old friend of India."

[**US in fight against climate change: Never a leader, but still significance-The Indian Express Explained**](#)

Environment

Easy Explanation

The article discusses the **United States' weak role in global climate action**, especially highlighted by its **absence from COP30** (the UN climate conference) held in Belém, Brazil.

Despite being the **world's largest historical emitter** of greenhouse gases and possessing the **technological and financial strength** to lead global efforts, the US has often failed to act decisively on climate change.

Under **Donald Trump**, the US **withdrew from the Paris Agreement** (though it remains part of the **UNFCCC**, the broader 1994 climate convention). The US had never ratified the **Kyoto Protocol** either, and its complete absence from COP30 underscores its shifting, inconsistent approach to climate leadership.

The piece argues that this absence is a double-edged sword — while it reduces the risk of the US **blocking international progress**, it also means less funding, less innovation, and less global coordination.

Even outside of Trump's era, **US climate performance has been underwhelming**:

- Between **1990 and 2023**, US emissions dropped by just **4%**.

- Under **Biden**, the US pledged a **50–52% reduction by 2030 (from 2005 levels)**, but this amounts to only around **45–46% reduction from 2019 levels**, far below what the IPCC recommends (a 43% cut from 2019 levels globally).

- On **climate finance**, the US contributed far less than expected — only about **$9.5 billion in 2023**, even as the developing world needs **hundreds of billions annually**.

If the US disengages completely, the **global fight against climate change will suffer**, because:

- The US still emits **over 11% of annual global greenhouse gases**.

- It has major **influence over global finance** and institutions like the World Bank and IMF.

- US **research bodies** (like NOAA and EPA) are vital for climate data and science — Trump's budget cuts to these could harm long-term research.

Still, **not all of America is in denial**: several **US states, city officials, and corporations** continue to attend COP30 and push climate-friendly policies, signaling internal resistance to Trump's stance.

Key Takeaways

1. **US Climate Record:** Despite being a major emitter and having advanced capabilities, the US has never been a consistent climate leader.

2. **Trump's Withdrawal:** The Trump administration exited the **Paris Agreement**, reduced funding for research, and minimized international engagement.

3. **Limited Progress Under Biden:** While rejoining the Paris pact, the US's emission targets and finance contributions remain far below global expectations.

4. **Finance Gap:** The developed world pledged $100 billion annually for developing nations; US contributions are small and contested.

5. **Global Impact:** The world cannot meet climate goals without substantial US participation, given its emissions and influence over finance and technology.

6. **Science Setback:** Funding cuts to agencies like NOAA and EPA threaten long-term climate research and data integrity.

7. **Subnational Action:** Some US states, cities, and corporations remain committed to climate goals, showing domestic divisions on the issue.

Discord between Supreme Court and the Centre over tribunals-The Indian Express Explained

Polity

Easy Explanation:
The ongoing clash between the **Supreme Court (SC)** and the **Central Government** over **tribunal control** highlights a deep constitutional conflict about **judicial independence** and **separation of powers**. The issue revolves around the **Tribunals Reforms Act, 2021**, which was passed after the SC had already struck down similar provisions in an earlier ordinance.

Tribunals are **specialized quasi-judicial bodies** meant to handle cases in fields like corporate law, tax, and administration, to **reduce the burden on regular courts**. However, the **executive's influence** in appointing and controlling tribunal members has raised serious concerns.

The **Madras Bar Association** challenged the Act, arguing that the **Centre re-enacted provisions already invalidated by the SC**, thereby **undermining judicial authority**. The main points of dispute include:

- **Tenure:** The government fixed a **four-year term**, while the SC earlier recommended **five years** to ensure independence.

- **Minimum age:** The Act set it at **50 years**, excluding many competent younger lawyers.

- **Executive control:** Short tenures and reappointment dependence make members vulnerable to **government pressure**.

The government defends these as **policy matters within Parliament's domain**, accusing the judiciary of overreach.

Due to this confrontation, **many tribunals have large vacancies**, crippling their functioning — e.g., 24 vacancies each in the **NCLT** and **Armed Forces Tribunal**, and 18 in the **Income Tax Appellate Tribunal**. The SC has warned that some are now **"virtually defunct."**

Key Takeaways:

1. **Core Issue:** Tussle between judiciary and executive over **control and independence** of tribunals.

2. **Legal Trigger:** The **Tribunals Reforms Act, 2021** re-enacted provisions struck down earlier, challenging the SC's authority.

3. **Judicial Concerns:** Short tenure and high age bar compromise **independence** and **judicial diversity**.

4. **Executive Stand:** Argues it's a **policy matter** and within **Parliament's power**.

5. **Consequences:** Delay in appointments has left many tribunals **non-functional**, affecting justice delivery.

6. **Wider Significance:** Reflects ongoing struggle over **separation of powers**, **checks and balances**, and **judicial independence** in India's constitutional framework.

[Terror's new footprint is the urgent challenge-The Indian Express The Ideas Page](#)

Internal security

Easy Explanation:
 The recent **terror blast near Delhi's Red Fort Metro Station**, which killed 13 people, marks a **return of terrorism to the capital after 14 years**—the last major incident being the 2011 Delhi High Court blast. The explosion coincides with a massive recovery of **nearly 3,000 kg of explosives** in an inter-state and transnational terror operation linked to **Jaish-e-Mohammad (JeM)** and **Ansar Ghazwat-ul-Hind**. This suggests a larger plot may have been foiled.

The attack underlines that **terrorism's footprint is evolving** — spreading beyond Kashmir and involving **"white-collar" networks** (educated professionals aiding terror modules). It highlights the **continuing threat to India's internal security**, even as the country focuses on growth and modernization.

The government's response so far has been **measured and fact-based**, avoiding hasty blame. The Opposition, too, has acted responsibly. In such times, **political unity and restraint** are crucial to maintain public confidence. The priority now is a **thorough, time-bound investigation**, coordinated among Delhi Police, J&K Police, IB, and NIA, to close security gaps and hold the guilty accountable.

Key Takeaways:

1. **Red Fort Blast:** A deadly car explosion near Delhi's Red Fort Metro killed 13, marking the first major terror attack in the capital since 2011.

2. **Major Seizure:** Over 3,000 kg of explosives were recovered in a related operation—suggesting a **larger planned attack** was foiled.

3. **Terror Links:** The plot is linked to **Jaish-e-Mohammad (JeM)** and **Ansar Ghazwat-ul-Hind**, showing the reactivation of old terror networks.

4. **New Terror Pattern:** Evidence points to an **expansion of terror networks beyond Kashmir**, using **white-collar operatives** and interstate links.

5. **Security Coordination:** A **joint probe** led by the NIA with Delhi Police, J&K Police, and IB is crucial to identify and neutralize the network.

6. **Political Maturity:** Both the government and opposition have responded with **restraint and unity**, avoiding politicisation.

7. **National Implication:** The attack is a **reminder of terrorism's evolving footprint** and the urgent need to strengthen internal security mechanisms.

Internal security

Easy Explanation:
 After a blast, forensic experts play a **crucial role in uncovering the scientific truth** behind the explosion — what caused it, how it happened, and who was involved. Their work starts right at the scene and extends into advanced laboratory analysis.

When a blast occurs (like the recent **Red Fort car explosion in Delhi**), teams from the **Forensic Science Laboratory (FSL)** and **police** reach the site immediately. They examine the scene scientifically, collect samples, document everything through **photographs and sketches**, and later test the materials in laboratories to determine the **nature of the explosion** and whether it was **accidental or deliberate**.

Explosions make forensic work especially hard — most evidence is destroyed by **heat and pressure**, but experts rely on **Locard's Principle** ("every contact leaves a trace") to find microscopic clues such as **debris, residues, burnt metal, or chemical particles**.

Key Steps and Techniques

1. **Scene Observation and Sample Collection**

   ○ Experts collect debris, metal parts, burnt residues, and carbon deposits.

   ○ They photograph the site and sketch it for reconstruction.

   ○ They look for **electronic components** like timers or circuits to detect remote-controlled blasts (none were found in the Delhi case).

2. **Laboratory Analysis**

   ○ **Spectroscopic tests (FTIR, ATR-FTIR):** Identify how residues interact with infrared light to find chemical composition.

   ○ **Raman spectroscopy:** Detects the chemical signature of explosives.

   ○ **Scanning Electron Microscopy (SEM)** and **Energy Dispersive X-ray (EDX):** Examine microscopic structures and elements in the blast residue.

   ○ **Thermal analysis:** Determines chemical activity and stability of explosives.

   ○ **Laser mapping and flashpoint tests:** Track how fire spread and whether combustible materials were involved.

3. **Vehicle and Electronic Analysis**

- ○ **Cyber-forensic experts** check CCTV footage to trace who used the vehicle.

- ○ **Forensic physicists** conduct *etching* (thermochemical examination) to recover erased **engine and chassis numbers**.

4. **Biological Examination**

- ○ **DNA profiling** of body parts helps identify victims and establish personal connections.

Key Takeaways

1. **Purpose:** Determine if the explosion was **accidental or intentional**, and identify the **type and source of explosives**.

2. **Approach:** Scientific, evidence-based — not speculative.

3. **Tools:** Advanced technologies like **FTIR, Raman spectroscopy, SEM-EDX, laser mapping**.

4. **Collaboration:** Multiple forensic divisions — explosives, cyber, physics, biology — work together.

5. **Outcome:** Their findings form the **scientific foundation for criminal investigation and court proceedings**.

6. **Challenge:** Evidence is often destroyed in blasts, demanding **high precision and coordination**.

[Why do astronauts wear pressurised suits?-The Hindu Text and Context](#)

Science and technology

Easy Explanation:
 Astronauts wear **pressurised suits** because **space has no air or atmospheric pressure**, and the human body cannot survive in such conditions. On Earth, the atmosphere presses on us with around **20 tonnes of force**, balanced by our internal pressure. But in space, the lack of pressure leads to **boiling of body fluids (ebullism)**, **tissue expansion**, **loss of oxygen**, and **death within minutes**.

Pressurised suits act like a **personal spacecraft** — they maintain pressure, supply oxygen, regulate temperature, and protect astronauts from **radiation, space debris, and extreme temperatures**.

During **ascent (launch)** and **descent (re-entry)**, astronauts wear **Intra-Vehicular Activity (IVA)** suits because these are the most dangerous phases, with chances of **sudden cabin pressure loss, high G-forces, and heat**. The tragic **Soyuz 11 (1971)** mission — where three cosmonauts died after cabin depressurisation — made it mandatory to wear IVA suits in these stages.

Key Concepts

1. **Atmospheric Pressure and Survival**

- ○ Earth's atmosphere exerts pressure that our bodies are adapted to balance.

- ○ In space (vacuum), there's **no pressure**, causing severe physiological effects like **ebullism**, **hypoxia**, and **decompression**.

2. **Types of Space Suits**

- ○ **EVA Suits (Extravehicular):** Used for spacewalks; 12–14 layers; protect from vacuum, radiation, and temperature extremes; weigh 100–130 kg.

- ○ **IVA Suits (Intra-Vehicular):** Worn inside spacecraft during ascent/descent; protect from pressure loss; lighter (8–10 kg); include **flight suit** and **pressure suit**.

3. **Historical Significance**

- ○ After **Soyuz 11 (1971)** deaths due to cabin depressurisation, IVA suits became **mandatory** during launch and re-entry for all astronauts.

4. **India's Gaganyaan IVA Suit**

- ○ Uses the **Russian Sokol KV2 suit**, made by **Zvezda**.

- ○ **Inner layer:** Rubberised polycaprolactam bladder (airtight).

- ○ **Outer layer:** White nylon canvas for structural protection.

- ○ Proven reliability — used in over **128 Soyuz missions**.

Key Takeaways

1. **Why suits are needed:** Space lacks air and pressure; suits maintain life-support conditions.

2. **IVA suits' purpose:** Protect astronauts from **pressure loss** during launch/re-entry — the riskiest mission phases.

3. **Historical lesson: Soyuz 11 tragedy** made IVA suits mandatory.

4. **Gaganyaan's approach:** Using proven **Sokol KV2 suits** — balancing **international collaboration** with **India's indigenous space ambitions**.

5. **Bottom line:** Pressurised suits ensure astronauts **stay alive and conscious** in an environment where human survival is otherwise impossible.

What's the status of the rare earth hypothesis?-The Hindu Text and Context

Science and technology

Easy Explanation:

The *Rare Earth Hypothesis* (2000, by Peter Ward and Donald Brownlee) suggests that while simple microbial life may be common in the universe, complex multicellular life like on Earth is extremely rare. It argues that many precise conditions—planetary, atmospheric, chemical, and cosmic—must align for advanced life to emerge and persist.

Recent evidence from NASA's *Kepler* and *James Webb Space Telescope (JWST)* has updated this debate. Kepler showed that Earth-sized planets in "habitable zones" (regions where liquid water can exist) around sun-like stars are not uncommon—perhaps around 20% of them have such planets. However, *being Earth-sized and habitable-zone located does not mean Earth-like.*

Planets orbiting M-dwarf stars, for example, often lose their atmospheres due to intense stellar radiation, creating "false oxygen" atmospheres (oxygen not produced by life but by radiation splitting water molecules). Some may retain atmospheres if they have magnetic fields or volcanism—but such systems are rare. JWST's observations of TRAPPIST-1 planets (like TRAPPIST-1b and 1c) found no thick, life-friendly atmospheres—showing that many "Earth-sized" worlds are barren.

Another factor is *climate stability*. Earth's plate tectonics and carbon cycle have buffered its climate for billions of years, maintaining habitability. It's unclear if other planets have similar geological processes. Some may have stagnant crusts or occasional tectonics but not enough to stabilise climate long-term.

The role of *giant planets* like Jupiter—once thought to shield Earth from asteroids—is now seen as more complex. Depending on their orbits, such planets can either protect or increase impacts. So, Jupiter-like planets aren't a strict necessity for life.

Searches for "technosignatures" (e.g., radio signals from alien civilisations) by projects like *Breakthrough Listen* have so far found nothing, setting upper limits on how common intelligent life might be.

Current Status:

- Earth-sized planets in habitable zones are *not rare*.

- But Earth-like conditions—stable atmospheres, protective magnetic fields, long-term climate regulation, and suitable system architecture—*may still be uncommon*.

- Microbial life could be widespread; complex ecosystems like Earth's might be very rare.

Key Takeaways:

1. **Rare Earth Hypothesis:** Complex life needs many finely balanced conditions.

2. **Kepler Data:** Habitable-zone rocky planets are common → weakens the "rare planet" claim.

3. **JWST Findings:** Most such planets lack stable, life-supporting atmospheres → supports "rare complex life" idea.

4. **Climate Regulation:** Plate tectonics and carbon cycles critical but possibly uncommon elsewhere.

5. **Giant Planets:** Their effect on habitability is system-specific, not universal.

6. **Technosignature Searches:** No evidence yet of intelligent life.

7. **Conclusion:** Simple life may be frequent; complex, Earth-like life likely remains rare until further evidence.

13th November 2025

[Tokyo tutorial:countering China's rare earths choke-The Indian Express Explained Page](#)

Geography

Easy Explanation

China dominates the global supply of *rare earth elements (REEs)* — minerals essential for making magnets used in automobiles, wind turbines, and electronics. But in 2010, China briefly blocked REE exports to Japan after a political dispute. This incident exposed Japan's overdependence on China (then nearly 90%) and acted as a wake-up call.

Since then, Japan has built a *resilient supply chain* through multiple strategies:

- **Diversifying imports:** Partnered with *Lynas Rare Earths* (Australia), the biggest REE producer outside China.

- **Government support:** Allocated over **JPY 100 billion (>$1.1 billion)** soon after the 2010 crisis to strengthen supply chains.

- **Recycling & substitution:** Promoted technology to reuse REEs and find alternatives.

- **Strategic stockpiling:** Maintained reserves to cushion against future embargoes.

- **Investment in refining facilities:** Ensured REEs could be processed domestically.

As a result, Japan's dependence on China has dropped from **90% to below 60%**, with a target to fall under 50%.

Meanwhile, **China still controls around 70% of global REE mining and 90% of processing**, giving it huge leverage over the global tech and clean energy industries.

For other nations, Japan's model shows how to handle China's dominance — through diversification, long-term planning, and cooperation with like-minded countries.

India's Position:

- India's REE usage is still small, but growing.

- Imports (2023–24): **2,270 tonnes**, 65% from China and 10% from Hong Kong.

- Domestic production: modest, led by **IREL Ltd** (10,000 tonnes capacity).

- Steps underway:

  - Auction of seabed blocks in the Andaman Sea for REE exploration.

  - Plans for **Rare Earth Theme Parks** in Vizag and Bhopal.

- India aims to develop domestic REE capacity like Japan did post-2010.

Globally, the **US and EU** are also trying to rebuild REE supply chains to reduce dependence on China.

Key Takeaways:

1. **2010 crisis**: China's export ban on REEs to Japan exposed global vulnerability.

2. **Japan's response**: Diversified sources, built stockpiles, invested in R&D and refining — reducing dependence on China.

3. **Lesson for the world**: Don't rely on a single country for critical materials; adopt multi-pronged resilience strategies.

4. **China's control**: Still dominant in global mining (70%) and refining (90%) of REEs.

5. **India's efforts**: Scaling up exploration and refining; setting up REE theme parks to reduce reliance on imports.

6. **Global trend**: US, EU, and India are following Japan's playbook to secure supply chains in critical minerals.

[The Bill that could end longest-ever govt shut down in the US-The Indian Express Explained](#)

International relations

Easy Explanation

1. **What happened?**
   The United States faced its **longest-ever government shutdown**, lasting **41 days**. It ended when a few **Democratic senators** supported a **Republican spending bill**, even though it excluded a key healthcare funding demand from the Democrats.

2. **Why did the shutdown happen?**
   The shutdown occurred because **Congress failed to approve new spending** before the start of the fiscal year.

   - **Democrats** wanted to **extend healthcare subsidies** and **reverse Medicaid cuts** introduced by the Trump administration.

   - **Republicans** rejected these demands, leading to a funding deadlock and the subsequent shutdown.

3. **Impact of the shutdown:**

   - **Millions lost access** to food benefits (SNAP).

   - **Thousands of flights were cancelled.**

   - **1.4 million federal employees** were furloughed or worked without pay.

4. **What's in the Bill to end it?**

   - **Food Assistance:** Full **SNAP funding restored** till **September 30, 2026**, ensuring food aid for about **42 million Americans**.

   - **Federal Agencies:** Most agencies get funding till **January 30**, raising the possibility of **another shutdown** in three months.

   - **Guaranteed Pay:** Retroactive **salary payments** for 1.4 million federal workers; no layoffs till January 30.

   - **GAO Protection:** The **Government Accountability Office (GAO)** keeps its funding intact after criticizing the Trump administration's spending practices.

5. **Why Democrats aren't fully satisfied:**

   - The Bill **does not include healthcare subsidy extensions**, their main demand.

   - They supported it to **restore normalcy** but called it an **imperfect compromise**.

   - Democrats now plan to **use the healthcare issue politically** against Republicans, who face pressure to lower medical costs.

6. **What's next?**
   The **House of Representatives** is expected to vote soon. If passed, the shutdown will formally end, though there's a risk of another one by early next year.

Key Takeaways

1. **Duration:** 41 days — **longest government shutdown in US history.**

2. **Trigger:** Disagreement over **healthcare spending and Medicaid cuts.**

3. **Bill Passage:** Supported by a **minority group of Democrats** to break the deadlock.

4. **Major Provisions:**

   ○ Restores **SNAP food aid** till FY 2026.

   ○ Funds **federal agencies** till Jan 30.

   ○ Provides **back pay** to furloughed workers.

   ○ **Protects GAO funding** and oversight powers.

5. **Democrats' View:** Compromise accepted for now, but **healthcare subsidies remain unresolved.**

6. **Political Impact:**

   ○ Democrats gain narrative of **protecting healthcare**.

   ○ Republicans face **pressure to reduce medical costs.**

7. **Future Concern:** Possible **renewed shutdown** in three months if a full budget deal isn't reached.

   [**Delhi-Thimphu warmth can help fight China chill-The Indian Express The Ideas Page**](#)

International relations

Easy Explanation

1. **Background:**
   Many small South Asian countries are finding it hard to deal with **China's growing influence**. China uses **loans, infrastructure projects, and defense cooperation** to expand its presence — often called **"debt trap diplomacy"**, as seen in **Sri Lanka's Hambantota Port case**.

2. **Bhutan's challenge:**
   Bhutan doesn't have **formal diplomatic ties with China**, but shares a **long, disputed border**.

   ○ China uses a **carrot-and-stick approach**: offering aid while also **building settlements inside Bhutanese territory**.

- This puts Bhutan under pressure to negotiate with Beijing, which can affect its sovereignty.

3. **Modi's visit to Bhutan:**
 Indian Prime Minister **Narendra Modi's two-day visit** to Bhutan aimed to **strengthen ties** amid these regional tensions.

   - He and Bhutan's **King Jigme Khesar Namgyel Wangchuck** signed several **MoUs** on **renewable energy, health, and economic support**.

   - India reaffirmed assistance for Bhutan's **13th Five-Year Plan** and **Economic Stimulus Programme**.

   - Modi also attended the **70th birthday of former King Jigme Singye Wangchuck**, symbolizing the close personal and historical ties between the two nations.

4. **Strategic importance of Bhutan for India:**

   - Bhutan is vital for India's **trade, energy cooperation, and border security**.

   - The **Doklam plateau**— where India and China faced off in 2017 — is strategically crucial, located near India's **Siliguri Corridor** (the narrow link connecting India's northeast).

   - A **China-Bhutan land swap** in this region could threaten India's security.

5. **Diplomatic foundation:**
 The **2007 India-Bhutan Friendship Treaty** emphasizes **Bhutan's freedom in foreign affairs**, replacing the earlier clause that required it to follow India's guidance.
 This **mutual respect and trust** are the basis of their strong partnership in a region where China is expanding its footprint.

Key Takeaways

1. **Context:** China's assertive influence in South Asia poses challenges for smaller neighbors like Bhutan.

2. **Bhutan's Dilemma:** No diplomatic ties with China; faces territorial intrusions and pressure tactics from Beijing.

3. **Modi's Bhutan Visit:**

   - Strengthened India-Bhutan partnership.

   - New MoUs on **renewable energy, health, and economic development**.

   - India reaffirmed support for Bhutan's **13th Five-Year Plan**.

4. **Strategic Importance:**

   ○ **Doklam plateau** remains a sensitive zone affecting India's **Siliguri Corridor**.

   ○ Both sides must ensure any **China-Bhutan boundary settlement** doesn't compromise Bhutan's sovereignty or India's security.

5. **Diplomatic Principle:**
   The **2007 Friendship Treaty** reflects India's commitment to **respect Bhutan's independence** while maintaining close cooperation.

6. **Broader Message:**
   Strengthened **Delhi-Thimphu relations** can serve as a **stabilizing force against China's growing regional influence**.

[From trump-Xi G2,a message forIndia—build your own leverage-The Indian Express The Ideas Page](#)

International relations

Easy Explanation

1. **Background — The "G2" Moment:**
   Recently, **US President Donald Trump** and **Chinese President Xi Jinping** met at the **APEC Summit in Busan, South Korea**.
   Trump called it a **"G2" meeting**, implying the US and China as two global superpowers managing world affairs.
   This raised concerns for **India**, as it suggests that Washington may prioritize ties with Beijing over New Delhi.

2. **Implications for India:**

   ○ **Strategic calm between the US and China** may reduce global tension but forces India to **rethink its assumptions**.

   ○ India has long believed it was **America's key partner** in countering China under the **Indo-Pacific strategy**.

   ○ But the **Trump–Xi rapprochement** shows a **hierarchy of US interests** — the **China relationship** (for trade and economic gains) **comes first**, while **India remains secondary**.

3. **Economic Disparity:**

   ○ China has **strong leverage** over the US — large markets, supply chain control, and the ability to influence global trade.

- India lacks comparable **economic power** or **bargaining tools**:

  - No major US dependence (like rare earths or large-scale imports).

  - India is **more dependent on both the US and China**, creating a **strategic imbalance** in negotiations.

4. **Policy Message for India:**

   - India must **build its own leverage** — through **technological innovation, manufacturing scale**, and **control over critical minerals**.

   - Dependence on Chinese imports (in **pharma, electronics**, etc.) is India's **biggest vulnerability**.

   - The country should **diversify supply chains** and accelerate **self-reliance (Atmanirbharta)** to strengthen its strategic position.

5. **Foreign Policy Recalibration:**

   - India should move towards a **"multi-aligned" diplomacy** — maintaining balanced ties with **Europe, the UK, Gulf states, Africa, ASEAN**, and **Russia**, alongside the **Quad** (US, Japan, Australia, India).

   - The **Quad's uncertain future** under Trump means India must not depend solely on it.

   - India should pursue **"managed competition" with China** — maintaining border vigilance while keeping diplomatic and trade channels open.

6. **Domestic Policy Reforms:**

   - To support strategic autonomy, India needs **policy coherence** and **economic reforms** aligned with social and political realities.

   - It must **strengthen ease of doing business**, protect **critical industries**, and invest in **AI, semiconductors, and quantum tech** for technological independence.

   - The government should smartly use **industrial policy and digital sovereignty** where markets fall short.

7. **Core Message:**
   The **G2 moment** is a **wake-up call** — the **US's support is not guaranteed**.
   India must **rely on its own strength**, enhance **economic and technological resilience**, and craft an **independent, multi-aligned strategy** to navigate an increasingly **transactional world order**.

Key Takeaways

1. **Event:** Trump–Xi meeting at APEC labeled as "G2" — signals closer US-China ties.

2. **Implication for India:** Erodes assumption that the US will always back India against China.

3. **Strategic Reality:** US–China calm may stabilize markets but sidelines India's role in global power equations.

4. **India's Weakness:**

   - Limited economic leverage compared to China.

   - Dependence on **Chinese imports** and **US technology/markets**.

5. **Action Plan for India:**

   - Develop **asymmetric leverage** through tech, manufacturing, and critical minerals.

   - Diversify **supply chains** and boost **economic self-reliance (Atmanirbharta)**.

   - Adopt a **multi-aligned foreign policy** engaging Europe, ASEAN, Gulf, and Russia.

6. **China Policy:** Pursue **"managed competition"** — border readiness + open dialogue.

7. **Domestic Focus:** Build **national power** via reforms, innovation, and strategic industrial policy.

8. **Main Message:**

   - **US backing is conditional**, not automatic.

   - India must **build strength, flexibility, and autonomy** to safeguard its interests in a **multipolar, transactional world**.

     [**Can lawyers break client confidentiality?-The Hindu text and Context**](#)

Polity

Easy Explanation

1. **Background:**
   The **Supreme Court (SC)** recently ruled that **lawyers cannot be forced to reveal what their clients tell them**, unless the information is linked to a **crime**.
   The case arose when an **Ahmedabad lawyer** was summoned by the police to "explain facts" in a case where he was a defence counsel — the SC intervened **to protect the sanctity of client-lawyer confidentiality**.

2. **What is privileged communication?**

    ○ **Privileged communication** means private exchanges between two parties that the law protects from disclosure in court.

    ○ These include:

        ■ **Spousal communications** (protected under Section 128, Bharatiya Sakshya Adhiniyam 2023).

        ■ **Official state records** (Section 129).

        ■ **Lawyer-client communications** (Section 132).

    ○ The goal is to ensure **trust, honesty, and fairness in justice** by protecting what clients share in confidence with their lawyers.

3. **When can a lawyer disclose client information?**
   Section 132 of the **Bharatiya Sakshya Adhiniyam (BSA), 2023** allows disclosure **only in three cases**:

    ○ **Client consents** to disclosure.

    ○ The **communication is made for an illegal purpose**.

    ○ The **lawyer witnesses a crime being committed** during his professional engagement. Outside of these, **lawyers must maintain confidentiality** — even after their employment ends.

4. **Why the Supreme Court's judgment matters:**

    ○ The SC held that **calling a lawyer to reveal what a client said** violates the **right to a fair trial** and **equitable legal representation**.

    ○ This protection flows from **Article 20(3)** (no self-incrimination) and **Article 21** (right to life and fair trial).

    ○ The Court reasoned: if the State **cannot force an accused to confess**, it **cannot compel the lawyer** to reveal what the accused said.

    ○ It prevents the **State from turning defence lawyers into prosecution witnesses**, preserving fairness in the justice process.

5. **Lawyers as 'constitutional actors':**

- The SC emphasized that **advocates are not private agents**, but **"constitutional actors"** — essential to uphold **rule of law and justice**.

- Privilege is **not a personal right** of the lawyer but a **safeguard for citizens**, ensuring that everyone — rich or poor — can speak openly with their counsel without fear of betrayal.

- Summoning lawyers to disclose client communications would **collapse the wall between defence and prosecution**, violating **Articles 14 and 21**.

6. **Broader significance:**

- Reinforces the **right to effective legal representation** under **Articles 21 and 22(1)** (as in *M.H. Hoskot* and *Hussainara Khatoon* cases).

- Limits police powers under **Section 179 of BNSS**, clarifying that this power **cannot override professional confidentiality**.

- Restores **balance and restraint** in investigative powers — reminding the executive that legal privilege is essential to the justice system.

Key Takeaways

1. **SC Ruling:** Lawyers cannot be summoned to disclose what clients tell them, **except in three specific cases** (client consent, illegal purpose, or ongoing crime).

2. **Legal Basis:** Protected under **Section 132, Bharatiya Sakshya Adhiniyam (2023)**.

3. **Constitutional Link:** Connected to **Article 20(3)** (protection from self-incrimination) and **Article 21** (right to fair trial).

4. **Purpose:** To preserve **trust, fairness, and equality before law** — ensuring citizens can confide in their lawyers without fear.

5. **Lawyer's Role:** The SC recognized advocates as **"constitutional actors"**, not just private agents — they defend the justice system itself.

6. **Limits on Police Power: Section 179 (BNSS)** cannot be used to compel lawyers to reveal client information.

7. **Wider Impact:** Strengthens **rule of law**, **citizens' rights**, and **institutional independence** against misuse of investigative authority.

   [Why does India's road safety system keep failing?-The Hindu Text and Context](#)

Economy

Easy Explanation

The **Supreme Court** took note of two major accidents in **Rajasthan and Telangana**, highlighting India's poor road safety record — **1.7 lakh deaths in 2023**. The Court pointed to failures in **licensing, enforcement, road design, and trauma care**.

India's **driver licensing** system is weak — licences are often issued **without real training or testing**. **Commercial drivers** lack proper safety training, and there are **no periodic fitness checks**, allowing **tired or unfit drivers** to operate heavy vehicles.

Traffic enforcement remains manual, inconsistent, and corruption-prone. **Speeding, drunk driving, and overloading** are rarely detected effectively. **Technology-based enforcement** (like cameras and e-challans) is underused across States.

India's roads are often **poorly designed and maintained**, with **bad lighting, missing barriers, and unsafe curves**. Many highways were built for **speed, not safety**, and **pedestrians lack safe infrastructure**.

Post-crash care is another weak link — **ambulance delays** and **lack of trauma facilities** mean many victims die even after survivable crashes. A **Right to Trauma Care law** is being considered to improve emergency response.

Overall, road safety fails because **licensing, enforcement, and healthcare** work in **silos**. A **coordinated national system** focused on safety, accountability, and design reform is urgently needed.

Key Takeaways

1. **Scale of the Problem:** Over **1.7 lakh people died in road accidents in 2023** — a public safety crisis.

2. **Licensing Flaws:** India's **licensing process is weak**, with poor testing, no structured training, and no fitness re-checks.

3. **Enforcement Gaps: Manual policing** dominates; **technology-based enforcement** remains underused.

4. **Unsafe Roads:** Poor design, maintenance lapses, and missing pedestrian facilities make roads **dangerous and "unforgiving."**

5. **Poor Trauma Response:** Weak emergency systems and lack of trained trauma care facilities **reduce survival chances**.

6. **Systemic Issue:** Different departments work in **silos**; road safety needs **integration and accountability**.

7. **Way Forward:**

   - Standardized driver training and testing.

- - Widespread tech-based enforcement.

  - Road design focused on safety.

  - National trauma care standards and networks.

  - Unified institutional approach to road safety.

14th November 2025

US govt shut down & the state of its Budget-The Indian Express Explained

International relations

Easy Explanation

A US government shutdown happens when the government loses legal permission to spend money because Congress has not approved the Budget. The shutdown doesn't mean America has run out of money; it means the Budget has not been passed due to political disagreement.

In the US Presidential system, the President and Congress are separate. So even if the President proposes a Budget, Congress must agree. If they don't, the government shuts down. In the recent case, this deadlock lasted 43 days, the longest in US history.

The US fiscal year begins on October 1. If the Budget is not approved by then, federal agencies must stop many activities because they cannot legally spend money.

The US also has a high fiscal deficit — it spent $7 trillion and earned $5.2 trillion in FY 2025, creating a $1.8 trillion deficit. High deficits increase borrowing and interest payments.

India cannot face such shutdowns because the Executive is part of Parliament. If a Budget is not passed, the government must resign. This forces consensus and prevents shutdown.

Key Takeaways

1. A US shutdown happens when Congress does not approve the Budget on time.
2. It is a political deadlock, not a situation of running out of money.
3. The recent 43-day shutdown was the longest in US history.
4. The US Presidential system allows Budget disagreement to stop government functioning.
5. India's Parliamentary system prevents shutdowns because the government must have majority support to pass a Budget.
6. US fiscal deficit in FY 2025 was $1.8 trillion (5.9% of GDP).
7. Interest payments are among the largest US expenditure items.
8. Tariffs contribute very little to US government revenue despite claims otherwise.

9. The episode shows why a Presidential system can face governance paralysis, especially for developing economies.

Governance

Easy Explanation

The article says India's air pollution persists mainly because of **toxic politics**. Governments deny the seriousness of the crisis, distract with symbolic schemes (like odd-even, purifiers, vacuum trucks), and blame complexity, weather, or other states/countries. Air quality never becomes a voting issue, so political parties don't prioritise it.
 Elites and media also fail to demand real reforms, allowing politicians to escape accountability. Weak regulators, fragmented authorities, and understaffed agencies are not natural problems; they are **political choices** that keep the system ineffective.
 Although dealing with pollution involves many sectors (transport, agriculture, industry, waste, construction), India has the expertise to solve it. The real barrier is lack of political will. Unless leaders and specific institutions are held publicly accountable, toxic politics will continue to produce toxic air.

Key Takeaways

1. Pollution as a Political Problem

• Toxic air is driven by toxic politics: denial, distraction, and blaming others
 • Air pollution never becomes a voting issue, so political parties avoid serious action

2. Elite and Media Failure

• Elites could push for cleaner air but rarely do
 • Media avoids tough questions; symbolic gimmicks go unchallenged
 • Environmental activism is weakened by being labelled "foreign-funded"

3. Complexity Used as an Excuse

• Governments hide behind "complexity" to justify inaction
 • Most countries have handled pollution better; India has the expertise too
 • Weak institutions (local bodies, regulators) are deliberately kept weak

4. Real Barriers Are Political Choices

• Fragmented jurisdictions and understaffed agencies are politically created
 • Leaders choose not to use the powers they already have
 • Crop-burning, waste systems, transport and industry norms can be acted upon

5. Lack of Accountability

• The Commission on Air Quality focuses on rules, not outcomes
 • Experts remain silent instead of acting as a public conscience
 • Naming and shaming specific actors is the only way to force change

6. Rising Public Anger

• People are getting frustrated; the question is how their anger gains political voice
 • Social movements need political and media backing to succeed

7. Stakes for India's Future

• Pollution is hurting health, productivity, and economic growth
 • Without serious leadership, toxic politics will keep producing toxic air

[Workplace stress linked to rising cases of diabetes among adults-The Hindu Science](#)

Science

Easy Explanation

Stress at work is increasingly contributing to diabetes among adults, especially younger professionals. Doctors say constant pressure, long hours, night shifts, and lack of proper sleep or meals disrupt the body's hormones — especially cortisol — which then affects how insulin works. This leads to higher sugar levels, abdominal fat, fatigue, and poor metabolic health.
 Tech, finance, customer service, and healthcare workers face the highest risk, and women show rising stress-linked metabolic issues.
 Simple workplace changes — proper breaks, predictable routines, movement gaps, and reduced late-night work — can significantly reduce stress-related diabetes risk. For those already diagnosed, stress-management techniques like mindfulness also improve blood sugar control.

Key Takeaways

1. Rising link between stress and diabetes

- Chronic workplace stress is increasingly linked to Type 2 diabetes in younger adults.
- Indian data now mirrors international findings on stress-metabolism disruption.
- High cortisol from stress interferes with insulin function.
- More patients in their 30s–40s show rising sugars despite no major diet issues.
- Doctors report clear visibility of the stress–diabetes connection today.

2. Early metabolic warning signs

- Abdominal fat gain, fatigue, cravings, and poor sleep appear early.
- These symptoms are often dismissed as "busy lifestyle" effects.
- Insulin sensitivity drops earlier than people realise.

- Post-meal sugar fluctuations appear in early stages.
- Ignoring early signs leads to impaired glucose tolerance.

3. High-risk groups

- Tech, finance, customer service, and healthcare workers show rapid rise.
- Night-shift workers have unstable sugar levels due to circadian disruption.
- Women show higher incidence of stress-linked pre-diabetes and diabetes.
- Many workers report inability to disconnect from work.
- Even those with good diet/medication control see instability if sleep is irregular.

4. Workplace measures that help

- Scheduled lunch breaks improve metabolic stability.
- Movement gaps between meetings reduce stress hormone load.
- Limiting late-night login hours helps normalise cortisol.
- Healthy cafeteria choices support glucose regulation.
- Rotating shifts for night workers reduces long-term metabolic damage.

5. Managing stress improves sugar control

- Mindfulness, therapy and structured breaks stabilise cortisol.
- Lower stress leads to better sleep and smoother sugar patterns.
- Predictable daily routines complement medication.
- Counselling improves long-term metabolic outcomes.
- Doctors say small, consistent habits create major health benefits.

Should public celebrations or expression of devotion be avoided?-The Hindu Text and Context

Polity

Easy Explanation

The debate discusses whether public religious celebrations or displays of devotion should be limited. India has always been expressive about religion in public, but the scale and frequency have increased across communities. Large festivals, loudspeakers, processions, namaz in public spaces, jagrans, and other events often disrupt civic life, create noise, and lead to competition between communities.
 While the Constitution protects religious practices, only those that are essential to a religion are fully protected; non-essential aspects (like noise levels, public blocking, or processions) can be regulated for public order.
 Experts argue that growing public display is often about political assertion or identity, not spirituality. They also highlight that Hindu festivals are given more space and tolerance, while minorities face restrictions. This leads to competitive religious expressions and tension.
 The broader issue is political: religious identity is being used to consolidate groups, creating division. Rational, private religiosity is declining as public demonstrations increase.

Key Takeaways

1. India's public religious display has grown significantly

- Festivals and ceremonies now occupy more time and space than before
- Public celebrations often disrupt traffic, noise levels, and civic life

2. All communities contribute to public disruption

- Loudspeakers, public namaz, and competitive displays happen across religions
- COVID showed that some crowding practices were avoidable

3. Law protects essential practices, not all public expressions

- Essential religious acts can't be stopped
- Non-essential elements like noise or processions can be regulated for public order

4. Public display is increasingly political

- Festivals and symbols are used to show group identity rather than devotion
- Hindu festivals often get more leeway, leading to competitive displays from minorities

5. Rising public religiosity reflects deeper political division

- Communities consolidate around religious identity
- Rational, personal religiosity is being overshadowed by public assertion

How is SEC ensuring fair elections? -The Hindu Text and Context

Polity

Easy Explanation

Maharashtra is preparing for local body elections following Supreme Court directions. But the Opposition has raised concerns about duplicate names, missing entries, and faulty voter lists. The key point is that the State Election Commission (SEC) **does not prepare or change the voters' list** — it only uses the list created by the **Central Election Commission** (ECI) under the Representation of the People Act.
 So the SEC cannot add or delete names. It only divides the existing Assembly voter list into ward-wise lists for local elections.

For the upcoming elections, the SEC will use the electoral roll updated up to **July 1, 2025**. This means young voters who turned 18 after January 1, 2025 will not be included, causing disappointment.

The SEC's main role now is **delimitation**, preparing ward-wise lists, and conducting a revision process where people can submit objections. Four types of objections can be made — missing names, wrong ward assignments, duplicate entries, or too many voters at one address.

Although SEC cannot delete names, it will **identify and mark duplicate or doubtful entries** using a tool that checks first name, middle name, last name, and gender. After this, field verification will be done. Voters with

duplicates will give undertakings specifying where they will vote so that they can't vote in more than one place.

However, the Opposition argues that the time is too short and that the basic voter list itself has errors, which the SEC cannot fix because the responsibility lies with the Central Election Commission.

Key Takeaways

1. SEC cannot change voter lists

- It must use the voter rolls prepared by the Central Election Commission
- It can only divide them into ward-wise lists, not add or delete names

2. Objections and corrections are allowed within limits

- Missing names in ward lists, wrong wards, duplicates, and overcrowded addresses can be flagged
- SEC will mark duplicate or doubtful entries but cannot delete them

3. Duplicate entries will be controlled through verification

- A tool will identify likely duplicates using name and gender filters
- Field verification will follow, and voters must give undertakings to prevent multiple voting

4. Young voters face exclusion

- Only voters added up to July 1, 2025 are included
- Those who turned 18 after Jan 1, 2025 cannot vote this time

5. Opposition says core issues remain unresolved

- They argue the root voter list itself has errors
- SEC cannot correct those errors due to legal limits, leading to unresolved concerns

[Can T.N.'s reforms change transgender healthcare?-The Hindu Text and Context](#)

Sociology

Easy Explanation

Transgender people often struggle to get proper healthcare because doctors aren't trained, insurance doesn't cover their needs, and hospitals can be discriminatory. Tamil Nadu has made major reforms to fix this — setting up special clinics, offering free gender-affirming surgeries, expanding insurance, and strengthening legal protections. These steps have improved access to care, but more work is still needed to make the system fully inclusive and stigma-free.

Key Takeaways

1. Why transgender people face healthcare barriers

- Very few doctors are trained in full transgender health needs.
- Social exclusion leads to low income and lack of insurance.
- Discrimination in hospitals discourages them from seeking care.
- Many get care only for STIs or surgeries, not full health needs.
- Delays in treatment happen because the system feels unsafe.

2. What Tamil Nadu has done

- Started free gender-affirming surgeries in government hospitals since 2008.
- Set up India's first Transgender Welfare Board.
- Created Gender Guidance Clinics offering many services under one roof.
- Expanded these clinics to eight districts.
- Over 7,600 transgender persons used these clinics between 2019–2024.

3. Insurance reforms

- Included gender-affirming surgeries and hormone therapy in CMCHIS-PMJAY.
- Removed income limit and ration-card requirement to simplify access.
- Over 5,200 transgender persons enrolled by 2025.
- More than 600 received free surgeries or hormone therapy.
- Public and private hospitals provide treatment under this scheme.

4. Policy and legal support

- 2019 Transgender Act mandates comprehensive healthcare.
- Doctors trained in global standards (WPATH SOC-8) in 2024.
- Madras High Court rulings strengthened rights (marriage, education, no conversion therapy).
- State policies (2019 and 2025) protect health and social rights.
- These reforms create a rights-based healthcare ecosystem.

5. Challenges ahead

- Clinics need to expand into full, continuous care.
- Mental health services must be strengthened.
- Empanelled hospitals require stricter regulation.
- More training, research, and grievance systems are needed.
- Social stigma and discrimination still remain major obstacles.

15th November 2025

Economy

Easy Explanation

India's Flexible Inflation Targeting (FIT) framework — aiming for 4% inflation within a 2%-6% band — is due for review in 2026. The RBI's paper raises three issues: whether India should target headline or core inflation, what the acceptable inflation level is, and whether the inflation band should change.

Inflation control is crucial because high inflation hurts the poor the most and disrupts savings and investment. Since adopting FIT in 2016, India has generally kept inflation stable despite multiple shocks.

The article supports targeting **headline inflation**. Food inflation in India is not purely supply-driven; when monetary policy is expansionary, food prices rise more and spill over into wages and other prices, pushing up core inflation. So ignoring food inflation could lead to policy mistakes.

On the acceptable inflation level, evidence shows that inflation beyond a certain point reduces growth. Data since 1991 shows the ideal rate is around **4%**, so there is no strong case for raising the target.

The current band of **2%-6%** has worked well, but staying close to the upper limit (6%) for long harms growth and weakens the framework. Fiscal discipline is essential because fiscal slippages raise inflation. FIT and FRBM must work together to maintain stability.

Key Takeaways

1. Inflation control remains essential

- High inflation disproportionately burdens poorer households.
- It disrupts savings and investment decisions.
- FIT has helped stabilise inflation since 2016.

2. Headline inflation is the appropriate target

- Food inflation increases more under loose monetary policy.
- Food price spikes spill over to wages and core inflation.
- In India, food inflation often becomes general inflation.
- Ignoring food inflation risks faulty policy signals.

3. Acceptable inflation level is around 4%

- Low inflation can support growth only briefly.
- Beyond a threshold, inflation reduces growth.
- Empirical analysis shows an inflection point at about 3.98%.
- No justification for raising the target above 4%.

4. Current 2%-6% band is adequate

- The ±2% range has provided enough flexibility.
- Remaining near 6% for long weakens inflation control.
- Growth declines sharply beyond 6%.

5. Fiscal discipline is critical

- Past high inflation came from monetising fiscal deficits.
- FRBM and FIT must function together.
- Fiscal slippage can undermine monetary policy and raise inflation.

[The Great Nicobar project and a Ministry in knots-The Hindu Editorial](#)

Governance

Easy Explanation

The Great Nicobar mega project — involving a port, airport, power plant and tourism township — will significantly affect one of India's most biodiverse islands. In a recent submission to the National Green Tribunal (NGT), the Environment Ministry admitted that Galathea Bay, the project site, has rich ecological features: over 20,000 coral colonies, more than 50 Nicobar Megapode nesting mounds, and active nesting of the Giant Leatherback turtle.

The problem is that these facts directly contradict the Ministry's previous actions. In 2021, the National Board for Wildlife denotified the Galathea Bay Wildlife Sanctuary, removing protections meant specifically for these species. Also, by law, such ecologically sensitive areas fall under Coastal Regulation Zone (CRZ)-1A, where major construction like ports is banned.

NGT's 2023 order confirmed that the site is CRZ-1A, but a later survey by NCSCM (under the same Ministry) claimed it was not CRZ-1A — a conclusion based on a confidential report not released to the public. This creates circular logic: protections were removed, then surveys claimed no protections exist.

Now, the Ministry has admitted again that Galathea Bay indeed has corals, megapodes, and turtle nesting — meaning it still qualifies as CRZ-1A. This exposes contradictions, raises questions about scientific accuracy, transparency, and whether the Environment Ministry has failed its primary conservation role.

Key Takeaways

1. The project has major ecological impacts

- Galathea Bay has 20,000+ coral colonies.
- It is a key site for Nicobar Megapode and Giant Leatherback turtle nesting.
- The Ministry has acknowledged these impacts.

2. Protection was removed despite known ecological importance

- The wildlife sanctuary proposed for this area was denotified in 2021.
- This removed legal protection meant for the same endangered species.

3. CRZ-1A regulations should prohibit the port

- CRZ-1A includes areas with corals, mangroves, turtle nesting etc.
- Such zones prohibit major constructions like ports.
- NGT earlier confirmed the port area is CRZ-1A.

4. Conflicting reports create credibility issues

- NCSCM later claimed the area is *not* CRZ-1A, based on a confidential report.
- The logic is circular: protection removed → survey says no protection exists.
- Reports were withheld under the pretext of "defence needs", though the projects are commercial.

5. Ministry's recent admission contradicts earlier claims

- The Ministry now accepts the area has corals and nesting — meaning it *is* CRZ-1A.
- This reveals internal contradictions, lack of scientific rigour, and possible procedural lapses.
- Raises serious questions about environmental governance and transparency.

[**Invest in people's resilience,clean energy-The Indian Express The Ideas Page**](#)

Environment

Easy Explanation

A new Global Carbon Project report released during COP30 shows that global carbon emissions will reach a record high by the end of 2025. The U.S. saw the biggest jump, while India's and China's emissions increased more slowly than before due to rapid growth in renewable energy, a cooler summer, and an early monsoon that reduced power-sector emissions. India's long-term carbon intensity has also been declining.

But the report warns that global decarbonisation is still too slow. Even though renewables are expanding, rising energy demand means fossil fuel use is not dropping enough. Global emissions may peak around 2030, but that is nowhere near sufficient to keep global warming below the Paris Agreement's **1.5°C** target. At the current pace, the world will soon exhaust its remaining carbon budget. Another report warns the planet is headed toward a **2.6°C** temperature rise.

The takeaway: Negotiators at COP30 must strengthen clean energy plans and also invest heavily in climate adaptation — protecting people from floods, droughts, cyclones, and other climate impacts.

Key Takeaways

1. Global emissions will hit a record high in 2025

- U.S. emissions rose the most.
- India and China saw slower increases due to rapid renewable energy deployment.
- Cooler weather and early monsoon reduced India's electricity emissions.

2. India's long-term carbon intensity is falling

- Emission growth slowed from 6.4% (2004–15) to 3.6% (2015–24).

- Shows structural shift toward cleaner energy.

3. Decarbonisation remains too weak globally

- Renewables are growing but energy demand keeps fossil fuels high.
- Global emissions may flatten only by around 2030.

4. The 1.5°C Paris target is slipping out of reach

- Current emissions could exhaust the world's carbon budget soon.
- New assessments warn of a **2.6°C** warming path.

5. COP30 must focus on clean energy + resilience

- Stronger roadmap needed for renewable expansion.
- Countries must also invest more in adaptation: floods, droughts, cyclones, and climate-related risks.

[On BirsaMunda's birth anniversary, let's celebrate his fight for dignity-The Indian Express The Ideas Page](#)

History

Easy Explanation

The article reflects on Birsa Munda's legacy and the wider contribution of India's tribal communities to the freedom struggle. Tribal uprisings from the 18th to early 20th century — led by Birsa Munda, Alluri Sitarama Raju, Sidhu-Kanhu and others — were not small or isolated revolts; they were strong collective movements against British exploitation, landlords, and moneylenders who disrupted tribal life.
 In 2021, the Government declared Birsa Munda's birth anniversary as *Janjatiya Gaurav Diwas* to honour these struggles. Recent policies like the PM-JANMAN mission and Dharti Aaba Abhiyan focus on empowering tribal communities with infrastructure, services and economic opportunities. Expansion of EMRS schools and tribal museums further aims to preserve heritage and support education.
 The article highlights that tribal movements shaped India's national consciousness, and Birsa Munda's short life left a long-lasting legacy of courage and dignity.

Key Takeaways

1. historical role of tribal leaders

- Tribal uprisings were powerful, organised movements against colonial exploitation.
- Leaders like Birsa Munda, Alluri Sitarama Raju, Sidhu-Kanhu and others defended land, identity and dignity.
- Their struggles strengthened the broader Indian freedom movement.

2. significance of janjatiya gaurav diwas

- Declared in 2021 on Birsa Munda's birth anniversary.
- Aims to honour tribal freedom fighters and spread awareness of their contributions.
- 2024–25 marked the 150th birth anniversary year of Birsa Munda.

3. policy shift towards empowerment

- Recent government initiatives focus on empowerment rather than only welfare.
- PM-JANMAN mission targets 75 PVTG communities with housing, roads, water, electricity, health and education.
- Dharti Aaba Abhiyan aims for 100% saturation of basic services in 63,000 tribal-majority villages.

4. education and heritage preservation efforts

- Expansion of Eklavya Model Residential Schools: 728 planned, 479 functional, benefiting 3.5 lakh tribal students.
- 11 tribal freedom fighter museums sanctioned; four operational using digital, immersive technology.

5. legacy of birsa munda and tribal movements

- Birsa Munda lived only 25 years but inspired generations of resistance and pride.
- Tribal struggles underline that India's freedom fight was rooted deeply in forest and hill regions.
- Their courage continues to inspire movements for justice, environmental balance and human rights.

17th November 2025

Why universities are boycotting global rankings: 'Blackboxes,work as closed systems-The Indian Express Explained Page

Sociology

Easy Explanation

Top global university rankings like **THE (Times Higher Education)**, **QS**, and **Shanghai Rankings** heavily influence how students, employers, and governments view universities. But many top universities in Europe and India are **boycotting** some of these rankings because they believe the processes are **not transparent**, rely on **black-box reputation surveys**, and **favour English-language and STEM research** over humanities and social sciences.

Sorbonne University (Paris) recently withdrew from THE rankings, saying that the methodology is unclear and that the data used is not open. Older IITs in India also stopped participating in THE rankings in 2020 because of similar concerns over lack of transparency and questionable perception-based scores. Some universities also criticise the dependence on **paid databases** like Scopus and on universities' ability to "game" citation counts.

In short, universities feel global rankings reduce their diverse academic work into a single number that is neither fair nor transparent.

Key Takeaways

1. Growing Boycott by Leading Universities

- Sorbonne University has withdrawn from THE rankings over transparency issues.

- Older IITs (Delhi, Bombay, Madras, Kanpur, Kharagpur, Roorkee) also stopped participating in 2020.
- Only five of 23 IITs appeared in THE 2026 due to continued boycott.
- Utrecht University pulled out earlier, citing excessive competition.
- Many institutions argue rankings oversimplify university quality.

2. Problems With Ranking Methodologies

- Rankings rely heavily on **reputation surveys**, seen as subjective and opaque.
- Some indicators favour STEM fields and English-language journals.
- Humanities and social sciences get systematically undervalued.
- Institutions cannot see or verify how their data is interpreted.
- Final scores often hinge on undisclosed weighting systems.

3. The "Black Box" Issue

- Universities say rankings function as **closed systems** with limited clarity.
- Reputation survey respondents' geographical distribution is unknown.
- Key data behind scores is not shared publicly.
- Ranking systems often use proprietary methods, limiting scrutiny.
- Institutions feel they cannot correct or question errors.

4. Citation and Data Concerns

- Some universities inflate citations via coordinated self-citation.
- Heavy dependence on databases like Scopus (by Elsevier) disadvantages non-subscribers.
- A university needs 1,000 Scopus-indexed papers to even qualify.
- Rankings may penalise institutions that publish in local languages.
- Data sources are often subscription-based, limiting fairness.

5. Impact on Indian Institutions

- When IITs exited THE in 2020, no Indian university entered the top 300.
- IISc remains India's top performer but still outside the top 200.
- IIT leaders argue perception-based metrics are unreliable for India.
- Concerns also extend to India's own NIRF ranking system.
- Boycott aims to push for fairer, more transparent global evaluation.

[**Why buying bhaang is legal but growing cannabis at home isn't-The Indian Express Explained Page**](#)

Economy

Easy Explanation

The NDPS Act (1985) does **not ban all parts** of the cannabis plant. It bans **charas** (resin) and **ganja** (flowering/fruiting tops). But it **excludes leaves and seeds**, which is why **bhaang**, made from leaves, is legal in many states.

However, **cultivating the cannabis plant itself** is separately prohibited under Section 8(b), unless done for medical/scientific/industrial purposes with state permission.

So even if the leaves are legal to consume, **growing the plant at home is illegal**. The Kerala High Court recently reaffirmed this: the offence is the **act of cultivation**, regardless of whether the plant has flowers, fruits, or only leaves.

Key Takeaways

1. What the NDPS Act Bans and Permits

- NDPS bans **charas** (resin) and **ganja** (flowering/fruiting tops).
- It **excludes leaves and seeds**, so leaves are not legally "cannabis".

2. Why Bhaang Is Legal

- Bhaang is made from **leaves**, which are outside the NDPS definition of ganja.
- Its sale and consumption are regulated by **state laws**, not the NDPS Act.

3. Why Home Cultivation Is Illegal

- Section 8(b) **prohibits cultivating any cannabis plant**, regardless of part used.
- The definition of "cannabis plant" includes **any plant of the cannabis genus**.

4. Kerala High Court's Ruling

- The court held that flowering tops are irrelevant for determining the offence.
- The crime is **cultivation itself**, not possession of ganja.

5. State-Level Variations

- Some states like UP and Rajasthan license bhaang shops.
- Others like Assam have banned bhaang completely.

[The hurdles in India's fight to eliminate TB-The Indian Express Explained Page](#)

Sociology

Easy Explanation

India has made progress in diagnosing and treating tuberculosis, but it is still **far from eliminating TB by 2025**, a target set in 2018. The Global TB Report 2025 shows that India still has the **highest TB burden in the world**, with over **27 lakh cases and 3 lakh deaths** in 2024.

While treatment coverage has improved significantly (92% in 2024) due to better diagnostics, decentralized care, and shorter treatment regimens like BPaL, the declines in TB incidence and deaths are **far below** global End TB targets. Drug-resistant TB remains a major worry, and factors like undernutrition, diabetes, air pollution, treatment interruption, and the Covid diversion have slowed progress.

Innovations such as handheld AI X-rays, large-scale active screenings, nutrition support, and differentiated care models (e.g., Tamil Nadu's TN-KET) are helping, but systemic gaps—drug shortages, delayed preventive therapy, poor paediatric formulations, and inequity in benefits—remain major hurdles.

Key Takeaways

1. India's TB Burden & Progress

- India reported **27.1 lakh cases** and **3 lakh deaths** in 2024 — the highest globally.
- TB incidence and deaths have reduced by only **21%** and **28%** since 2015, far below End TB targets for 2025.
- India's decline is still better than the **global average** (12% fall in incidence).

2. Missed Elimination Targets

- India is far from the 2025 goal of TB elimination (<1 case per million).
- Even End TB's 2025 milestones (50% fall in incidence, 75% fall in deaths) remain unmet.
- Experts say targets may have been overly ambitious and need reassessment.

3. Diagnosis & Treatment Improvements

- Treatment coverage rose to **92% in 2024**, up from 53% in 2015.
- Newer tools: rapid diagnostics, decentralised services, large community screenings, and handheld AI X-rays.
- Shorter regimens like **BPaL** cut MDR-TB treatment from 18–24 months to 6 months.

4. Persisting Gaps in Care

- Paediatric drugs and preventive therapy are still **not readily available** everywhere.
- Reports of drug shortages in some states in 2024.
- High-risk groups need better differentiated care, comorbidity management, and early support.

5. Drug-Resistant TB: A Major Threat

- India accounts for nearly **one-third of global drug-resistant TB cases**.
- MDR rates: 12.63% among previously treated, 3.64% among new cases.
- Treatment success is 90%, slightly above the global average, but resistant cases show slower progress.

6. Factors Slowing Progress

- Covid-19 diverted resources and worsened treatment interruptions.
- Undernutrition, diabetes (linked to 3.2 lakh TB cases), and air pollution increase vulnerability.
- Treatment dropout fuels drug resistance and ongoing transmission.

7. Program Innovations & Support

- 100-day active screening: **19 crore people screened**, leading to 24.5 lakh detections.
- Nikshay Poshan Yojana: nutrition support raised from Rs 500 to **Rs 1,000/month**, but delays persist.
- Tamil Nadu's TN-KET model shows success via triaging, intensive support for severely ill patients.

[Delhi's air, a 'wicked problem' in need of bold solutions-The Hindu Editorial](#)

Environment

Easy Explanation

Delhi's air pollution becomes very severe every winter. The city's geography traps polluted air, and winter weather (temperature inversion and low winds) prevents it from moving out. On top of this, human activities add huge amounts of pollutants — vehicles, construction dust, industry emissions, stubble burning from neighbouring States, crackers during Deepavali, and waste burning.

This creates a **"wicked problem"** — a problem with many causes, many stakeholders, and no single quick solution. The health impacts are extremely serious: reduced life expectancy, more asthma and heart diseases, even mental health effects. Emergency measures help only temporarily.

Other cities like London, Los Angeles, and Beijing fixed similar pollution problems through strong, coordinated policies, cleaner fuels, strict emission controls, and modern public transport. Delhi needs a similar **long-term, science-based and unified NCR-level plan**, involving Delhi, Haryana, Uttar Pradesh, and Rajasthan together. Citizens also need to change behaviour, because pollution is not just a government issue — it is everyone's responsibility.

Key Takeaways

1. Why Delhi's Pollution Gets So Bad

- Geography and winter weather trap pollutants close to the ground.
- Human activities — vehicles, construction dust, industry, stubble burning — add heavy pollution.

2. Serious Health and Economic Impacts

- Long-term exposure cuts life expectancy and increases respiratory, heart and mental health problems.
- Pollution causes big economic losses through medical costs, lost productivity, and reduced tourism.

3. A Complex "Wicked Problem"

- Many sources across multiple States make it hard to fix with single policies.
- Fragmented governance and blame-shifting weaken long-term action.

4. What Global Cities Did Successfully

- London, LA, and Beijing reduced pollution through strict emission rules, clean transport, and coordinated regional plans.
- Transparent real-time monitoring and long-term planning were key.

5. What Delhi Needs to Do

- A Unified NCR Airshed Plan with joint regulations and enforcement across States.
- Cleaner public transport, EV incentives, dust control, waste burning bans, and real alternatives for farmers.

6. Behavioural Change Is Essential

- Citizens, builders, farmers, and industries must share responsibility, not just governments.
- Treating pollution as a seasonal issue prevents real progress.

[What are Digital Personal Data Protection Rules?-The Hindu text and Context](#)

Science and technology

Easy Explanation

The Digital Personal Data Protection (DPDP) Act, 2023 is India's main data protection law. It tells companies (called **data fiduciaries**) how they must collect, store and use people's personal data. People whose data is being collected are called **data principals**. Companies must take clear consent, protect data with security measures, allow users to modify or erase their data, and delete it after long inactivity.

The new **DPDP Rules, 2025** have now been notified, and this has officially triggered the formation of the **Data Protection Board of India (DPBI)**, which will enforce the Act. Some parts of the Act (like DPO requirements) will take more time to come into force. The Act also includes special rules for protecting children's data and limits targeted advertising to them.

A major controversy is the **amendment to the Right to Information (RTI) Act, 2005**. The earlier RTI law allowed "personal information" to be disclosed if it served a larger public interest. The DPDP Act removes this exception, making it easier for the government to refuse RTI requests. Groups like **MKSS** say this weakens transparency and affects social audits.

Key Takeaways

1. What the DPDP Act & Rules Do

- Define **data fiduciaries** (companies handling data) and **data principals** (users), require informed consent, data deletion, security measures and DPOs for large firms.
- Protect children by restricting targeted ads and some data collection; Rules allow parental tracking as an exception.

2. Implementation Status & DPBI Formation

- Most compliance requirements take effect after up to **18 months**, but the **Data Protection Board of India (DPBI)** has already been formed with four members.
- DPBI will enforce the law, handle violations, and oversee breach reporting.

3. RTI Act Amendment

- Section 8(1)(j) of RTI no longer has the "larger public interest" safeguard for personal information.
- Government bodies can now deny more RTI requests by broadly labeling data as "personal".

4. Why Activists Oppose It

- Groups like **MKSS** and **NCPRI** say this change weakens transparency and social audits (e.g., ration lists, muster rolls, work logs).
- They argue it could shield misconduct by public officials and reduce citizen oversight.

[How is the global precision medicine market shaping up?-The Hindu Text and Context](#)

Science

Easy Explanation

Precision biotherapeutics means designing medical treatments tailored to a person's unique genetic or molecular profile. Instead of treating symptoms, these therapies target the root cause of diseases using tools like gene editing (CRISPR), mRNA therapies, monoclonal antibodies, and AI-driven drug discovery.

For India, precision medicine is important because non-communicable diseases (NCDs) such as diabetes, cancer and heart disease cause most deaths. India's population has huge genetic diversity, so drugs tested abroad may not always work well here. With India's growing genomic programmes (IndiGen, GenomeIndia) and strong biotech research institutes, customised and predictive healthcare becomes possible.

The global precision medicine market is expanding rapidly and could cross $22 billion by 2027, giving India major economic opportunities. However, India still lacks clear regulations for gene and cell therapies, has limited manufacturing capacity, and high costs restrict access. Ethical issues like genomic data privacy also remain major concerns.

Key Takeaways

1. What Precision Biotherapeutics Are

- Therapies tailored to a patient's genetic or molecular profile using genomics, gene editing (CRISPR), mRNA, monoclonal antibodies, and AI drug discovery.
- Aim to correct the underlying cause of disease rather than manage symptoms.

2. Why India Needs Precision Medicine

- NCDs cause nearly **65% of deaths**; foreign-tested drugs may not suit India's diverse genetic background.
- Indian genomic initiatives (IndiGen, GenomeIndia) can enable personalised, preventive and predictive care.

3. Current Landscape in India

- DBT identifies precision biotherapeutics as a priority area; top institutes mapping genetic diversity.
- Companies like Biocon, Dr. Reddy's, Immuneel, Bugworks, Akrivia, 4baseCare and ImmunoACT are developing precision therapies.

4. Challenges

- No clear regulation for gene/cell therapies; "therapeutic use" not well-defined.
- High costs, weak biologics manufacturing capacity, and limited accessibility.

5. Opportunities & Global Market

- Global precision medicine market expected to surpass **$22 billion by 2027**; India can become a hub due to talent and cost advantages.
- Ethical issues remain: genomic data protection, privacy, and misuse risks.

[Astronomers spot coronal mass ejection on another star for first time-The Hindu Science](#)

Science

Easy Explanation

Astronomers have, for the first time, seen a **coronal mass ejection (CME)** — a huge burst of plasma — on a star other than our Sun. They found it accidentally while checking old data from the LOFAR radio telescope network. The explosion came from a **red dwarf star** 133 light-years away and lasted only a minute, but it was extraordinarily powerful — **10,000 times stronger than the biggest solar storms** on the Sun.

This matters because red dwarfs are the most common stars that host Earth-sized planets. But if these stars produce such violent storms, they can **destroy the atmospheres** of planets orbiting close to them, making those planets less likely to support life. The discovery also marks the beginning of studying **space weather** in other star systems, helping scientists understand how stellar activity affects exoplanet habitability.

Key Takeaways

1. First CME on another star

- LOFAR data revealed a one-minute coronal mass ejection from red dwarf StKM 1-1262.
- This is the **first confirmed CME** detected outside our solar system.

2. Extremely powerful eruption

- The event was **10,000 times stronger** than solar storms on the Sun.
- Shows red dwarfs have far more violent magnetic activity.

3. Impact on exoplanet habitability

- Such massive storms can **strip atmospheres** of nearby planets.
- Makes many red dwarf–orbiting planets potentially **inhospitable**.

4. New method in space weather study

- LOFAR's background data enabled detection of hidden stellar events.
- Opens a new way to study "space weather" around distant stars.

5. Scientific importance

- Helps understand how stars affect surrounding planets.
- Key for assessing whether exoplanets near red dwarfs can support life.

18th November 2025

[How China dealt with air pollution,lessons for India-The Indian Express Explained Page](#)

Environment

Easy Explanation

China once faced extremely high air pollution levels, very similar to what India experiences today. Rapid industrialisation, coal-based heating, construction dust, vehicle emissions, and crop burning created severe smog. Around 2013, China began a strong, long-term national campaign to reduce pollution. It shut or upgraded highly polluting factories, promoted electric vehicles, cleaned up residential heating, and strictly monitored officials based on air-quality targets.
 As a result, most regions in China saw major improvements in PM2.5 levels. However, issues like dependence on coal, falsified data by local leaders, and weaker standards compared to Western countries still persist. India can learn from China's continuous, well-funded, accountable approach but must adapt strategies to its democratic and federal context.

Key Takeaways

1. China's Pollution Problem Was Similar to India's

- Late-2000s China had PM2.5 levels close to today's India.

- Causes included coal burning, vehicles, industrial growth, and crop burning.

- Public pressure and the 2008 Olympics pushed China to act.

2. China's Air-Cleanup Strategy

- Air pollution became a national priority with long-term plans.
- Officials' promotions linked to achievement of pollution targets.
- Polluting industries and old coal boilers were closed or upgraded.
- Massive push for electric vehicles and cleaner heating systems.

3. What Actually Improved the Air

- Strong, continuous monitoring and quick enforcement.
- Big investments in pollution-control technology.
- Full electrification of bus fleets in cities like Shenzhen.
- PM2.5 levels improved across almost 80% of China since 2013.

4. Gaps and Limitations in China's Model

- Some local authorities falsified data or secretly reopened factories.
- Post-2021 coal expansion threatens air-quality gains.
- China's basic air standards remain weaker than Western norms.
- Highly centralised structure not directly replicable in India.

5. Lessons for India

- Move from short-term GRAP-style responses to sustained national action.
- Build strong accountability between national targets and local enforcement.
- Improve access to clean household fuels to reduce biomass burning.
- Strengthen industrial and vehicular emission norms; expand EVs and public transport.
- Adapt China's best practices but design solutions suited to India's governance and resource realities.

[Trump tariffs:'major questions'conundrum before US top court-The Indian Express Explained Page](#)

Polity

Easy Explanation

The US Supreme Court is examining whether Donald Trump had the legal power to impose his large, global tariffs using a law meant for national emergencies (the IEEPA of 1977). Trump declared emergencies related to drug trafficking and trade deficits, then used this law to impose tariffs on many countries, including India. Opponents argue the law never mentions tariffs or taxes, which are powers given only to Congress. Lower courts have already ruled Trump's actions illegal.
The Supreme Court must now decide this issue using the **major questions doctrine**, which says that if a policy has huge economic/political impact, the President or agencies must show clear permission from Congress. This doctrine was previously used to strike down major Biden policies.
During hearings, even conservative judges seemed doubtful of Trump's justification. The court's final decision will shape presidential powers over trade and determine whether the doctrine is applied consistently or selectively.

Key Takeaways

1. The Case Challenges Trump's Authority on Tariffs

- Trump used the IEEPA emergency law to impose global tariffs, including on Indian goods.
- Challengers say the law does not authorise tariffs, taxes, or duties.

- Trade policy is constitutionally a power of Congress, not the President.

2. Lower Courts Already Ruled Trump's Tariffs Illegal

- Three lower courts held that Trump misused the emergency law.
- The administration appealed to the Supreme Court to defend the tariffs.

3. Major Questions Doctrine Is Central to the Case

- Doctrine says major policies need clear approval from Congress.
- Supreme Court used it earlier to block big Biden policies.
- Critics say the same standard must now apply to Trump.

4. Supreme Court Judges Showed Scepticism

- Government argued "regulating importation" includes tariffs.
- Judges questioned this, noting tariffs are essentially taxes controlled by Congress.
- Justice Gorsuch warned this would expand presidential power too much.

5. Big Implications for US Governance

- If tariffs are struck down: major setback for Trump, possible constitutional clash.
- If upheld: court may face criticism for selectively applying the doctrine.
- Decision will decide how much power US presidents have over trade in future.

[Despite their high population,why Rhesus monkeys need legal protection-The Indian Express Explained Page](#)

Environment

Easy Explanation

Rhesus macaques look very common because they live close to humans, especially in towns, temples, markets, and farms. This visibility creates the false impression that their numbers are huge. After they were removed from Schedule II of the Wildlife Protection Act in 2022, they lost legal protection. This made it hard for the forest department to manage conflict, prevent cruelty, or stop illegal capture and trafficking.
 Experts argued that without protection, scientific management becomes impossible, and monkeys may be trapped, relocated unsafely, or harmed. Reinstating protection ensures proper monitoring, conflict management, disease control, and expert-led intervention.
 Although some areas see high numbers, macaque populations can decline sharply without notice—as seen with the Bonnet macaque, which dropped by 82% in 35 years. Rhesus macaques also play a vital ecological role by dispersing seeds and helping forest regeneration. Legal protection ensures they are managed scientifically while reducing human–monkey conflict.

Key Takeaways

1. Why Protection Was Restored

- After removal from Schedule II in 2022, forest departments lost authority to act.
- Increased risks of illegal capture, trafficking, cruelty, and unscientific relocation.
- Experts warned that lack of protection blocks scientific population management.

2. Visibility Creates a False Sense of Abundance

- Rhesus monkeys live near humans, making them appear very numerous.
- Real numbers may be lower; visibility ≠ population health.
- Similar mistake happened with Bonnet macaques, which declined 82% unnoticed.

3. Importance of Scientific Management

- Without Schedule II protection, municipal bodies (without expertise) handled conflict.
- Experts recommend zonation: conservation zones, co-existence zones, and management zones.
- Relocation without expertise spreads diseases or leads to high mortality.

4. How Conflicts Can Be Reduced

- Humane sterilisation programmes (like in Himachal Pradesh).
- Population surveys, baseline data, and monitoring of conflict frequency.
- Discouraging feeding of monkeys in urban areas; it increases dependency and aggression.

5. Ecological Importance of Rhesus Macaques

- They play a major role in seed dispersal and forest regeneration.
- Areas with macaques show higher natural regeneration of many tree species.
- Their ecological contribution is not widely recognised by the public.

Sentinel-6B:new satellite to observe ocean-The Indian Express Explained Page

Science and technology

Easy Explanation

Sentinel-6B is a new satellite launched from California to study the oceans. It moves very fast around the Earth (one round in 112 minutes) and uses six scientific instruments to measure sea-level rise and ocean temperature.
 This information is extremely important for weather forecasting, storm and flood warnings, and protecting coastal infrastructure like pipelines, cables, and ports.

Sentinel-6B is a joint mission of NASA, NOAA, and the European Space Agency. It continues a long series of sea-level monitoring satellites that began in the 1990s.
 It will work together with its twin satellite, Sentinel-6 Michael Freilich (launched in 2020), to give highly accurate sea-level data — accurate up to about an inch — for more than 90% of the world's oceans.

Key Takeaways

1. What Sentinel-6B Is

- An ocean-tracking satellite launched from Vandenberg Space Force Base, California
- Equipped with six instruments to study sea-level changes
- Orbits Earth in 112 minutes at 7.2 km/s

2. Why It Matters

- Measures sea-level rise and ocean temperature
- Helps predict storms, floods, and weather patterns
- Supports coastal protection, shipping, and undersea cable safety

3. Mission Partnership

- Joint effort of NASA, NOAA, and the European Space Agency
- Part of a satellite series monitoring sea levels since the 1990s

4. Twin Satellite System

- Works together with Sentinel-6 Michael Freilich (operational since 2020)
- Both provide continuous, long-term ocean data

5. Level of Accuracy

- Can measure sea level with precision down to about one inch
- Covers over 90% of the world's oceans

[SC ruling in telecom dues case softens a crippling blow-The Indian Express The Ideas Page](#)

Governance

Easy Explanation

The Supreme Court has now allowed the government to *recalculate* telecom AGR dues — a relief mainly for Vodafone. Earlier, in 2019, the Court had taken a very strict view of "Adjusted Gross Revenue (AGR)" and said telecom operators must pay licence fees on the **full published tariff**, even when customers actually paid less due to discounts.
 This meant companies were forced to pay on revenue they never earned.

Originally, the telecom regulator (TDSAT) had said AGR should be based only on *actual revenue received* after discounts — just like normal accounting rules everywhere. But the 2019 ruling reversed this, creating a massive financial burden.

The worst part was not the principal amount but the **huge interest, penalty, and interest-on-penalty**, which made the dues explode. Out of ₹93,000 crore demanded, only ₹23,000 crore was actual revenue — the rest (₹70,000 crore) was interest and penalties.

Now, with the Supreme Court allowing reconsideration, the dues and penalties can be corrected. This gives the stressed telecom sector a chance to recover from the financial damage caused by the 2019 verdict.

Key Takeaways

1. What Was the AGR Issue

- Telecom licence fee shifted from fixed fee (1994) to revenue sharing (1999).
- AGR = part of revenue on which licence fee is paid.
- Dispute: Should it be *actual revenue* or *published tariff*, even if discounts were given?

2. Conflicting Decisions

- TDSAT (2015): AGR should be based only on actual revenue after discounts.
- SC (2019): AGR must include all possible revenue sources, including notional tariff.

3. Impact of the 2019 Judgment

- Telecom companies had to pay 8% on revenue they never earned.
- Huge dues: ₹93,000 crore total, but only ₹23,000 crore was principal.
- ₹70,000 crore (75%) was interest, penalty, and interest on penalty.

4. Why the New SC Step Matters

- Reconsideration of AGR dues now allowed.
- Possibility of waiving interest and penalty.
- Corrects the harsh effects of the 2019 ruling.

5. Broader Significance

- SC revisits economic impact of its judgments.
- Relief for financially stressed telecom operators.
- Chance to undo the "crippling blow" to the telecom sector.

[From Jharkhand,an inclusive model for India-The Indian Express The Ideas Page](#)

Sociology

Easy Explanation

This article reflects on 25 years of Jharkhand's statehood and the 150th birth anniversary of Birsa Munda. It argues that Jharkhand was formed to protect the rights of Adivasi communities over *jal, jungle, jameen* — water, forests, and land.
The state's first 25 years show progress but also remind us of past injustices where locals bore the cost of mining while benefits went elsewhere.

In recent years, Jharkhand has tried to shift from an extraction-based economy to an empowerment-based model. This includes better education, stronger skills training, women-led rural development, community institutions, and forest-based livelihoods.
Women's collectives, especially Palash and SHGs, are transforming rural incomes and resilience.

The article says development must respect ecology, protect people's rights, and create skilled jobs. Sectors like sports, arts, tourism, and cleaner manufacturing are helping rebuild cultural confidence and sustainable growth.
Jharkhand aims to offer India a new development model rooted in identity, inclusion, and ecological balance.

Key Takeaways

1. Why Jharkhand Was Formed

- Created to protect Adivasi rights over land, water, and forests.
- Celebrates Birsa Munda's legacy and Adivasi stewardship of nature.
- Acknowledges that extraction benefits often flowed out, while costs stayed local.

2. Shift From Extraction to Empowerment

- Minerals shaped the past but human capability should shape the future.
- Focus now on education, skills, ITIs, universities, and reducing labour out-migration.
- Aim: build capacity within the state, not send workers away.

3. Women-led Rural Transformation

- SHGs and Palash have strengthened food processing, NTFP value chains, agro-based enterprises.
- Women seen as producers and innovators, not just beneficiaries.
- Improved incomes and climate resilience in villages.

4. Ecological and Inclusive Development Vision

- Treat ecology as an economic asset; ensure growth without harming people or nature.
- Seek investments that create skilled jobs and uphold land/livelihood rights.
- Better governance, infrastructure, and community participation at the centre.

5. Cultural, Tourism and Industrial Renewal

- Sports, arts, and heritage boosting confidence and recognition.
- Landscapes becoming hubs for responsible tourism.
- Manufacturing shifting to cleaner, safer, community-aligned models.

The lower judiciary — litigation, pendency, stagnation-The Hindu Editorial

Polity

Easy Explanation

India's lower courts are overwhelmed: nearly 4.7 crore cases are pending. A Constitution Bench of the Supreme Court says that the subordinate judiciary suffers from stagnation, poor training, outdated procedures, and excessive clerical work — all of which slow down justice delivery.
Many newly appointed judges join with little or no practical experience, struggle with basic procedures, and take years to pass orders.

A major problem is procedural overload. In most district courts, judges spend mornings calling cases, issuing summons, receiving vakalathnamas — clerical work that leaves little time for actual hearings. The article suggests appointing a separate judicial officer in each district to handle all such ministerial tasks, freeing judges to focus only on trials and judgments.

Several laws and procedures have also unintentionally increased delays — like mandatory pre-suit mediation under the Commercial Courts Act, the six-month cooling-off period in mutual consent divorce, ambiguities in

the new Rent Act, and cumbersome CPC rules such as preliminary and final decrees in partition suits or 106 rules under Order XXI for execution.

The author argues for simplifying procedures, reforming outdated laws, improving judicial recruitment, and training subordinate judges properly. Pendency will not reduce unless courts recruit competent judges, modernise civil procedure, and make case disposal efficient and time-bound.

Key Takeaways

1. Structural Problems in Lower Judiciary

- Over 4.69 crore cases pending in district courts.
- Judges spend mornings on clerical tasks instead of hearings.
- Many new judges lack experience and basic legal skills.
- Training with High Courts is needed to improve work culture.

2. Procedural Burdens That Cause Delay

- Mandatory pre-suit mediation in commercial cases rarely helps.
- Six-month cooling-off period in mutual consent divorce makes couples wait unnecessarily.
- New Rent Act creates confusion on jurisdiction due to written lease requirement.
- Outdated CPC provisions allow litigants to delay proceedings easily.

3. Examples of Archaic or Misused Provisions

- Partition suits require preliminary and final decrees — causing multiple stages of delay.
- Execution of decrees slowed by 106 rules under Order XXI.
- Time limit for written statements (90 days) rarely leads to faster case disposal.

4. Proposed Administrative Reforms

- Create a separate court/officer in every district to handle: summons, vakalath, ex parte evidence, written statements, and case listing.
- Free subordinate judges to exclusively conduct trials, arguments and pass orders.
- Publish next-day case lists online each evening.

5. Larger Reform Needs

- Simplify civil procedure and remove archaic laws that no longer work.
- Recruit competent, experienced lawyers as judges.
- Ensure quick termination of proceedings rather than simply fast trials.
- Reduce pendency through systemic reform, not superficial timelines.

India needs to 'connect, build and revive' with Africa-The Hindu Editorial

International relations

Easy Explanation
India and Africa have deepened their partnership over the last decade. After the big 2015 India-Africa

Summit, India expanded its diplomatic missions, increased trade and investment, supported Africa's global representation (like AU's G20 membership), and built new cooperation in education, security and technology.

Africa's population and markets are growing rapidly, and India—soon to be the world's third-largest economy—sees a major opportunity for a shared growth corridor. India is investing in infrastructure, digital tools, maritime security, and education (like IIT Madras' Zanzibar campus).

But challenges remain: India still lags China in trade, Indian companies face bureaucratic obstacles, and India needs stronger delivery mechanisms. The future direction calls for connecting finance to real outcomes, building a joint digital corridor, and reviving the India-Africa Forum Summit process.

At the core, people-to-people links—students, professionals, cultural exchanges—remain the strongest bridge, creating long-term trust. The next chapter requires India and Africa to co-create and build together.

Key Takeaways

1. Current Status of India–Africa Relations

- India hosted the last IAFS in 2015 with all 54 African countries.
- Added 17 new embassies in Africa; trade crossed $100 billion.
- India backed Africa's full membership in the G20.
- Investments worth $75 billion make India a top five investor.

2. Emerging Opportunities & Shifts

- By 2050, one-fourth of the world's population will be in Africa.
- India and Africa can form a major growth corridor in tech, trade and demography.
- India's investment model is shifting to co-building infrastructure, vaccines and digital tools.
- Joint maritime exercises (AIKEYME 2025) signal deeper security cooperation.

3. Key Sectors Strengthening the Partnership

- Lines of credit and development finance (e.g., $40 million to EBID).
- Education is a long-term anchor — IIT Madras Zanzibar campus, ITEC, ICCR.
- Digital cooperation potential through UPI and India Stack.
- Peacekeeping and support for Africa in global forums continue.

4. Challenges India Must Overcome

- India lags behind China in trade volume and market presence.
- Bureaucratic hurdles and small balance sheets slow Indian firms.
- Need to move up the value chain: green hydrogen, e-mobility, digital infrastructure.
- Africa's own ecosystem is growing fast—competition is global.

5. The Road Ahead: Connect, Build, Revive

- **Connect:** Link finance to real, visible outcomes; use public finance to de-risk private investment.
- **Build:** Create an India-Africa digital corridor co-developed for health, education, payments.
- **Revive:** Restart the India-Africa Forum Summit (last held in 2015) to institutionalise momentum.

- Strengthen people-to-people ties as a foundation for future partnership.

The trajectory of anti-rape laws in India-The Hindu text and Context

Sociology

Easy Explanation

India's anti-rape laws have evolved over the last four decades, largely because of public outrage against major cases where the justice system failed women. The 1979 Supreme Court judgment in the Mathura rape case — where the Court said the survivor "consented" because she had no injuries — exposed a deeply patriarchal understanding of consent. This led to nationwide protests, forcing Parliament to strengthen rape laws repeatedly.

Starting from the 1983 Criminal Law Amendment (which created a separate offence for custodial rape and shifted the burden of proof), to the Vishaka guidelines on sexual harassment, to the major reforms after the 2012 Delhi gangrape, laws kept evolving to better protect survivors and punish perpetrators. Later cases like Unnao and Kathua pushed Parliament to make punishments harsher, including the death penalty for raping minors.

The latest change came in 2023 under the Bharatiya Nyaya Sanhita (BNS), which made sexual offences gender-neutral, expanded definitions of rape/harassment, and increased penalties.
Overall, the journey shows how public pressure, judicial failures, and painful cases together shaped India's stronger (yet still imperfect) anti-rape legal framework.

Key Takeaways

1. Mathura Case (1972–79): The Turning Point

- Supreme Court called custodial rape "consensual" due to lack of injuries.
- Judgment exposed patriarchal views on consent and ignored power imbalance.
- Triggered nationwide outrage and marked a major institutional failure.
- Letter by four academics highlighted difference between *submission* and *consent*.

2. First Wave of Reforms: Criminal Law Amendment Act, 1983

- Custodial rape became a separate offence.
- Burden of proof shifted from survivor to accused once intercourse was proven.
- Reform strengthened protections for women in police custody.
- Formed basis for future legal reforms.

3. Workplace Safety and Broader Protections (1990s–2000s)

- Bhanwari Devi case (1992) led to the Vishaka Guidelines on workplace harassment.
- Expanded the idea of women's safety beyond rape to institutional responsibility.
- Recognized harassment as a violation of fundamental rights.

4. After the 2012 Delhi Gangrape: Major Overhaul (2013)

- Justice Verma Committee recommendations shaped the 2013 amendments.
- Broadened definition of rape beyond penetrative intercourse.

- Silence or weak resistance no longer counts as consent.
- Increased age of consent from 16 to 18 years; stricter punishments including life term and death penalty.
- Obligations added for police and hospitals to support survivors.

5. Stronger Penalties After Unnao & Kathua (2017–18) and BNS 2023 Changes

- 2018 amendments introduced death penalty for rape of children under 12.
- Minimum 20 years for rape of minors under 16; faster investigation/trial timelines.
- BNS 2023 made sexual offences gender-neutral for both victims and perpetrators.
- Added new offences (e.g., sex under false pretences) and broadened sexual harassment definitions.

What are the new UNESCO recommendations for neurotechnology use?-The Hindu science

Science and technology

Easy Explanation

UNESCO has released the world's first global ethical framework for neurotechnology — tools that read or act on the brain, like brain–computer interfaces. The aim is to support innovation while preventing misuse of brain data.

Neurotechnology can help in medicine (detecting tumours, helping disabled people, treating mental illness), but it can also be misused — for political manipulation, workplace screening, advertising, or discrimination based on brain data. Countries like Chile and California have already taken steps to protect "mental integrity", but global standards were missing.

UNESCO's new guidelines set values and rules for governments, companies, and researchers worldwide. They emphasise protecting mental privacy, freedom of thought, autonomy, and preventing any manipulation using brain data. They also require transparency, accountability, and special care for vulnerable groups like children and the elderly.

The framework pushes for "responsible research and innovation" and encourages open science so knowledge is shared — though this may clash with patents and private control. The aim is to create an ecosystem where innovation continues but within clear ethical boundaries that protect human dignity.

Key Takeaways

1. Why UNESCO Intervened

- Neurotechnology is growing fast, backed by billions in public and private investment.
- Brain data can be misused for political persuasion, advertising, job screening, insurance decisions, etc.
- Existing laws focused on individual rights but lacked global ethical standards.
- UNESCO created the first worldwide framework to guide safe and ethical development.

2. What Counts as Neurotechnology

- Tools that read, access, or act on brain and neural systems (e.g., BCIs, AI-assisted neuroimaging).
- Used in medicine for tumour detection, disability support, mental health, etc.
- Also used in emerging enhancement technologies — raising concerns about manipulation and privacy.

3. Core Principles UNESCO Recommends

- Human dignity and human rights must be central.
- Autonomy, free will, and freedom of thought must be protected.
- Brain data must be safeguarded from misuse.
- Beneficence, proportionality, no harm, and accountability.
- Non-discrimination, inclusivity, transparency, trustworthiness, and epistemic justice.
- Special protections for vulnerable groups (children, elderly).

4. Explicit Prohibitions in the Framework

- No use of neural or non-neural data for manipulation or deception.
- Bans misuse in political campaigning, commercial advertising, or medical decision-making.
- Ensures strict, informed consent for any neurotechnology use.

5. How Innovation Should Proceed

- Promote responsible research and innovation: anticipate risks, involve society, align with ethical values.
- Encourage open science — sharing data, tools, and results openly to benefit all.
- Balance open access with intellectual property rights, which can restrict sharing.
- Push companies to self-regulate: ethics boards, ethics-by-design in R&D.

19th November 2025

[How base effect,bullion price shaped CPI inflation-The Indian Express Explained Page](#)

Economy

Easy Explanation

India's CPI inflation fell to just 0.25% in October 2025 mainly because of temporary statistical effects, not a deep fall in prices.

1. Base effect:
Prices in October 2024 were unusually high, so this year's inflation appears much lower. The base effect alone reduced October inflation by 133 bps. For food, the base effect was even larger at 256 bps, pushing food inflation to −5%.
From November onward, the base turns unfavourable and will push inflation up, peaking in January 2026.

2. Bullion (gold + silver):
Gold and silver prices have surged for 20 months. Although they form only 1.19% of the CPI basket, their very high inflation (58% gold, 62% silver) keeps headline CPI elevated.
Without gold and silver, October CPI would have been −0.63%.

3. GST cuts:
GST rate cuts continue to reduce prices, but companies haven't passed on the full benefit. Some of the initial price reductions are already being partly reversed, especially online.

Overall for RBI:

RBI must judge whether inflation is genuinely low or just temporarily suppressed by the base effect and bullion prices.

Key Takeaways

1. Base effect and its impact

- October inflation dropped mainly due to a favourable base of 133 bps.
- High October 2024 prices made current inflation look lower.
- Food base effect was stronger at 256 bps.
- Without October price changes, inflation could have been 0.1%.
- Base turns unfavourable from November, peaking January 2026.

2. Food index as main driver

- Food is 39% of CPI, so its base strongly shapes headline inflation.
- Food inflation fell to −5.02% mostly due to base effect.
- Food base becomes unfavourable from November.
- RBI sees inflation rising to 4.5% in April–June 2026.
- Food will dominate near-term inflation trends.

3. Bullion inflation distortion

- Gold and silver together weigh only 1.19% in CPI.
- Extreme inflation (58% gold, 62% silver) lifts headline CPI.
- Bullion inflation has been in double digits for 20 months.
- Excluding bullion, October CPI would be −0.63%.
- Global bullion rally is artificially inflating CPI.

4. GST cuts and pass-through

- GST cuts from September 22 continue lowering prices.
- Firms haven't fully passed on cuts; more effect expected in November data.
- Online prices already reversed 6.3% of earlier reductions.
- Reversals are larger for low- and mid-priced items.
- Offline markets may follow similar reversals.

5. Implications for RBI policy

- RBI must separate temporary effects from real inflation trends.
- Base reversal will push inflation up in coming months.
- Bullion inflation is external and not a core policy concern.
- GST cut impact is temporary and fading.
- Rate-cut decisions will depend on underlying inflation, not the distorted October print.

Internal security

Easy Explanation

The Nowgam blast happened because seized explosives were being handled inside a police station instead of a safe, isolated place. According to experts, there are strict SOPs (rules) for dealing with explosives recovered during raids.

Once police find anything that looks like an explosive or an IED, it must immediately be checked by a Bomb Detection Team (BDT) or Bomb Disposal Squad (BDS). The material must be kept far away from people — in an isolated, ignition-free spot, ideally a licensed explosive storage facility called an "explosive magazine".

If no such facility is available, it can be kept in an open stadium under guard. Storing explosives in police stations or residential areas is risky unless the place is officially approved.

Some materials react dangerously if left in the open air — for example, sodium can ignite spontaneously, and phosphorus must be stored in water — so quick handling by trained personnel is essential.

The police must also maintain a proper chain of custody: register an FIR, get a magistrate's permission for destruction, and meanwhile store the explosives safely.

For transportation, special "explosive vans" are normally used. These are designed to prevent sparks and help contain a blast if something goes wrong. Such vehicles should be available in sensitive areas like Jammu & Kashmir.

Key Takeaways

1. Initial handling

- Suspected explosives must be examined immediately by BDT/BDS.

- PESO officials can be informed for safe destruction.

- Material must be moved away from people without delay.

2. Safe storage rules

- Store only in isolated, ignition-free locations.

- Prefer licensed explosive magazines with approved safety systems.

- Open stadiums may be used if nothing else is available.

3. Avoid risky locations

- Police stations or residential sites should not store explosives unless specially designated.

- Some materials (e.g., sodium, phosphorus) react dangerously if exposed.

4. Chain of custody

- Officer must shift explosives to a safe spot immediately.

- FIR filed quickly; magistrate approval needed for destruction.

- Must be guarded and monitored until disposal.

5. Transport protocols

- Special explosive vans are designed with safety features to prevent ignition and contain blasts.

- These should be readily available in high-risk regions like J&K.

[Human activities and pollution: What threatens India's seacows-The Indian Express Explained Page](#)

Environment

Easy Explanation

Dugongs — gentle, herbivorous marine mammals also called "sea cows" — live in shallow coastal waters and depend entirely on seagrass. A recent global assessment shows India's dugong populations in the Gulf of Kutch, Gulf of Mannar–Palk Bay, and the Andaman & Nicobar Islands are declining sharply. Their habitats are polluted, disturbed by fishing, and damaged by human activities. Many dugongs die after getting caught in fishing nets, and new research shows toxic metals from industrial and agricultural pollution are accumulating in their organs.

Because they reproduce very slowly (a calf once in several years), even small increases in mortality can push them toward extinction. India has created a national dugong recovery programme and a Dugong Conservation Reserve, but enforcement, bycatch reduction, and habitat protection need to be much stronger.

Key Takeaways

1. What dugongs are

- Dugongs are herbivorous marine mammals that feed only on seagrass, live in shallow warm coastal waters, and play a major role in keeping seagrass meadows healthy and productive.

- Their grazing helps prune seagrass, prevent overgrowth, release nutrients, and support fish populations, making them crucial for both marine biodiversity and carbon storage.

2. Why they matter

- Healthy seagrass meadows maintained by dugongs act as powerful carbon sinks and support commercially important fish, shellfish, and invertebrates, benefiting coastal livelihoods.

- Areas with dugong presence provide economic value through higher fish production, proving their ecological and economic importance to coastal communities.

3. Why India's dugongs are declining

- Human pressures such as fishing-net entanglement, habitat loss, pollution, and coastal development are the leading causes of death and long-term decline.

- Studies show heavy metals like arsenic, mercury, and lead accumulating in their organs, while high turbidity and slow reproductive rates make recovery harder.

4. Region-wise threats

- In the Gulf of Kutch, high turbidity, pollution, and harmful fishing practices pose the biggest risk to dugongs.

- Tamil Nadu and the Andamans face severe bycatch issues and coastal pollution, with fisheries-related mortality especially high in the islands.

5. Conservation steps and gaps

- India has set up a national dugong recovery programme, a Task Force, and the Palk Bay Dugong Conservation Reserve to protect habitats and the species.

- However, experts say enforcement is weak, bycatch control is inadequate, and monitoring must improve significantly to prevent further decline.

[Language of security needs upgrade,beyond OTP-The Indian Express The Ideas Page](#)

Internal security

Easy Explanation

The article argues that the term *OTP* has become too common and casual because it is used for everything — from logging into apps to making high-value financial transactions. Since people receive so many OTPs daily, they stop treating them as sensitive information. This makes it easier for fraudsters to trick users into sharing them.

Fraud cases linked to OTP misuse have increased sharply, causing losses of over ₹22,000 crore. The author suggests introducing a new term — **FTP (Financial Transaction Password)** — to be used **only for money-related actions** like UPI transfers, card payments, or bank debits.

Behavioural research shows that language influences caution. If "FTP" is used only for financial operations, people might treat it more seriously, similar to an ATM PIN. This simple language change could help reduce fraud by making users think twice before sharing such codes.

Key Takeaways

1. Why OTPs are failing as a security tool

- OTPs are now used for so many small daily tasks that people no longer treat them as sensitive, reducing their psychological importance and making fraud easier.

- This overuse has contributed to a large rise in digital fraud cases, with citizens losing thousands of crores because they casually share OTPs.

2. Why a new term 'FTP' could help

- Replacing OTP with "FTP" for money-related transactions would signal higher seriousness, making people more cautious before sharing it.

- A terminology shift needs no major technology changes but can reshape user behaviour, similar to how people treat ATM PINs with strict care.

3. How FTP would be implemented

- Banks and payment systems would use FTP only for transactions involving money transfer—UPI, cards, NEFT/IMPS, or any debit operation.

- Other services would continue using OTP for non-financial tasks, keeping public familiarity intact while elevating the seriousness of financial authentication.

4. Behavioural impact of language

- Studies show that small changes in wording can strongly influence human behaviour, so "FTP" could create a mental alert for users during financial steps.

- By giving financial authentication its own label, the system reinstates a sense of danger and responsibility around sharing such codes.

5. Why this matters for India's digital journey

- India's UPI-driven digital payments boom needs stronger user protection so that fraud does not undermine trust in the system.

- Upgrading the "language of security" is a low-cost but high-impact step to protect people while sustaining digital adoption and safety.

[Between US and Saudi Arabia,Israel is the elephant in the room-The Indian Express The Ideas page](#)

International relations

Easy Explanation

The article explains that Saudi Crown Prince Mohammed bin Salman's visit to the US is a major moment in redefining the US–Saudi partnership. Historically, the relationship was built on an oil-for-security understanding. Now, both countries want a new, broader deal that includes defence, technology, civil nuclear cooperation, and support for MbS's Vision 2030, which aims to modernise Saudi Arabia's economy and society.

A big obstacle, however, is **Israel**. The US wants Saudi Arabia to normalise relations with Israel as part of a new Middle East order and an expanded Abraham Accords. Saudi Arabia says it will do so only if there is at least a minimal and credible pathway toward Palestinian statehood. But Israel's far-right government strongly opposes any such concessions. This makes Israel the "elephant in the room" — the main factor that could derail a historic US–Saudi deal.

Key Takeaways

1. Why the US–Saudi relationship is being reset

- MbS wants American backing for his succession, defence needs (like F-35s), nuclear cooperation, and his Vision 2030 plan to transform Saudi Arabia into a diversified, modern economy.

- The US sees Saudi Arabia as crucial for stability in the Middle East, maintaining American influence, and advancing a new regional architecture that includes Israel.

2. What Saudi Arabia seeks from the US

- Strong security assurances, access to advanced weapons, technology transfer, a civil nuclear deal, and recognition of Saudi Arabia as a major global actor.

- Support for AI-led economic transformation, new industries, giga-projects like NEOM, and broader strategic cooperation beyond oil.

3. Israel as the main stumbling block

- The US wants Saudi Arabia to normalise ties with Israel, but Riyadh insists on at least a "credible pathway" to Palestinian statehood before any deal.

- Israel's far-right coalition rejects concessions to Palestinians, making it difficult for Netanyahu to agree, turning Israel into the biggest barrier to a grand bargain.

4. The new diplomatic context

- A new UN Security Council resolution, backed by the US, outlines an international plan for Gaza's transition and hints at future Palestinian self-determination.

- This strengthens Washington's hand but does not guarantee Israeli flexibility, keeping uncertainty high.

5. Possible outcomes and India's stakes

- A Saudi–Israel normalisation could reshape the Middle East, expand the Abraham Accords, and boost regional stability and economic integration.

- India, which has strong ties with both countries, would benefit from greater regional cooperation, but expectations should stay realistic because Israel remains reluctant to move on Palestinian statehood.

[What can local bodies expect from the 16th FC?-The Hindu Text and Context](#)

Polity

Easy Explanation

The article explains what panchayats and municipalities are expecting from the **16th Finance Commission (FC)**. The FC mainly decides how resources are shared between the Union and the States, but it also has a constitutional duty to **strengthen local bodies**. The problem is that local governments provide essential services like water supply, sanitation, waste management, roads, and public health — but they do **not have enough financial powers**. States give them responsibilities without giving enough tax authority or staff. Because of this mismatch, most local bodies survive only on grants from higher governments.

State Finance Commissions (SFCs) were created to correct this imbalance, but many States do not implement their recommendations. Union Finance Commissions (UFCs) have tried different ways to transfer funds to local bodies, but their approaches were inconsistent, often based on lump-sum grants or changing sets of conditions. The hope is that the **16th FC** finally assesses the real financial needs of all local bodies and gives them a predictable, fair share from the Union tax pool so they can function effectively as grassroots governments.

Key Takeaways

1. What local bodies expect from the 16th FC

- A stable formula-based share from the Union's divisible tax pool (not lump-sum grants), and recommendations that strengthen the financial autonomy of panchayats and municipalities.

- Clear recognition that local bodies need funds aligned with their service delivery responsibilities, which currently far exceed their revenue powers assigned by States.

2. Weaknesses in the current system

- States often give panchayats and municipalities responsibilities (water, sanitation, rural roads, health) without giving matching revenue handles, leading to persistent financial gaps and poor governance.

- State Finance Commissions rarely get implemented; local bodies therefore depend on the Union for funds, but previous UFCs have given inconsistent, ad hoc, and condition-heavy grants.

3. Lessons from past UFCs

- The 13th FC created a fair system by linking local grants to a percentage of Union taxes, making transfers inflation-neutral and growth-linked, but later FCs reversed this and returned to lump-sum grants.

- Successive FCs changed performance conditions each time, creating confusion and discontinuity, with many States failing to meet shifting targets for conditional grants.

4. Why reform is urgent

- Local bodies are frontline providers of key public services but lack money, staff, and predictable funding, leading to inefficiency and stalled development.

- The mismatch between constitutional expectations (73rd–74th Amendments) and actual fiscal powers has grown wider, requiring the 16th FC to directly address resource gaps.

5. What the 16th FC is expected to deliver

- A realistic, data-driven assessment of resource requirements of **2.7 lakh panchayats** and **5,000 municipalities**, and recommendations that support them as true institutions of economic development and social justice.

- A more stable, long-term, inflation-neutral funding mechanism that avoids abrupt policy changes, strengthens accountability, and ensures functional autonomy for local governments.

[Unpacking the global 'happiness' rankings-The Hindu Editorial](#)

Governance

Easy Explanation

The article explains why global "happiness" rankings often give surprising results — such as Finland being ranked happiest for the eighth time in a row, Pakistan scoring above India, and countries with high income or

strong democracies ranking lower than expected.

The World Happiness Report uses people's *perceptions* of life, not objective data. So, countries with low expectations or limited freedom often report higher satisfaction because people adapt to hardship or hesitate to express dissatisfaction. In contrast, in democracies like India, higher aspirations and active media make people more critical, which lowers perceived happiness even when the real quality of life is improving.

The report's framework also carries western biases: it values institutional trust typical of Nordic societies and underestimates community and family trust that shapes wellbeing in countries like India. The authors argue that India's challenge is not lack of economic growth but lack of social connection and trust — and that improving community ties, mental health systems, and citizen–state transparency is key to raising happiness.

Key Takeaways

1. Why India's rank is low and why perceptions mislead

- Happiness rankings are based on subjective self-rating (Cantril Ladder), which reflects expectations, social comparisons, media exposure, and democratic openness — not actual economic performance.

- Countries with limited freedoms or low expectations may report higher satisfaction, while democracies like India show lower scores because citizens demand better services, governance, and quality of life, making them more critical.

2. Limits of the global happiness framework

- The index has "WEIRD" biases: it values the kind of institutional trust, social security, and predictable public services common in Nordic welfare states, while ignoring collective trust systems (family/community) that operate in countries like India.

- Perception-based metrics can underrate large democracies: openness leads to more complaints, uneven governance lowers trust, and informal social networks — a major source of resilience in India — are not captured by the index.

3. What shapes real happiness beyond GDP

- Studies show happiness is driven more by social trust, fairness, community networks, and emotional security than income or growth. India's economic rise coexists with shrinking real-world connections, migration strains, and lower institutional trust.

- Mental health, workplace well-being, and inclusion are becoming policy concerns, with programmes like Tele-MANAS signalling a shift toward recognising emotional resilience as a development goal.

4. Why Pakistan scores higher than India

- Lower expectations, constrained public voice, and stable small-community support systems can artificially raise perceived satisfaction in crisis-hit nations.

- Democracies face "penalties": the more people speak up about problems, the more "unhappy" they seem in surveys, even when living conditions are better.

5. What India must build to improve real (not just ranked) happiness

- Rebuild social capital through stronger community spaces, shared activities, and inter-generational bonds that restore connection in a rapidly digitalising society.

- Improve institutional trust by simplifying public services and ensuring transparent, predictable governance, which directly boosts wellbeing.

20th November 2025

[3 states,25 years:Story so far,road ahead-The Indian Express Explained Page](#)

Sociology

1.UTTARAKHAND-Home in hills:Created for resources,representation, has left parent state behind in many key metrics

Easy Explanation

Uttarakhand became a separate state in 2000 because people in the hill regions felt ignored under Uttar Pradesh. They had very few Assembly seats, poor access to resources, and believed that decisions taken in the plains did not reflect the needs of mountain communities. In 1994, a reservation decision by the UP government created fear that jobs and college seats in the hills would be taken by people from the plains, which united the region and intensified the statehood movement.

In 25 years, Uttarakhand has built a clear identity and performs somewhat better than UP in education, health, and sex ratio. But major problems remain: people continue to migrate out in search of jobs, schools and hospitals in the hills are weak, there is a big shortage of doctors in mountain districts, and frequent disasters slow down development. The hill–plain divide still shapes the state's progress.

Key takeaways

1. Why the demand for a new state grew

- Hill people faced political under-representation in UP
- Felt resources were used without benefit to the region
- Long-standing cultural and geographical distance from plains administration
- Early support from leaders like Nehru and CPI activists
- Uttarakhand Kranti Dal helped turn it into a mass movement

2. 1994 as the turning point

- UP's 27% OBC reservation plan worried hill communities
- Fear of outsiders filling jobs and colleges
- Garhwal and Kumaon united under a common Uttarakhandi identity
- Widespread protests across the region
- Rampur Tiraha firing intensified national attention

3. Formation of the state

- Deve Gowda government first announced "Uttaranchal"
- Vajpayee government passed the UP Reorganisation Bill in 1998
- State officially created in 2000
- Included plains districts like Haridwar and Udham Singh Nagar

4. Where Uttarakhand does better than UP

- Higher schooling levels for both men and women
- Higher sex ratio at birth (especially in urban areas)
- Lower infant mortality
- Better basic human development indicators overall
- Stronger identity and governance focus on hill-specific needs

5. Key challenges even after 25 years

- High migration due to unemployment and weak local opportunities
- Education deprivation rising instead of falling
- Massive shortage of specialist doctors, especially in hill districts
- Hill–plain development gap within the state
- Frequent disasters and extreme weather increasing vulnerability

2.CHHATISGARH-Once a punishment posting for bureaucrats,how state made quiet,firm strides

Easy Explanation

Chhattisgarh became a state in 2000 because people in the region felt distant—both physically and emotionally—from the administration in Bhopal. Despite having rich natural resources like coal, iron ore, forests, and a large tribal population with distinct identities, the area remained the most backward part of undivided Madhya Pradesh. The demand for statehood started early in the 1900s but stayed quiet for decades. It gained real momentum in the 1990s due to competitive politics and growing frustration over neglect.

After statehood, Chhattisgarh made strong progress in budgets, infrastructure, power supply, and food security. It emerged as a major paddy producer and claims to be a zero-power-cut state. But major challenges remain—poverty, weak education quality, unemployment, Maoism in some districts, and environmental damage due to mining and industrialisation.

Key takeaways

1. Why people wanted a separate state

- Felt alienated and ignored by MP's administration

- Rich region remained backward despite natural resources

2. How the demand evolved

- Early 1900s identity movements kept the idea alive

- 1990s political support pushed it toward approval

3. Creation of the state

- 1998 Vajpayee promise led to strong electoral backing

- Statehood granted in 2000 after long-standing demands

4. Progress after statehood

- Big jump in budget, power self-reliance, and paddy production

- Strong food security measures like cheap rice and local procurement

5. Challenges today

- Poverty, weak education quality, and unemployment persist

- Environmental degradation and Maoism still major concerns

3.JHARKHAND-Adivasi homeland fight won,but battles remain

Easy Explanation

Jharkhand was created in 2000 after a long struggle by Adivasi communities who felt their land, culture, and resources were being taken away without their consent. Since colonial times, Adivasi society in the Chhotanagpur region faced intense disruption, leading to periodic rebellions. Over the 20th century, several leaders and organisations—first the Adivasi Mahasabha under Jaipal Singh Munda, and later the Jharkhand Mukti Morcha (JMM) under Shibu Soren—kept the demand alive. The movement widened beyond Adivasis to include peasants, backward castes, and industrial workers, which strengthened its political base.

By the 1990s, with strong student mobilisation, regional unity, and the BJP's growing support, the demand became politically unavoidable. The Vajpayee government finally passed the Jharkhand statehood bill in 2000. But even after 25 years, Jharkhand's core promise—protection of Adivasi identity, rights, and resources—remains partly unfulfilled. Poverty, unemployment, weak schooling, and exploitation of minerals continue, even though the state inherited rich resources.

Key takeaways

1. Why the demand for Jharkhand began

- Adivasi communities faced massive cultural, economic, and land disruptions during colonial rule, creating a long-standing desire for self-rule to protect their way of life.

- The conflict between Adivasi traditions and the practices of "Dikus" (outsiders) shaped a strong identity-based movement demanding control over land and resources.

2. Early history of the movement

- From 1912 onward, Adivasi intelligentsia and organisations like Chhotanagpur Unnati Samaj formally raised the demand for an Adivasi province during British rule.

- Jaipal Singh Munda broadened the movement by turning the Adivasi Mahasabha into the Jharkhand Party, opening it to non-tribals to build wider political support.

3. Rise of mass mobilisation in the 1970s–1990s

- The JMM united tribals, backward castes, workers, and peasants, leading strong grassroots agitations against exploitation by moneylenders, industries, and forest officials.

- Student and coordination groups like AJSU and JCC used rallies, blockades, and strikes in the 1980s–90s, making statehood a powerful political force.

4. Political momentum leading to statehood

- National and regional parties—especially the BJP—saw electoral advantage in supporting the demand, creating a convergence for statehood.

- The Vajpayee-led NDA government introduced and passed the Bihar Reorganisation Bill (1998–2000), resulting in Jharkhand's creation on November 15, 2000.

5. The promise and the reality after 25 years

- Despite inheriting rich mineral wealth and industrial resources, Jharkhand remains among India's poorer states, with weak indicators in income, literacy, and gender ratios.

- Large sections of the population still face poverty, unemployment, and poor schooling, while natural resources are often given to commercial interests rather than benefiting local communities.

[Global south is redefining credible climate action.CoP 30 must acknowledge this-The Indian Express The Ideas Page](#)

Environment

Easy Explanation

This article argues that the Global South — especially countries like Brazil, India, Indonesia, Nepal, and others — is no longer a passive participant in climate negotiations. Instead, it is becoming a leader in credible climate action. The Amazon example shows that when Global South countries have strong institutions, monitoring systems, and political will, they can reduce deforestation and protect crucial carbon sinks without depending entirely on foreign money.

The author says COP30 must recognise that forests, biodiversity, and community-led systems in the tropics are global assets, not burdens. However, climate finance remains deeply inadequate — adaptation needs hundreds of billions, but only a tiny fraction is delivered, often as loans that increase debt. The Global South now wants fair, fast, debt-free finance that supports local priorities and avoids imposing Northern models.

The article emphasises that South Asia's climate agenda is about more than emissions — it's about jobs, equity, and resilience. The Global South already has working solutions like community forestry, peatland restoration, solar parks, mangrove restoration, and disaster preparedness. COP30 should formalise a new global compact based on partnership, trust, and South-led innovation.

Key Takeaways

1. Global South's emerging leadership

- Countries like Brazil and India are showing strong domestic action through monitoring systems, institutional reforms, and community-led governance, proving they can deliver real climate results.
- The Amazon's reduced deforestation demonstrates that empowered Global South countries can safeguard global carbon sinks without relying mainly on foreign technology or capital.

2. Forests and tropical regions as global assets

- Tropical forests hold enormous biodiversity and carbon reserves, making them essential for the world's carbon budget, not optional "burdens" needing compensation.
- Supporting local stewardship instead of extractive development can create a new model of inclusive, sustainable growth rooted in community rights and ecological protection.

3. Fixing climate finance and closing the adaptation gap

- Adaptation needs run into hundreds of billions annually, but current finance is slow, loan-heavy, and disconnected from local needs, worsening debt rather than solving climate risks.
- The Global South demands smarter, grant-based finance to support bio-economies, indigenous rights, community conservation, and green value chains, not Northern templates.

4. Need for South-led systems, data, and institutions

- Climate governance depends on who collects and interprets data, and Global South countries need the capacity to set their own baselines and challenge outdated narratives.
- Regional examples — India's solar parks, Brazil's monitoring, Indonesia's peatland restoration, Nepal's community forestry — show scalable, low-cost models for climate resilience.

5. South Asia's climate priorities and the new global compact

- For South Asia, climate action is tied to employment, equity, and empowerment, with climate solutions viewed as opportunities for green jobs and social transformation.
- COP30 must formalise a new partnership where the North invests in locally led transitions while the South leads with innovation, delivery, and sovereignty at the centre of climate action.

[We need a mental health movement rooted in community-The Indian Express The Ideas Page](#)

Sociology

Easy Explanation

The article argues that India urgently needs a mental-health movement built around community support, not just medical treatment. Scientific research shows that even simple daily practices—like mindfulness, compassion training, or awareness exercises—can improve brain chemistry, reduce anxiety, and even benefit unborn children. India already has a strong cultural foundation for such practices.

The National Mental Health Festival, "Manotsava," held in Bengaluru, tried to change the way people think about mental health—moving it away from stigma and disease and connecting it with wellness, science, and community. With huge treatment gaps and millions needing help, such festivals create safe spaces for discussions on trauma, stress, gender issues, addiction, parenting, and more.

The festival showed that family, friends, and community support are as important as doctors in healing. When communities actively help those struggling with mental health, everyone becomes more resilient. The article concludes that India needs many more such community-based mental-wellness movements.

Key Takeaways

1. Why community-based mental health is essential

- India faces a huge treatment gap, and millions need support that cannot come from doctors alone, making community involvement crucial for early help and long-term healing.

- Scientific evidence shows that simple daily practices like mindfulness and compassion training can significantly improve emotional health, brain function, and resilience.

2. What Manotsava achieved

- The festival offered diverse sessions—from trauma recovery to digital addiction, parenting, ageing, and workplace stress—showing the public's strong need for accessible mental-health spaces.
- Safe environments for survivors, open discussions by people with bipolar disorder and schizophrenia, and strong family/community stories highlighted the value of collective care.

3. The path forward for India

- India must shift from a disease-focused mental-health system to a wellness-oriented, community-rooted model that strengthens relationships and shared responsibility.
- Philanthropy, public institutions, and communities together can replicate Manotsava across the country, building widespread awareness and resilience.

[More than two decades later,there is light at the end of the red corridor-The Indian Express The Ideas Page](#)

Internal security

Easy Explanation

This article explains how, after more than 20 years, India is finally gaining the upper hand against Maoist insurgency in the Red Corridor. The recent killing of top Maoist commander Madvi Hidma in the Marredumilli forest signals a major shift. Today, security forces are better equipped with helicopters, drones, anti-mine vehicles, trained state police, and fortified stations. Development schemes are also being pushed to fill gaps in infrastructure in long-neglected tribal and forest areas.

The article recalls how difficult the situation was in the early 2000s, when Maoist groups like the People's War Group operated freely across a wide stretch from Andhra Pradesh up to Nepal. State governments were inconsistent, sometimes pausing police operations and even trying peace talks, which the Maoists used to regroup. Poorly equipped police, lack of local intelligence, and weak administration made it easy for Maoists to expand.

Over the years, especially since 2014, the Centre strengthened security forces, improved local policing, choked Maoist funding, targeted leadership, and pushed development into remote areas. As a result, Maoist-affected districts have fallen sharply—from 126 in 2013 to only 11 today. Challenges remain, but the trend shows clear progress.

Key Takeaways

1. How the security situation has changed

- Stronger security measures—drones, helicopters, anti-mine vehicles, better-trained state police, and fortified stations—have reversed earlier disadvantages and weakened Maoist influence.
- Targeted actions against Maoist leadership, along with efforts to cut funding and improve administrative presence, have significantly reduced the scale and spread of insurgency.

2. Why earlier decades strengthened Maoists

- Peace talks, pauses in police action, and lack of coordination in the early 2000s allowed Maoist groups to merge, reorganise, and expand across a vast forested region.
- Poor equipment, limited local intelligence, and viewing the crisis only as a state-level law-and-order issue prevented effective early counter-insurgency operations.

3. The turning point and current outlook

- Nationwide efforts since 2014 combining security upgrades, welfare schemes, and infrastructure development have shrunk Maoist-affected districts from 126 to just 11.
- Recent operations such as the killing of Madvi Hidma reflect growing state dominance, though continued policing, development, and local confidence-building are still essential.

[Recognise the critical role of the childcare worker-The Hindu Editorial](#)

Sociology

Easy Explanation

This article explains why childcare workers — especially Anganwadi workers and helpers — are essential for India's social development but remain undervalued, poorly paid, and overworked. Although India has one of the world's largest childcare systems through ICDS, workers still face low wages, limited training, weak working conditions, and very little recognition.

The demand for childcare is rising because more women work outside the home, men migrate due to climate stress, and poor families struggle to meet daily care needs. With only 10% of Anganwadis in urban areas and very few crèches for children below age three, the burden on women increases and affects children's nutrition, health and development.

Events like the India Childcare Champion Awards highlight that childcare workers are skilled professionals who break social barriers, support migrant families, ensure child health, and build strong emotional bonds with children. But sustainable improvement requires higher public investment, better training, decent wages, and Scandinavian-level commitment to universal childcare.

Key Takeaways

1. Why childcare workers matter

- They ensure nutrition, health, early learning and emotional support for millions of children, especially from poor and migrant families who have no alternative care options.

- Their work reduces the unpaid care burden on women, improves child development outcomes, and supports overall social and economic progress.

2. Why they remain undervalued

- Low wages, poor working conditions and limited training stem from the perception that care work is "simple" domestic work rather than a skilled profession.
- Rapid expansion of ICDS without proper support has weakened training systems, leaving workers without career growth, social security or strong institutional recognition.

3. Rising pressures due to climate change and migration

- Climate-related migration forces men to leave rural homes, increasing women's care responsibilities while reducing access to health, nutrition and childcare support.
- Migrant families in cities face high living costs, limited Anganwadi coverage, and poor care infrastructure, worsening child undernutrition and developmental gaps.

4. What recent recognition efforts show

- Awards such as the India Childcare Champion Awards highlight workers as trained professionals who break caste and gender barriers and advocate for child health and safety.
- Their multi-role contributions — nurturing, teaching, monitoring development, and supporting families — show how crucial they are to community well-being.

5. What India needs to improve

- Public spending on childcare must rise from 0.4% of GDP to 1–1.5% to match global best practice and ensure universal high-quality childcare.
- Policies should guarantee decent pay, stronger training, more crèches for children under three, and decentralised community-based systems that empower women and protect children's rights.

[Redefining the narrative of TB eradication worldwide-The Hindu Editorial](#)

Science

Easy Explanation

This article explains how **point-of-care molecular diagnostics** — small, portable PCR machines like **Truenat** — have transformed the global fight against TB. Earlier, TB diagnosis depended on sputum smear tests (often inaccurate) or culture tests (slow, taking weeks). Now, rapid molecular tests can detect TB and drug resistance **within an hour**, even in remote clinics without full laboratories.

Countries such as **Nigeria, Mozambique and Tanzania** have shown major improvements in early detection and treatment after adopting these platforms. India played a central role by developing these technologies, rapidly deploying them through the **National TB Elimination Programme**, and demonstrating that high-quality diagnostics can be affordable and scalable.

The recent **Kochon Prize** awarded to India's Molbio Diagnostics recognises this global impact. But the article reminds us that diagnostics alone are not enough: India still needs better treatment access, nutrition support, community involvement, and stigma reduction. TB is deeply connected to poverty and inequality, so technology must be paired with strong public health and social welfare efforts.

Key Takeaways

1. How point-of-care diagnostics changed TB control

- Portable molecular PCR platforms such as Truenat diagnose TB and drug resistance in under an hour, replacing slow culture tests and poorly sensitive smear microscopy.
- Studies from Africa show that using these tests directly in primary health centres speeds up diagnosis and ensures patients begin treatment within a week of first contact.

2. India's innovations creating global impact

- WHO-endorsed Indian technologies now operate in low-resource settings worldwide, from mobile vans in Africa to refugee camps in Europe, proving their reliability and scalability.
- The Kochon Prize for Molbio Diagnostics recognises India's leadership in producing affordable tools that have enhanced TB detection globally.

3. Nigeria, Africa trials and child-friendly approaches

- After Truenat's adoption, Nigeria nearly doubled identification of rifampicin-resistant TB cases and improved childhood TB detection through stool-based testing.
- Mozambique–Tanzania trials showed that onsite testing plus rapid communication significantly improved treatment initiation and case confirmation.

4. India's decentralised and collaborative TB response

- India's NTEP rapidly installed thousands of point-of-care units, reducing diagnostic delays and strengthening treatment pathways in rural and urban settings.
- A strong public-private-community partnership — innovators, health workers, and government systems — now drives India's TB elimination efforts.

5. The next steps beyond diagnostics

- TB elimination needs equal focus on nutrition, treatment access, stigma reduction and social protection, especially since malnutrition causes nearly 40% of TB cases in India.
- Continued investment in integrated innovations — diagnostics plus digital adherence, contact tracing, vaccines, and welfare support — is key to ending TB as a disease of inequality.

Internal security

Easy Explanation

This article explains how the Red Fort blast investigation shows a dangerous shift in terrorism tactics. Modern terror groups are no longer relying only on physical networks or simple communication. Instead, they are using advanced digital techniques — encrypted apps, private servers, unsent email drafts, VPNs, and minimal digital footprints — to plan attacks while avoiding detection.

The suspects, including three doctors, allegedly used the high-privacy messaging app Threema and "dead-drop emails" to communicate without leaving any traceable records. They also carried out physical reconnaissance and used everyday vehicles to avoid suspicion. These methods match what researchers have long warned: extremist groups now blend encryption, anonymous digital tools, and traditional spy-like techniques.

This makes surveillance and investigation far harder. Phone tapping, metadata tracking, and email intercepts are less effective when terrorists use private servers and apps that do not store data. The article stresses that India needs stronger digital forensic teams, better legal frameworks, tighter regulation of private communication servers, and deeper cooperation with foreign agencies and tech companies.

The broader point: As terrorism becomes more digital, counter-terrorism must evolve equally — not just by improving physical security, but by building expertise to track threats in encrypted and decentralised online spaces.

Key Takeaways

1. How terrorists are using digital tools

- Terror modules are now using encrypted apps like Threema, private servers, VPNs, and unsent email drafts to communicate in ways that leave almost no digital trace, making detection extremely difficult.
- These tools allow terrorists to share maps, instructions, and plans securely while blending into normal digital activity, matching global research on modern extremist tradecraft.

2. Why this makes investigations harder

- Traditional surveillance methods — phone tapping, metadata analysis, and email monitoring — fail against platforms that store no identifiers, retain no metadata, and operate on self-hosted servers.
- Investigators now require specialised cyber-forensics, memory analysis, and server tracking skills to uncover communication chains that are intentionally hidden or deleted.

3. Operational behaviour of the Red Fort module

- The suspects conducted detailed reconnaissance, stockpiled explosives discreetly, and cut off digital trails when associates were arrested, showing high operational discipline.

- Early signs point to possible links with groups like JeM, suggesting the attack may be part of a larger, trained and well-structured network rather than an isolated cell.

4. What governments must do next

- India needs stronger digital forensics units, updated counter-terror laws addressing encrypted communications, and rules for private server compliance under judicial oversight.
- Institutions such as universities must be supported to detect radicalisation early, and international cooperation with tech companies and foreign agencies must grow to track decentralised threats.

5. The bigger lesson for counter-terrorism

- Modern terrorism is shifting from physical spaces to encrypted digital spaces, requiring states to upgrade intelligence, cyber capabilities, and legal tools to keep pace.
- Protecting society now means fighting threats not only on the ground but also within codes, servers, and hidden digital networks used by technologically skilled extremist groups.

[**Attribution science: the tricky task of linking disasters to emitters-The Hindu Science**](#)

Environment

Easy Explanation

This article explains **climate attribution science** — a field that tries to answer a difficult question: *When a disaster happens (like a heat wave, flood, cyclone, or acid rain), how much of it can we blame on human-caused climate change?*

Scientists compare two worlds:

1. **The real world**, where greenhouse gases have already warmed the planet.

2. **A model world**, where humans never emitted these gases.

By comparing these, they estimate whether climate change made an event *more likely*, *more intense*, or *longer-lasting*. For example, heat wave attribution is fairly reliable because models simulate heat patterns well. But linking rainfall extremes or specific floods to climate change is harder due to complex local influences.

Attribution science also helps identify **"point sources"** (like power plants, industries) and **"non-point sources"** (like vehicles, crop burning) that contribute to disasters such as acid rain or air pollution.

However, the science is still evolving. Better satellites, chemical transport models, and higher-resolution climate models are improving accuracy, but limited historical data can weaken conclusions.

The article also highlights the *political and legal implications*:
 If we can scientifically link fossil fuel emissions to specific damages (e.g., heat-related economic losses), then rich countries or major companies could be held responsible in courts.

The broader message: Climate attribution is becoming more robust, and as climate impacts worsen, this science will influence how countries demand compensation, design policies, and prepare for future disasters.

Key Takeaways

1. What attribution science tries to do

- It estimates how much climate change altered the likelihood or intensity of events like heat waves, floods, or acid rain by comparing the real world with a no-climate-change model world.
- Attribution is stronger for heat waves than for rainfall extremes, because temperature patterns are easier to simulate reliably across decades.

2. How real-world examples link to emissions

- Events like Delhi's severe smog, acid rain in Visakhapatnam, and coal-related pollution in Dhanbad are traced to identifiable sources such as vehicles, crop burning, and fossil fuel industries.
- Studies show northern India's rain patterns have intensified since the 1980s because of rising greenhouse gases and aerosols, contributing to disasters like Kedarnath.

3. Why the science is still evolving

- Better satellites, higher-resolution models, and chemical transport tracking are improving attribution accuracy, especially for heat waves and cyclones.
- Limited or uneven data makes some assessments uncertain, requiring comparisons with historical periods when human influence was much smaller.

4. The justice and equity dimension

- Attribution could help determine per-capita emission rights and establish fair climate risk-sharing across countries and generations.
- Since rich nations caused most historical emissions, scientists argue they should compensate poorer countries for climate-related losses.

5. Legal and policy consequences

- Advanced attribution now allows researchers to link emissions from specific fossil fuel companies to trillions in economic damages from extreme heat.
- This opens the door for courts to hold emitters accountable, enabling affected communities to seek compensation for climate-driven disasters.

22nd November 2025

[As Chile sounds alarm,why population of Humboldt Penguin continues to shrink-The Indian Express Explained Page](#)

Environment

Easy Explanation

Humboldt Penguins, mostly found along the Pacific coast of Chile, are shrinking in number. Their population has dropped from about 45,000 in the late 1990s to fewer than 20,000 today. The Chilean government has now officially listed them as *endangered*.

Scientists warn that several threats are harming the species — less food because of commercial fishing, deaths in fishing nets, pollution, bird flu, and climate change destroying their habitat. If these problems continue, the species may soon become *critically endangered*, and after that, extinction becomes a serious possibility.

Experts say Chile needs stricter laws to ensure sustainable fishing and better protection for the penguins.

Key Takeaways

1. Sharp population decline

- Numbers fell from ~45,000 in the 1990s to <20,000 today.
- Chile hosts 80% of the world's Humboldt Penguins.

2. Officially classified as endangered

- Chile's Environment Ministry upgraded the species to "endangered."
- Scientists warn it could soon become "critically endangered."

3. Major threats

- Commercial fishing reduces their food supply.
- Penguins get trapped and die in fishing nets.
- Habitat loss, pollution, and bird flu worsen survival chances.
- Climate change further disrupts marine ecosystems.

4. Urgency stressed by experts

- Continued threats could push the species close to extinction.
- Marine biologists highlight the rapid pace of decline.

5. Call for stronger protections

- Need for stricter sustainable fishing laws (industrial + small-scale).
- Improved conservation efforts essential to prevent further decline.

[How India's agri exports posted impressive growth-The Indian Express Explained Page](#)

Economy

Easy Explanation

India's agricultural exports have grown much faster than overall merchandise exports. In April–September 2025, farm exports rose nearly 9%, while total goods exports grew only 2.9%. This growth has been driven mainly by non-basmati rice (after lifting export restrictions), buffalo meat, marine products, coffee (helped by high global prices), and fruits & vegetables.

India's farm exports have historically fluctuated because global food prices rise and fall. When international

prices are high, India's farm exports rise; when they fall, exports drop. Government export restrictions to control domestic inflation also affect export performance.

This year, global food prices are relatively low, and US tariff hikes by the Trump administration are beginning to hurt India's exports to the US in some items. However, exporters are diversifying to new markets, and some tariffs on food products have recently been rolled back.

On the import side, India buys only a few key farm products—mainly vegetable oil, pulses, fresh fruits, and raw cotton. Imports of vegetable oil remain very high, while pulses have reduced due to better domestic harvests.

Key Takeaways

1. Strong farm export growth

- April–September 2025 farm exports: $25.9 bn (+8.8%).
- Growth far higher than overall merchandise exports (+2.9%).
- 2024–25 farm exports also rose 6.4% against almost flat total exports.

2. Main drivers of export rise

- Non-basmati rice boosted by lifting earlier export curbs.
- Buffalo meat exports may hit a new record.
- Marine product exports surged 17.4%.
- Coffee exports rising due to global price spike from low stocks.
- Fruits & vegetables showing steady growth in both fresh and processed forms.

3. Impact of global prices and past volatility

- India's farm exports have tracked global agri-commodity price cycles.
- High FAO Food Price Index (2021–23) boosted exports; recent fall pushed them down.
- Export bans on wheat, rice, sugar, onions also reduced shipments in recent years.

4. US tariffs creating mixed effects

- Marine product, spices, basmati exports to the US dipped in September.
- Exporters compensated by increasing shipments to China, Vietnam, EU, Canada.
- Some US tariffs on spices, coffee, tea, fruits rolled back recently.
- Possibility of India–US trade deal improving prospects.

5. Import patterns and rising dependence

- Farm imports grew 5.9% in April–Sept 2025.
- Vegetable oil remains India's largest farm import; likely close to record $20.8 bn.
- Pulses imports dropped due to bumper harvest and restored duties.
- Fresh fruit imports rising, especially from the US (dominant share).
- India now a net importer of raw cotton due to stagnant productivity post-Bt cotton.

Polity

Easy Explanation

The article criticises the Supreme Court's advisory opinion on the powers of Governors under Article 200 (assent to state Bills). Earlier, in the *Tamil Nadu* judgment, the Court had set reasonable time-limits so Governors could not block State laws simply by doing nothing.

The new advisory opinion removes these timelines, saying Governors need "elasticity" (flexibility) to exercise their discretion. But this creates a serious problem: **a Governor can delay assent indefinitely**, which becomes an unaccountable veto over democratically elected State governments.

The Court claims Governors cannot withhold assent without giving reasons, and must engage in a "dialogue" with the legislature. But by not fixing any timelines, the Court makes it easy for Governors to delay Bills endlessly. This, the article argues, weakens federalism, strengthens the Union government (which often influences Governors), and forces States to keep going to court.

Ironically, after praising "restraint," the Court then says it can still intervene in cases of extreme delay — but provides no clear standard for when or how. This creates more confusion and more judicial power.

The result: a legal doctrine where constitutional powers become vague, elastic, and open to manipulation—benefiting the Centre.

Key Takeaways

1. Removal of time-limits weakens State legislatures

- Earlier judgment set timelines for Governors to act on Bills.
- New opinion rejects these limits, giving Governors wide freedom.
- This allows indefinite delays, functioning like an unaccountable veto.

2. "Elasticity" of discretion misused

- Court says Governors need flexibility to maintain checks.
- But fails to define the constitutional purpose of this discretion.
- Elasticity cannot justify silence that blocks democratic processes.

3. Court avoids core constitutional problem

- Governors often act politically on behalf of the Centre.
- The real issue is strategic, prolonged inaction.
- Court ignores how this power has been misused in practice.

4. Ambiguous judicial remedy creates confusion

- Court says it can intervene in some cases of delay.
- But gives no criteria for when or how intervention will occur.
- This invites more litigation and increases judicial discretion.

5. Overall effect: centralisation and weakened federal democracy

- Without timelines, Centre-appointed Governors gain more control over State laws.
- States must litigate to get Bills cleared—distorting separation of powers.
- The result is a doctrine of "infinite elasticity" that lets the Centre pull the strings.

[Labour laws poisonous regulatory cholesterol, new codes clean up,usher in regime of trust-The Indian Express The Ideas Page](#)

Economy

Easy Explanation
The article argues that India's old labour laws were extremely complicated, outdated and harmful — especially for poorer states like Bihar that need more private investment and high-productivity employers. These old laws acted like "regulatory cholesterol", blocking job creation, encouraging corruption and keeping most workers stuck in low-pay work or self-employment.

The newly notified labour codes simplify 29 old laws into four clear codes. They reduce thousands of compliances, cut the number of registers and returns, decriminalise many offences, expand social security, and allow smoother hiring conditions. States now have the freedom to adapt these rules to their needs, which is important because backward states must attract industries the way Karnataka and Tamil Nadu did.

The article says this shift represents a move from a suspicious, punitive system to a trust-based regulatory regime that supports formal, high-wage job creation. Younger workers benefit, unions lose some old privileges, and states that use this opportunity well will be the ones that capture millions of new jobs in the coming decade.

Key Takeaways

1. Old labour laws were a major barrier to growth

- India's earlier labour system had too many compliances, licences and punishments.

- It hurt small employers the most and discouraged investment in backward states.

- It kept a large share of workers trapped in low-productivity, low-wage jobs.

2. New labour codes drastically simplify the framework

- 29 laws reduced to four codes; thousands of sections, rules and registers cut down.

- Decriminalisation of 65 offences and significant reduction in discretionary powers.

- Social security extended to gig and unorganised workers and restrictions on women removed.

3. A shift toward a trust-based regulatory regime

- Moves away from excessive inspections, short-term licences and corruption-prone systems.

- Promotes self-registration and better rule clarity, reducing arbitrary enforcement.

- Aims to restore rule of law by removing overlapping guidelines, circulars and directions.

4. States gain flexibility to design job-friendly environments

- New codes allow states to tailor rules to their economic realities.

- Backward states like Bihar can use this to attract formal, high-productivity sectors.

- History shows state-level reforms matter more than central laws for job creation.

5. Younger workforce stands to benefit

- Trade unions protecting older workers lose some influence.

- With 65% of India below 35, simpler laws can unlock the formal sector and better wages.

- States that act quickly could capture over 50 million new jobs in the next decade.

Rethinking a symbol of 'environment responsibility'-The Hindu Editorial

Environment

Easy Explanation
The article argues that India is reducing the mandatory green-cover requirements for industries in the name of "ease of doing business". But this is risky because on-site green belts inside industrial areas cannot replace the ecological functions of natural forests, wetlands or connected landscapes.

Green belts do help locally by reducing dust, heat and noise, but these benefits are small and limited to the immediate surroundings. They do not bring back biodiversity, carbon storage capacity, hydrological balance or ecosystem resilience.

Countries with smaller green-cover norms cannot be used as examples for India because their population density, landscape pressure and ecological conditions are very different. What works there may not work here.

Instead of simply cutting green-cover norms within industries, India needs a balanced strategy: moderate on-site requirements AND compulsory off-site ecological restoration. Industries should be made partners in nature recovery — restoring degraded lands, building green corridors, rehabilitating wetlands and contributing to State-level ecological reserves.

This landscape-level strategy strengthens long-term sustainability and aligns with Nature-Based Solutions. Ultimately, true industrial sustainability depends not on the number of trees inside factory gates, but on the health of the surrounding ecosystem.

Key Takeaways

1. Green belts mitigate but do not restore ecosystems

- They reduce dust, noise and heat locally.
- They cannot replace forests, wetlands or natural habitats.
- Their benefits are limited and cannot offset ecological loss from land conversion.

2. Global comparisons are misleading

- Countries differ in population density, landscape stress and ecological capacity.
- Borrowing green-cover norms from abroad without ecological context is not sound policy.
- India's dense and stressed landscapes require stronger local green buffers.

3. Reducing plantation norms risks long-term sustainability

- Relaxations may simplify compliance but compromise ecological health.
- They prioritise convenience over environmental responsibility.
- Industrial plantations are often narrow, mono-species and degrade over time.

4. A two-tier strategy offers balance

- Keep moderate on-site green belts for local mitigation.
- Mandate off-site ecological restoration at regional/State level.
- Measures include degraded land restoration, green reserves, wetland recovery, habitat connectivity and green-credit integration.

5. Industries must become ecological partners, not just compliance targets

- Sustainable development requires industries to contribute to landscape-level restoration.
- Combining industrial growth with Nature-Based Solutions ensures long-term resilience.
- Real sustainability depends on regenerating natural landscapes around industrial clusters.

The new direction for India should be toward Asia-The Hindu Editorial

International relations

Easy Explanation
The article argues that India is at a turning point in its foreign policy. The U.S. wants India to side firmly with it and move away from China and Russia, but India is now confident enough to shape its own path. China-India border talks are progressing, Russia remains a reliable long-term partner, and India's economic rise demands a more autonomous foreign policy.

The piece says India should not be forced to choose between the U.S. and China. Instead, India should move toward deeper engagement with Asia, where markets, population and economic opportunities are expanding rapidly. Asian regional groupings — BRICS, SCO, ASEAN and possibly RCEP — are becoming interconnected, and India can play a balancing role with its technology, economy and leadership.

To succeed, India must take several hard decisions: redefine "strategic autonomy", protect its own technology and data, focus on local defence creation, and prioritise cyber and AI capabilities. AI sovereignty is essential for India to sustain double-digit growth and emerge as a major global power by 2047.

Key Takeaways

1. India must chart an independent path in a shifting world order

- U.S. pressure to 'pull India' away from China and Russia reduces India's strategic space.
- Improving China ties and strong Russia relations give India more options.
- India rejects binary choices pushed by Western analysts.

2. Asia is becoming the world's economic and political centre

- Asian markets are larger and rising faster than those of the U.S.
- Regional groupings — BRICS, SCO, ASEAN and RCEP — are overlapping and creating new value-chain networks.
- India's technology and economic heft can balance China within Asia.

3. Strategic autonomy needs a new, clearer definition

- India has dual global agendas: high growth potential and strong Global South development priorities.
- Partnerships must link value chains but not dilute India's core interests.
- India must avoid accepting others' frameworks uncritically.

4. New security and technology priorities must shape policy

- Digital interconnectedness, not traditional diplomacy, drives power.
- India must protect national data, invest in local defence, and prioritise cyber warfare over large land-heavy forces.
- Defence spending should shift from manpower and imported platforms to AI, missiles, drones, space and innovation.

5. AI sovereignty is essential for India's rise by 2047

- India's current AI mission may be too small to matter globally.
- Large increases in funding, indigenous foundational models and national collaboration are needed.
- Without strong AI capability, India risks losing economic and strategic influence.

23rd November 2025

[Why did India's trade deficit widen in October?: TH FAQ](#)

Economy

Easy Explanation

In October 2025, India's **trade deficit** — the gap between what it imports and exports — **jumped 141%** to **$21.8 billion**, compared to $9 billion in October 2024. While this looks worrying, a closer look shows that

the situation is not as bad as it appears. The rise was largely due to a **temporary surge in imports**, especially of **gold and silver**, during the festival season.

What Happened

A **trade deficit** happens when **imports are higher than exports**. In October 2025, India's imports increased sharply, while exports dipped slightly. The deficit was mainly due to **merchandise trade (goods)**, not **services trade (IT, consultancy, etc.)**.

Exports

India's **total exports** fell only **0.7%** to **$72.9 billion** in October 2025. This was because **merchandise exports** dropped by **11.8%**, but **services exports** grew **11.9%**. Over April–October 2025, total exports still **grew 4.8%**, supported mainly by strong services exports. India even recorded its **highest-ever export performance** in the first half of the year.

However, the **U.S. tariffs of 50%** on many Indian goods hurt merchandise exports badly. In September 2025, India's exports to the U.S. fell **20.4%**, but they **recovered 15.4%** in October because Indian exporters offered discounts to retain American customers. Still, exports to the U.S. were **8.6% lower than last year**.

Most Affected Sectors

Several **labour-intensive sectors** suffered due to U.S. tariffs:

- **Gems and jewellery:** -29.5%
- **Leather products:** -15.7%
- **Engineering goods:** -16.7%
- **Chemicals:** -21%
- **Textiles (cotton/man-made yarn, jute):** -11–27%

These are key export sectors for India, and many depend heavily on U.S. buyers.

Imports

Imports jumped **15%** to **$94.7 billion**, mainly because **gold imports surged 200% to $14.7 billion** during **Dhanteras and Diwali**, when Indians traditionally buy gold regardless of price. **Silver imports** also rose **530%**, though from a smaller base.

Normally, gold imports were down in the April–September period, but the festival boom in October reversed that trend. The rise was a **temporary seasonal effect**, not a sign of long-term import pressure.

The Bigger Picture

While the October trade deficit looks big, it was **a short-term spike** driven by **festive demand and U.S. tariff disruptions**. Negotiations between India and the U.S. on a **Bilateral Trade Agreement (BTA)** have resumed, and if they lead to a deal, exports may recover.

Looking ahead, **gold imports are expected to fall** after the festive season, though some investors may keep buying gold as a hedge against currency risks. The **Export-Import Bank of India** predicts that **India's merchandise exports will grow 5%** in the **October–December 2025 quarter**, reaching **$114.2 billion**.

Key Takeaways

1. Trade Deficit Surge

- October 2025 trade deficit: **$21.8 billion**, up **141%** year-on-year.
- Caused mainly by **higher imports of gold and silver**.

2. Exports Overview

- Total exports down **0.7%**; merchandise down **11.8%**, services up **11.9%**.
- Over April–October 2025: total exports **up 4.8%**.
- Strong **services exports** helped maintain overall growth.

3. Impact of U.S. Tariffs

- **50% U.S. tariffs** hit Indian merchandise exports.
- September: exports to U.S. fell **20.4%**; October: rebounded **15.4%**, still **8.6% lower** than last year.
- Exporters offered **discounts and diversified customers** to cushion losses.

4. Sectors Hit the Hardest

- **Gems & jewellery**, **leather**, **chemicals**, **engineering goods**, and **textiles** saw the biggest declines.
- All heavily dependent on the U.S. market.

5. Import Surge Explained

- Imports up **15%** to **$94.7 billion**.
- **Gold imports up 200%** to **$14.7 billion** due to Diwali.
- **Silver imports up 530%**, though on a smaller scale.
- Seasonal demand was the key reason.

6. Outlook and Forecast

- **Trade deficit likely to narrow** after festive demand fades.
- **India-U.S. BTA talks** show positive signs; tariff relief could boost exports.
- **Exim Bank projects 5% growth** in merchandise exports (Oct–Dec 2025).

[Are e-KYC norms excluding MGNREGA workers?: TH FAQ](#)

Sociology

Easy Explanation

MGNREGA is a very large rural employment programme that gives guaranteed work to crores of workers in India. It has **26 crore registered workers** across **2.69 lakh gram panchayats**.

Recently, a large number of workers have been **removed (deleted)** from the MGNREGA system.

- In the **last six months**, **15 lakh workers** were deleted
- But **between October 10 and November 14**, **27 lakh workers** were deleted — almost **double**

- This is also much **higher** than new additions — only **10.5 lakh workers** were added

This sudden spike happened when the Central Government started a strict **e-KYC verification drive** to remove people it believes are **ineligible** or **fake** workers.

Why is the Government Doing This?

Government says:

- Verification of workers is a **continuous process**
- e-KYC will **increase transparency**, reduce fraud, and make payments smoother
- Around **56%** of active workers have completed e-KYC so far

How were Workers Verified Earlier?

Government introduced new digital systems over time:

1. **Digital Attendance (NMMS App)** – Since May 2022
   - Supervisor must upload **geotagged photos** of workers **twice a day**
2. **Aadhaar-Based Payment System (ABPS)** – Since January 2023
   - Worker's **Aadhaar number** must match with:
     - Job card
     - Bank account
     - NPCI database

Workers who failed to match details correctly were **not able to get paid**.

How Does e-KYC Work?

- Supervisor takes a **live photo** of the worker
- App verifies it with the worker's **Aadhaar photo**

If the match fails → worker becomes marked as **unverified**.

Why Are So Many Workers Being Deleted?

Whenever a strict digital system is implemented, exclusion problems have happened:

1. **NMMS Attendance Issues**
   - Poor internet in rural areas
   - Workers & supervisors lack technical knowledge
   - Work not recorded → **workers lost wages**
2. **Aadhaar mismatches**
   - Small spelling errors → worker removed
   - During ABPS rollout, **deletions rose 247%** in one year
3. **Fake or incorrect photos uploaded on NMMS**
   - Photos of different workers
   - Photos uploaded later from gallery
   - Mismatch between real and recorded attendance

Government admits NMMS had **many failures**, so e-KYC was introduced to correct it.

Government's Claim

- Deletions follow a **Standard Operating Procedure (SOP)** issued earlier
- Workers get time to **appeal** before deletion
- Names are **published publicly** before final removal

But the government has **not explained** one big question:

Why are States with **high e-KYC completion** also showing **highest deletions**?

Example:

- Andhra Pradesh: 78.4% e-KYC done → 15.92 lakh deletions
- Tamil Nadu: 67.6% e-KYC done → 30,529 deletions
- Chhattisgarh: 66.6% e-KYC done → 1.04 lakh deletions

This suggests **strong digital verification = more deletions**.

Key Takeaways

1. Massive Spike in Deletions

- **27 lakh deletions** in one month (twice the previous 6-month number)
- Much higher than new registrations

2. Cause: e-KYC Verification Drive

- Workers must match Aadhaar photo through NMMS
- Used to identify "fake/ineligible" beneficiaries

3. Past Verification Changes Causing Exclusion

- **NMMS attendance app**: connectivity + technical issues
- **ABPS payments**: Aadhaar mismatch → many removed
- Exclusion increased **247%** during ABPS rollout

4. NMMS App Problems

- Fake photos uploaded
- Wrong worker count recorded
- Workers losing wages

5. Government's Stand

- Says the deletions follow **fair SOP**
- Claims no worker is removed without **public notice and appeal option**

6. Unanswered Concern

- States with better e-KYC completion show **more deletions**, raising doubts about fairness

[The guns fall silent: TH Profiles](#)

Internal Security

Easy Explanation

India has been fighting Maoist (Naxal) insurgency for decades, especially in forest areas of central India. On **18 November 2025**, a very important Maoist commander **Madvi Hidma** was killed in Andhra Pradesh. Government forces say this marks **the final collapse** of the Maoist armed movement.

Why was Hidma important?

- He was chief of the **Central Military Commission (CMC)** of CPI (Maoist)
- Considered the **last major military leader**
- Led **Battalion 1** of the PLGA — the Maoists' strongest fighting unit
- Mastermind of several deadly attacks on security forces and politicians

His death, along with his wife and bodyguards, was followed by:

- Killing of 7 more Maoists
- Arrest of 50 others across Andhra Pradesh

This shows the organisation is now **extremely weak**.

His Background

- Born in 1981 in Sukma, Chhattisgarh
- Joined movement at age 16
- Rose to top despite being a tribal in a mostly non-tribal leadership
- Tech-savvy, good communicator
- Responsible for at least **26 major attacks**, including:
    - **2010** Tadmetla: 76 CRPF killed
    - **2013** Jhiram Ghati: senior Congress leaders killed
    - **2017** Burkapal: 25 CRPF killed
    - **Tekulguda attack**: 21 jawans killed

But his forces were shrinking:

- From **45 Central Committee members in 2010** → now **10–12** remain
- Since 2024: **2,120 surrendered**, **560 killed**

Why Did the Maoist Movement Decline?

Originally, Maoists expanded in tribal areas by:

- Fighting exploitation by forest officials and contractors

- Gaining trust of tribals who felt disrespected and ignored by the state

But their own flaws damaged them:

- Continued **contractor system** to fund themselves
- Less focus on welfare, schools, health, or cooperatives
- Forced control in villages created frustration among tribals
- Leaders wanted to copy China's revolutionary model — **not suitable for India**

What Did the Government Do Right?

A **two-pronged approach**:

1. **Security operations**
   - Special forces, better equipment
   - Maoists declared illegal (UAPA 2009)
   - Creation of **"Bastar Fighters"** — local tribal police
   - **Operation Kagar** (2025): targeted top leaders
2. **Development with security**
   - Setting up camps near Maoist zones
   - Bringing services like ration shops & Anganwadis into remote areas
   - Roads, phones, schools creating contact with the state

Once tribals saw welfare and safety improving, **support for Maoists collapsed**.

Present Situation

- Leadership dead or surrendered
- Forces scattered into small groups
- Some leaders calling for **giving up arms**
- Remaining leadership still claims they will fight — but **capacity is gone**

The current top leader:

- **Thippiri Tirupathi (Devuji)**
- Even party meetings are risky due to security pressure

Key Takeaways

1. Hidma's death = Key turning point
 Maoists' military revival chances are almost gone

2. Maoist movement is collapsing nationwide
 Organisational strength, manpower, and territory have shrunk drastically

3. Strategic success = Security + Development
 Not just bullets — services reached remote tribal areas

4. But peace must be followed by dignity
 If the state ignores tribals again, new frustrations could emerge

High costs, poor training deepen India's stinging snakebite toll: TH Science

Science Tech

Easy Explanation

The World Health Organization says snakebite poisoning (envenomation) is a **serious but neglected disease**, especially in tropical countries. Snakebites kill **80,000–1,30,000 people worldwide every year**, and many more become permanently disabled.

India is the worst affected country in the world, responsible for almost **50% of global snakebite deaths**. A new study in *Nature Communications* shows that India's official numbers have been extremely low and do not capture the real situation. Latest estimates say **45,000–58,000 people die every year in India** because of snakebites.

Almost **half the deaths happen outside hospitals**. This is because:

- People do not get antivenom quickly
- They rely on home remedies or faith healers
- Hospitals are far away or treatment is expensive

The most dangerous snakes in India are known as the **"Big Four"**:

1. Indian cobra
2. Common krait
3. Russell's viper (causes most bites)
4. Saw-scaled viper

The severity of a snakebite depends on:

- How much venom the snake injects
- Type and size of the snake
- How fast the patient receives antivenom

If a large amount of venom enters the body and treatment is delayed, survival becomes very difficult.

Financial burden

Treatment cost is very high for poor families:

- About ₹3,900 in government hospitals
- About ₹27,400 in private hospitals

Many families fall into **debt** because of this. Researchers found that only **12% of victims had insurance**, even though many are eligible for **Ayushman Bharat** benefits.

Other gaps

The research highlights major challenges:

- Many doctors are **not fully trained** to handle snakebite complications
- Patients often **come late** after visiting traditional healers
- Current antivenom is **not perfect** and sometimes doesn't treat all symptoms

What India needs urgently

Experts say India must:

- Improve **quick access to hospitals**
- Provide **better insurance coverage**
- Upgrade antivenom to **next-generation therapies**
- Train healthcare staff to treat snakebites effectively
- Increase awareness to **avoid delays** in treatment

Key Takeaways

1. Very high global burden

- Snakebites kill up to 1.3 lakh people yearly worldwide
- India contributes **almost half of global deaths**

2. India's "Big Four" responsible for most fatal bites

- Indian cobra
- Common krait
- Russell's viper
- Saw-scaled viper

3. Delayed treatment leads to death or disability

- Nearly **50% deaths occur outside hospitals**
- Faith healers and distance from hospitals cause dangerous delays

4. Huge financial impact

- Treatment cost can be unaffordable for poor families
- Insurance coverage extremely low

5. Official numbers underrated

- Government data does not reflect the actual scale
- Recent estimates: **45,000–58,000 deaths annually in India**

6. Healthcare system needs strengthening

- Better antivenom development needed
- Training for healthcare providers necessary

Science Tech

Easy Explanation

A very large health study from the U.K. has compared the risks children face after **getting COVID-19** versus after **taking a COVID-19 vaccine**. The findings are clear:
 COVID-19 infection is much more dangerous for children and teenagers than vaccination.

Researchers analyzed the medical records of almost **14 million people under 18**, including:

- 3.9 million who tested positive for COVID-19
- 3.4 million vaccinated with at least one Pfizer dose (ages 5–17)

They checked five serious health problems linked to the heart, blood vessels, and immunity:

1. **Blood clots in veins or arteries**
2. **Low platelet count (thrombocytopenia)**
3. **Heart inflammation** (myocarditis and pericarditis)
4. **Severe body-wide inflammation** like MIS-C (a serious post-COVID condition)

What the study found

Within the first week of COVID-19 infection, children had a much higher risk of:

- **Severe inflammatory disease (like MIS-C): ~15 times higher**
- **Blood clots in veins: ~5 times higher**
- **Low platelets: ~3 times higher**
- **Heart inflammation: ~3.5 times higher**
- **Blood clots in arteries: ~2 times higher**

Even after **one year**, the risks of:

- Blood clots in veins
- Low platelet count
- Heart inflammation: remained higher than in children who never had COVID-19.

This means infection can lead to **long-term health problems**.

What about vaccination?

The vaccine caused **only one** significant short-term effect:

- A **small rise** in mild heart inflammation risk during the **first week after vaccination**
- It decreased by week 4 and **did not return later**
- Children recovered quickly with simple treatment

Real-world meaning

When researchers compared the **actual number of extra cases** expected:

- A child is **3 times more likely** to get heart inflammation from **COVID-19** than from a **vaccine**
- Infection also causes **many more complications**, not just heart issues

Why does COVID-19 cause long-lasting issues?

Researchers say:

- The virus may damage blood vessels (endothelial injury)
- It may disturb the immune system (immune dysregulation)
- Recovery in children may be slower for some conditions

Key Takeaways

1. COVID-19 infection is far riskier than vaccination

- Much higher risk of heart, blood clotting, and inflammatory problems
- Problems can last more than a year

2. Vaccination shows mainly short-term and mild effects

- Slight increase in myocarditis/pericarditis
- Resolves quickly and does not persist

3. MIS-C is a major concern after infection

- Condition risk is about **15 times higher** in infected children

4. Infection-related risks continue even in later pandemic waves

- Even with changing variants and more immunity, risk remained higher

5. Very strong data

- Study covers **98% of England's under-18 population**
- One of the biggest pediatric COVID-19 studies ever

6. Missed early cases might mean risks are even higher than reported

[How much of the internet actually runs on Cloud fare?: TH Science](#)

Science Tech

Easy Explanation

Earlier this week, many major websites and apps around the world suddenly stopped working. The reason was not a problem with those websites themselves — it was because **Cloudflare**, a company that provides internet infrastructure, suffered a technical failure in its **bot management system**.

This outage showed how dependent the modern internet has become on **a single company**. Cloudflare sits in the middle of the connection between users and websites, making the internet faster and more secure. So, if Cloudflare breaks, millions of online services also get disrupted.

Cloudflare has:

- Hundreds of data centers across more than 100 countries
- A network that handles **81 million web requests every second**
- Services used by **20% of all websites in the world**
- Even stronger dominance among big websites using reverse proxies or CDNs

A **reverse proxy** works like a middleman: when a user opens a website, the request first goes to Cloudflare, and then Cloudflare forwards it to the website server. This helps filter out attacks, speed up loading, and handle heavy traffic.

Some major websites using Cloudflare include:

- LinkedIn
- X (formerly Twitter)
- PayPal
- ChatGPT
- Discord
- Shopify
- Vimeo
  And in India: Titan, Air India, HDFC, and more.

Because Cloudflare supports such a huge portion of the internet, any error in its system — even a small configuration mistake — can lead to worldwide outages.

Experts say this shows how **centralized** the internet has become. A few large companies control most infrastructure. If any one of them goes down, the impact spreads like a chain reaction.

While Cloudflare doesn't run the entire internet, it has become a key backbone of the modern web. Its stability is essential for online businesses, social networks, payments, and everyday web browsing.

Key Takeaways

1. Cloudflare is a major internet infrastructure provider

- Manages fast, secure traffic delivery for millions of websites
- Uses reverse proxy and CDN technologies

2. Very large global footprint

- Data centers in 200+ cities, 100+ countries
- Handles 81 million requests per second

3. Massive adoption across the web

- Used by 20% of all websites worldwide
- Over 81% of websites that use any reverse proxy/CDN rely on Cloudflare
- Customers include major platforms like LinkedIn, PayPal, and ChatGPT

4. A Cloudflare outage affects the entire internet

- Even a technical issue in a single feature can impact websites globally
- Shows the risks of centralizing infrastructure in a few companies

5. Internet fragility due to dependency

- Cloudflare's engineering decisions directly affect millions of websites
- Centralized dependency means high impact during failures

24th November 2025

[Labour codes:What changes for workers and employers-The Indian Express Explained Page](#)

Economy

Easy Explanation
 The four new labour codes — Code on Wages, Code on Social Security, Industrial Relations Code, and Occupational Safety, Health & Working Conditions (OSH) Code — replace 29 fragmented labour laws to create a simpler and more uniform system. The main idea is to reduce compliance burdens on employers while expanding protection for workers across sectors, including those earlier left out.

The **Code on Wages** standardises the definition of wages, minimum wage, overtime, payment timelines, and working hours for all employees. It introduces a National Floor Wage and ensures every worker receives a wage slip and timely payment.

The **Social Security Code** merges nine laws and, for the first time, legally recognises gig and platform workers. It creates a national social-security fund and expands EPFO and ESIC coverage. Fixed-term employees now receive gratuity after just one year.

The **Industrial Relations Code** aims to provide employers more flexibility in hiring while creating a structured mechanism for union representation. It raises the threshold for mandatory government approval for layoffs and makes strike rules stricter.

The **OSH Code** streamlines registrations and licences, mandates appointment letters, expands safety norms, and allows women to work night shifts with safeguards.

Key Takeaways

1. Code on Wages

- Uniform definition of wage and minimum wage across sectors.

- National Floor Wage introduced for all states.

- Overtime fixed at twice the normal wage.

- Working hours capped at 48 hours/week with an 8–12 hour daily limit.

- Mandatory wage slips and strict timelines for wage payments.

2. Code on Social Security

- Combines nine social-security laws with wider worker coverage.

- Gig and platform workers legally recognised; national social-security fund created.

- Aggregators must contribute 1–2% of turnover to gig-worker welfare.

- Fixed-term workers eligible for gratuity after one year.

- EPFO and ESIC coverage significantly expanded nationwide.

3. Industrial Relations Code

- Merges three industrial laws with a broader definition of "worker".

- Fixed-term employment allowed; unions object due to job insecurity concerns.

- Layoff/closure approval threshold raised from 100 to 300 workers.

- Strikes require prior notice in all industries, tightening strike rules.

- Negotiating union/council system may reduce influence of smaller unions.

4. Occupational Safety, Health & Working Conditions (OSH) Code

- Combines 13 laws with single registration and digital compliance.

- Higher thresholds for factory licences; contract labour rules apply for 50+ workers.

- Women allowed night shifts with consent and safety measures.

- Mandatory appointment letters and annual health check-ups.

Economy(Agriculture)

Easy Explanation

Tamil Nadu received far more Cauvery water than usual last year. With the Mettur dam almost full, farmers in the Cauvery delta expanded Kuruvai paddy cultivation by nearly 40–60%. This produced a bumper harvest, and the state touched almost 47 lakh tonnes of procurement — close to an all-time record.

But the harvest clashed with the Northeast monsoon. Many farmers harvested late because of earlier rains, so huge quantities of paddy were still in fields or stacked at procurement centres when heavy monsoon showers began. The grain absorbed moisture, began germinating in bags, and piled up outside overcrowded godowns. Evacuation of stocks was slow, causing a storage and quality crisis.

The biggest technical hurdle is the *Fair Average Quality (FAQ)* rule that caps moisture in paddy at **17%**. Tamil Nadu says this standard suits dry North Indian kharif conditions, not the humid monsoon climate of the Cauvery delta. Farmers say it is impossible to dry paddy to 17% during rains, leading to rejections and distress.

Experts also say the delta has shifted to new short-term, high-yielding varieties that ripen later and are less suited to monsoon timing, making the quality issue worse.

Key Takeaways

1. Why there was a bumper harvest

- Excess Cauvery inflow; Mettur dam nearly full.

- Kuruvai area expanded by 40–57%.

- Procurement neared a record 47 lakh tonnes.

2. Why the crisis occurred

- Harvest coincided with Northeast monsoon.

- Delayed sowing led to late harvesting.

- Paddy got wet, germinated, and piled up in overcrowded yards.

3. Moisture and FAQ norms

- Central FAQ rule demands 17% moisture.

- Tamil Nadu says this is unrealistic in humid monsoon conditions.

- Farmers face rejections and losses due to moisture levels.

4. Storage and logistics stress

- Godowns and yards overloaded.

- Shortage of staff and slow evacuation.

- Allegations of corruption and middlemen controlling transport contracts.

5. Structural agricultural issues

- Shift from flood-resistant traditional varieties to short-term hybrids.

- New varieties mature later and clash with monsoon patterns.

- Experts urge crop choices better suited to delta climate and flood cycles.

[Russia's push to take Pokrovsk in Ukraine-The Indian Express Explained Page](#)

International relations

Easy Explanation

 Russia is trying to capture the Ukrainian city of **Pokrovsk**, a major road–rail junction in eastern Donetsk. The Russian military says it already controls over 75% of the city and is advancing further. Pokrovsk is important because it links Ukrainian frontline positions and sits close to Ukraine's only coking-coal mine, which supports its steel industry.

Russia's larger goal is to take full control of the **Donbas** region (Donetsk + Luhansk). Ukraine still controls about 10% of Donbas, mostly in northern Donetsk. If Russia captures Pokrovsk and nearby Kostiantynivka, it will gain a strong base to push north toward **Kramatorsk** and **Sloviansk**, the biggest remaining Ukrainian-held cities in Donetsk.

Taking Pokrovsk would also make Ukraine's **Dnipropetrovsk** region more exposed, potentially opening new routes for Russian advances.

Key Takeaways

1. Strategic importance of Pokrovsk

- Major road and rail junction in Donetsk.

- Key supply hub for Ukrainian frontline troops.

- Near Ukraine's only coking-coal mine.

2. Russia's progress

- Claims control of over 75% of Pokrovsk.

- Simultaneously trying to encircle Kostiantynivka.

3. Russia's broader objective

- Complete capture of the Donbas region (Donetsk + Luhansk).

- Seeks to eliminate remaining Ukrainian-held pockets.

4. Impact on Ukraine's defence

- Loss of Pokrovsk would weaken supply routes.

- Kramatorsk and Sloviansk become more vulnerable.

5. Regional consequences

- Dnipropetrovsk region to the west becomes exposed.

- Provides Russia a platform for deeper advances.

[With Hasina sentenced to death,what next for Bangladesh-The Indian Express Explained Page](#)

International relations

Easy Explanation

Former Bangladesh Prime Minister Sheikh Hasina has been sentenced to death by the International Crimes Tribunal for ordering violent crackdowns during the 2024 student-led protests. She has been in India since August 2024 after fleeing when her government collapsed. The charges include ordering the killing of unarmed protesters in Dhaka and Ashulia, and using helicopters, drones and lethal force against students. Hasina has called the verdict politically motivated, but the ruling effectively ends her chances of returning to Bangladesh or participating in future politics.

The decision reshapes Bangladesh's political landscape ahead of the February 2026 elections. Her Awami League is leaderless and demoralised, with no alternative leadership in place. Her hopes of passing the mantle to her son or daughter have created resentment within the party. The verdict strengthens interim leader Muhammad Yunus, who presents himself as a reformist ensuring justice, and also energises opposition groups like the BNP and Jamaat-e-Islami, who want to capitalise on anti-Hasina sentiment. Student groups who led the protests also gain renewed legitimacy.

India, where Hasina currently resides, has avoided criticism of the verdict and is unlikely to extradite her, viewing the issue as Bangladesh's internal matter and considering Hasina a long-time ally.

Key Takeaways

1. Nature of the verdict

- Hasina sentenced to death for protest-related killings

- Additional life term for inflammatory orders and armed crackdowns

- Verdict shuts the door on her political return

2. Impact on Awami League

- Party left without clear leadership

- Resentment over dynastic succession plans

- Losing organisational strength and voter base

3. Gains for interim government and rivals

- Muhammad Yunus gains moral and political advantage

- BNP hopes to ride anti-Hasina wave

- Jamaat seeks bigger electoral role

4. Role of student protesters

- Verdict validates their movement

- Opportunity to regain youth support

- May influence 2026 election atmosphere

5. India's position

- Declines to extradite Hasina

- Treats issue as Bangladesh's internal matter

- Maintains relationship based on strategic considerations

[How can State PSCs be reformed?-The Hindu Text and Context](#)

Governance

Easy Explanation

State Public Service Commissions (PSCs) conduct recruitment for State government jobs, but almost every exam gets caught in controversies such as paper leaks, errors in evaluation, reservation miscalculations and delays. This has created a widespread trust deficit among aspirants. The problems arise from structural weaknesses and procedural gaps that most State PSCs share.

Historically, PSCs were created to ensure merit-based recruitment and independence from political influence. While the UPSC works in a professional, politically insulated environment with stable manpower planning and a dedicated Personnel Ministry, State PSCs function in a politically influenced setting. Appointments often ignore merit, academic expertise is limited to within the State, and vacancies are not declared regularly because States lack financial resources and planning.

State PSCs struggle to revise syllabi, maintain evaluation standards, or balance transparency with confidentiality. They also face complexity in applying vertical, horizontal and zonal reservations, leading to frequent court cases.

Reforms suggested include: regular manpower planning through a dedicated Personnel Ministry, fixed age and qualification criteria for PSC members, a transparent and periodic syllabus revision system, use of mixed question formats to avoid bias, careful translation processes, and appointing experienced officers as Secretaries. These steps can rebuild trust and make State PSCs as credible as the UPSC.

Key Takeaways

1. Core structural problems

- Politicised appointments weaken autonomy

- No dedicated personnel ministry in most States

- Irregular vacancy notifications disrupt exam cycles

- Limited academic resources for paper setting

- Poor evaluation moderation increases errors

2. Procedural shortcomings

- Syllabus rarely updated

- Weak transparency–confidentiality balance

- Frequent reservation calculation mistakes

- Poor translation quality of question papers

- High litigation delays recruitment

3. Reforms in governance and appointments

- Create a State-level Personnel Ministry

- Five-year recruitment road map

- Fix minimum age 55 and maximum age 65 for PSC members

- Define clear qualifications for official and non-official members

- Consult Opposition leader before non-official appointments

4. Reforms in exams and syllabus

- Periodic syllabus revision with public consultation

- Mix objective and descriptive papers in mains

- Test State-specific knowledge in objective format

- Regularly change question pattern to counter AI-based answers

- Strengthen translation using tech plus human verification

5. Administrative and operational improvements

- Appoint senior education administrators as PSC Secretaries

- Improve storage, handling and security of papers

- Establish better evaluation moderation systems

- Maintain UPSC-like balance of confidentiality and transparency

- Reduce need for judicial intervention through timely grievance redressal

[Safe processing matters more than zesty flavours-The Hindu Editorial](#)

Economy

Easy Explanation

Food adulteration cases and poor hygiene practices across India have raised serious concerns about the safety of everyday foods, especially street food. Raids in cities like Chennai have exposed problems such as contaminated water, unhygienic handling and unsafe ingredients. While street food is culturally important and supports millions of livelihoods, its informal nature makes it difficult for regulators to monitor and maintain standards.

Packaged foods, on the other hand, operate under stricter oversight by the FSSAI. Because packaged items follow structured processing and labelling rules, they offer better traceability, clearer information about ingredients and consistent safety checks. Modern techniques like pasteurisation, vacuum sealing and aseptic packaging reduce the risk of contamination and ensure longer shelf-life. Companies are also adapting to consumer preferences by offering healthier options and fortifying foods to address nutritional deficiencies.

The informal street food sector faces systemic risks such as reused oil, adulterated ingredients and inadequate waste management. These factors contribute to widespread food-borne illnesses. Initiatives like FSSAI's vendor training programmes and certification drives aim to improve hygiene, but progress is slow due to the sector's massive scale.

Ensuring safe food requires a stronger national commitment. Street food should remain part of India's culture, but safety must take priority through better training, rating systems and awareness.

Key Takeaways

1. Rising food safety concerns

- Adulteration cases have shaken public trust

- Street food increasingly scrutinised for hygiene

- Unsafe practices exposed in multiple cities

- Informal sector hard to regulate

- Consumers more cautious in daily choices

2. Packaged food advantages

- Operates under clear FSSAI oversight

- Standards apply across sourcing to packaging

- Techniques reduce microbial risks

- Offers better shelf-life and stability

- Labelling ensures transparency for consumers

3. Consumer-driven shifts

- Demand for healthier processed foods rising

- Companies diversifying nutritious options

- Fortification used to address deficiencies

- Packaged foods cater to working populations

- Ease of distribution supports wider access

4. Challenges in street food safety

- Linked to large share of food-borne illnesses

- Reuse of oil and adulterants common

- Poor waste handling triggers contamination

- Outbreaks often underreported

- Vulnerable populations most affected

5. Way forward

- Train and certify vendors under national campaigns

- Strengthen Clean Street Food Hub and Eat Right India

- Encourage safe handling and storage practices

- Improve municipal-level monitoring

- Prioritise food safety as part of public health

25th November 2025

[How the climate summit COP30 in Brazil shone the spotlight on 'mutirão'-The Indian Express Explained Page](#)

Environment

Easy Explanation

COP30 was held in Belém, Brazil, and its main theme was *mutirão*, a Brazilian Indigenous idea that means collective effort and joint action. Brazil used this concept to push for a climate approach where governments, Indigenous communities, youth, civil society, scientists, and the private sector work together before, during, and after the summit. The term comes from the Tupi-Guarani people, highlighting the importance of Indigenous knowledge, especially for protecting rainforests like the Amazon. COP30 focused on showing how Indigenous groups worldwide — more than 5,000 communities — are vital for conservation and land management.

Key Takeaways

1. Meaning of mutirão

- Refers to collective effort and consensus.

- Emphasises continuous mobilisation before, during, and after COP30.

- Symbolises a participatory model of climate governance.

2. Why Brazil chose this theme

- Reflects Brazil's push for inclusive climate action.

- Connects local cultural concepts with global climate goals.

- Promotes cooperation across all sectors of society.

3. Indigenous roots of the term

- Originates in the language of the Tupi-Guarani tribe.

- Highlights Indigenous cultural and ecological wisdom.

- Links the summit's theme to the Amazon's history and communities.

4. Significance of hosting COP30 in Belém

- Brings global attention to Amazon rainforest vulnerabilities.

- Shows Brazil's intent to centre rainforest protection.

- Connects Indigenous heritage with modern climate diplomacy.

5. Role of Indigenous peoples in climate action

- Over 5,000 Indigenous groups globally contribute to conservation.

- Recognised as key custodians of forests and biodiversity.

- Their land management practices were highlighted at COP30.

[What will it mean for Chandigarh if it is brought under Article 240?-The Indian Express Explained Page](#)

Polity

Easy Explanation

Chandigarh is currently a Union Territory whose Administrator is the Governor of Punjab. Many laws of Punjab and Haryana apply there because it is the shared capital of both states. If Chandigarh is brought under **Article 240**, the Centre will get much stronger control. The President will be able to make regulations for Chandigarh without needing Parliament approval. This means even major changes—like altering the Mayor's tenure—can be done through a simple regulation signed by a Joint Secretary, instead of passing a full law in Parliament. It would also reduce the influence of Punjab and Haryana over Chandigarh. Supporters say it may bring more central funding and could even create scope for Chandigarh to have its own Legislative Assembly in the future. Opponents say it gives excessive power to the Centre and breaks the long administrative link with the two states.

Key Takeaways

1. Stronger central control under Article 240

- President can make regulations for Chandigarh.

- Parliament approval is not needed for many changes.

- Centre gets sweeping authority over UT governance.

2. Reduction of Punjab–Haryana influence

- Both states' laws currently apply because it is a shared capital.

- Article 240 may dilute their administrative control.

- Long-standing bureaucratic claims of both states weaken.

3. Practical governance impact

- Even changes like altering the mayor's tenure can be done easily.

- Only a regulation signed by a Joint Secretary is needed.

- Speeds up administrative decision-making.

4. Possible benefits highlighted

- More central budgetary support due to direct oversight.

- Potential future pathway for Chandigarh to get its own Assembly.

- Independent Administrator similar to L-G in other UTs.

5. Past attempts and context

- 2016 attempt to appoint independent Administrator was stalled.

- Punjab Governor has held charge since 1984 during terrorism years.

- Shift originally meant to ensure security coordination.

[Why India needs national counter IED policy-The Indian Express Explained Page](#)

Internal security

Easy Explanation

IEDs are simple but deadly bombs that terrorists prefer because they can be made easily from commonly available materials and cause huge damage without risking the bomber's life. India has seen different types of IEDs used across conflict zones — in Kashmir, Punjab (via drone-dropped sticky bombs), Naxal areas, and

even cities. Although overall blasts have declined, terrorists now mix military-grade, commercial, and homemade explosives to avoid detection. Commercial explosives used for mining and construction often get stolen at the last mile because monitoring capacity is limited. Fertilisers and precursor chemicals can also be misused. Because IEDs involve many sources (military-grade from Pakistan, commercial pilferage, precursor chemicals, switch mechanisms, bomb signatures), India needs a strong national policy that covers prevention, monitoring, forensic analysis, and rapid response.

Key Takeaways

1. Why IEDs remain a major threat

- Easy to assemble from off-the-shelf materials.

- Low risk for terrorists compared to other attack methods.

- Components like nails or ball bearings increase lethality.

2. What forensic analysis reveals

- Explosive type (military, commercial, homemade) indicates likely terror group.

- Switch mechanism (timer, command, victim-operated) helps identify modus operandi.

- Carriage method (vehicle-borne, person-borne) completes the group's 'bomb signature'.

3. Emerging patterns across regions

- Kashmir: mixed explosive compositions and drone-dropped sticky bombs.

- Punjab: drone delivery of magnetic IEDs from Pakistan.

- Naxal areas: decline in blasts but heavy use of commercial explosives.

- Cities: isolated but significant attacks like Bengaluru 2024.

4. Weak points in India's current system

- Military explosives smuggled via drones or couriers remain hard to stop fully.

- Commercial explosives face pilferage at end-user level due to limited PESO manpower.

- Precursor chemicals and fertilisers still vulnerable to misuse.

5. Why India needs a national counter-IED policy

- To integrate strategic and tactical measures against IED threats.

- To tighten monitoring of explosives, detonators, and precursor chemicals.

- To standardise reporting of bulk purchases and improve coordination across agencies.

[How Trump's tariffs have run into affordability crisis-The Indian Express Explained Page](#)

Economy

Easy Explanation

Trump imposed sweeping tariffs in 2025, claiming they would force companies to produce in the US, increase jobs, reduce inflation, and boost growth. But tariffs act like a tax on domestic consumers, so prices of imported goods rise. This reduces purchasing power, slows growth, increases inflation, and weakens business confidence. Now Americans are facing higher food prices, rising inflation, job market cooling, slower GDP growth, falling consumer sentiment, and strained diplomatic ties. Under political pressure, Trump has started cutting tariffs on key food items like bananas, coffee, and beef. Economists had predicted these problems from the start, and the negative effects are now visible across the US economy.

Key Takeaways

1. Flawed economic logic of tariffs

- Tariffs increase costs for domestic consumers.

- Higher prices reduce purchasing power and hurt economic growth.

- Claims of boosting jobs and reducing inflation did not materialise.

2. Clear economic deterioration since tariffs

- Inflation reversed its earlier decline and increased after April 2025.

- Unemployment edged up as labour demand weakened.

- IMF projects slower US GDP growth due to policy uncertainty.

3. Declining consumer and business sentiment

- Consumer sentiment dropped sharply—30% below last year.

- Richer households remain upbeat because stock markets are strong.

- US manufacturing has contracted for eight straight months.

4. Wider fallout beyond the economy

- Diplomatic ties with allies like Canada have worsened.

- The US dollar has weakened against major global currencies.

- Supply-chain disruptions hurt small US businesses disproportionately.

5. Political pressure forcing retreat

- Republicans suffered in recent polls as affordability became a key issue.

- Trump cut tariffs on food items to ease household budgets.

- A Supreme Court case on reciprocal tariffs could further weaken his presidency.

[Farmers must reap fruits of genetic engineering-The Indian Express Explained Page](#)

Science and technology

Easy Explanation

India has mostly stayed away from using modern **genetic engineering (GM)** in crops, except for Bt cotton — and even that has not seen any new upgrade since 2006. This resistance came from groups claiming to protect "swadeshi" interests, even when the technologies were developed by Indian scientists.

Now, India is seeing progress in **Genome-Edited (GE) crops using CRISPR**, which allow precise editing of plant genes without adding foreign DNA. Two improved rice varieties (Samba Mahsuri and MTU-1010) have already been prepared with better yield, drought tolerance, and salt tolerance. A new **low-pungency, disease-resistant mustard** variety is also in trials.

Indian scientists have also created a **new GE tool (TnpB-based system)** that could become an alternative to U.S.-controlled CRISPR technologies. This reduces dependence on foreign technology monopolies.

India faces the challenge of feeding **1.7 billion people by 2060**, with less land, more climate stress, and high import bills (vegetable oils, cotton). Without scientific crop improvement, the country will continue to depend heavily on imports.

The article argues that **opposing modern crop technologies in the name of swadeshi or environmentalism is actually harmful**. Farmers should get the benefits of scientific advances in breeding and genetic engineering.

Key Takeaways

1. India's GM progress stalled

- No new GM crop technologies approved since 2006.

- Opposition from "swadeshi" and green groups blocked even Indian-developed GM mustard.

2. Genome Editing (GE) shows new promise

- CRISPR-edited versions of **Samba Mahsuri** and **MTU-1010** rice created to boost yield and stress tolerance.

- **Canola-quality mustard** improved through GE is under field trials.

3. Indigenous gene-editing tool developed

- ICAR scientists patented a new **TnpB-based GE tool**.

- Reduces dependence on U.S.-controlled CRISPR technologies (**bold shift in technological autonomy**).

4. Food security demands scientific breeding

- India must feed **1.7 billion by 2060** amid climate uncertainty.

- Better breeding (conventional, GM, GE) is essential for yield, efficiency, and resilience.

5. Anti-technology activism harms farmers

- Blocking GM/GE crops increases import bills (vegetable oils, cotton).

- **Science denial cannot be the answer**; farmers need access to genetic engineering advancements.

[What does the SC's advisory opinion imply?-The Hindu Text and Context](#)

Polity

Easy Explanation

The Supreme Court gave an advisory opinion under Article 143 on a Presidential reference arising from a two-judge Bench ruling (April 2025) that had fixed a **three-month deadline** for Governors/President to act on Bills and had even granted **'deemed assent'** to Tamil Nadu Bills. The government asked whether courts can impose timelines when the Constitution is silent, whether actions of Governor/President can be reviewed **before** a Bill becomes law, and whether Article 142 can be used to create 'deemed assent'.
 A five-judge Bench has now **largely overturned** the April 2025 ruling. It said courts cannot fix timelines,

cannot introduce 'deemed assent', and that Governors have **discretion** under Article 200. This marks a shift from earlier cases which stressed acting on **aid and advice** of the Council of Ministers.

Key Takeaways

1. Governor's choices under Article 200

- Only three options: assent, return with comments, or reserve for President.

- No fourth option such as 'deemed assent'.

2. Governor's discretion widened

- Court held that Governor has **discretion** while choosing among the three options.

- This is a major shift from earlier rulings that tied Governors to **aid and advice** of the Council of Ministers.

- Could dilute authority of elected State governments.

3. No judicial timelines

- Courts **cannot** fix deadlines for Governors/President since the Constitution has none.

- This reverses the April 2025 judgment that imposed a three-month limit.

4. Very limited judicial review

- Governor's decisions/inaction not justiciable before a Bill becomes law.

- Only in rare cases of extreme, unexplained delay can courts issue a limited direction to act (not to decide in a particular way).

5. No 'deemed assent'; limits on Article 142

- Article 142 cannot substitute constitutional powers of Governor/President.

- **'Deemed assent' is unconstitutional** and cannot be used to bypass gubernatorial decision.

[Why do infant deaths persist in tribal-dominated Melghat?-The Hindu Text and Context](#)

Sociology

Melghat, a **remote tribal region** in Maharashtra, continues to see high infant deaths because **malnutrition and weak healthcare** have persisted for decades. Even though the government runs nutrition schemes, these often **fail to reach families consistently** due to poor coordination and delivery gaps.

Many villages lack **proper roads, electricity, doctors, and functioning health centres**, so infants who fall sick cannot reach hospitals in time. Mothers in Melghat are often **underweight and anaemic**, leading to **low-birth-weight babies** who have weak immunity and are easily affected by infections like pneumonia.

A major issue is that government departments work in **silos**, resulting in irregular monitoring and poor follow-up. Even incentives have not helped in **retaining doctors**, leaving health facilities understaffed.

Experts say that solving the problem requires more than food distribution — Melghat needs a **strong, well-coordinated healthcare system**, better-trained ASHA workers, attention to **co-morbidities**, strong community participation, and **basic civic infrastructure** to ensure continuous care for mothers and children.

Key Takeaways

1. Persistent malnutrition despite decades of intervention

- Melghat continues to report high infant deaths even after **30 years of government programmes**.

- Malnutrition remains deeply linked with poverty, tribal isolation, and weak public delivery systems.

2. Deaths not just from starvation, but from weakened immunity

- Many deaths are officially recorded as pneumonia or anaemia, but **underlying malnutrition weakens infants**, making them vulnerable to infections.

- **Low-birth-weight babies** born to anaemic mothers face the highest risk.

3. Severe gaps in healthcare and governance

- Region faces **shortage of doctors**, high absenteeism of staff, and poor-quality primary health centres.

- **Poor roads, electricity shortages, and delayed treatment** increase child mortality.

- Government departments work in **silos**, causing irregular monitoring and disruptions in nutrition supply.

4. High burden of malnourished children in Maharashtra

- Over **1.8 lakh malnourished children** recorded in Maharashtra.

- State continues to perform poorly on child nutrition indicators — **35% stunted** and **35% underweight** children.

5. Experts demand a systemic, multi-sectoral approach

- Solutions go beyond food distribution: need **strong health systems**, better-trained ASHAs, management of co-morbidities, community participation, and improved civic infrastructure.

- Addressing **intergenerational malnutrition** is essential to break the cycle.

[How are passengers able to access the Internet on aeroplanes?-The Hindu Text and Context](#)

Science and technology

Easy Explanation

Airplane Wi-Fi works by treating the **entire aircraft like a flying Wi-Fi router**. Your phone connects only to the **Wi-Fi inside the plane**, and the plane itself sends/receives data using either:

1. **Air-to-ground towers (ATG)**, or

2. **Satellites**.

ATG works like mobile towers pointing upward. The plane connects to these towers when flying over land. But ATG **fails over oceans or remote regions**, so aircraft use **satellite internet** there.

Older satellite systems used **geostationary satellites** (very far → high delay). Newer ones use **low-earth orbit satellites**, which are much closer → **lower latency and faster speeds**.

Inside the aircraft, Wi-Fi works like a **small office network**:
 routers + modems + cabin Wi-Fi access points.
 Passengers see a login page, authenticate, and then the system forwards their traffic through ATG/satellite links.

Because bandwidth is limited and shared with all passengers, airlines often **block video streaming**, compress images, or limit heavy data use.

Phones must stay on **airplane mode** because:

- Active phones create **unpredictable radio noise**,

- Many phones trying to connect to towers from the sky can confuse networks,

- Regulators prefer a safe, conservative approach.

But airplane Wi-Fi is safe because the equipment is **certified, shielded, and uses frequencies separated from aircraft navigation systems**.

Key Takeaways

1. How airplane Wi-Fi works

- Devices connect only to the plane's **internal Wi-Fi**, not to ground towers directly.

- The plane uses ATG or satellite links to reach the Internet.

2. ATG vs Satellite

- **ATG:** Works over land using ground towers; fails over oceans and remote areas.

- **Satellite:** Works everywhere; LEO satellites give **lower latency** and better speeds.

3. Why speeds vary

- Limited bandwidth shared by all passengers.

- Providers block or restrict heavy apps (video/VoIP) to manage load.

4. Why airplane mode is required

- Avoids random radio noise from hundreds of phones.

- Prevents phones from trying to connect to ground towers at high altitude.

5. Safety of in-flight Wi-Fi

- All equipment is **certified and shielded**.

- Frequencies used are separated from critical aircraft systems.

    Where does road dust settle in India's efforts to clean its air?-The Hindu Science

Environment

Easy Explanation

Road dust is one of the biggest reasons for air pollution in Indian cities. It mainly consists of **PM10 and coarse particles**, which easily get kicked up by vehicles and wind. Studies show that in many cities, **20–52% of PM10 pollution** comes from road dust.

Governments have spent a lot of money under NCAP to control road dust (64% of all funds), but results are still weak because:

- Roads are poorly built and maintained

- Dust collected by sweepers is dumped on the roadside or landfills, from where it again blows back

- Too many agencies share responsibility; nobody is fully accountable

- Mechanised sweeping machines are far fewer than needed

- There are no national rules on how to scientifically collect, treat, or dispose of dust

Delhi-NCR has some systems like Dust Control Cells, mechanised sweeping, greening roadsides, and digital mapping, but these efforts are not uniform across India.

A big solution gap is that **dust suppressants**, proper disposal of collected dust, and standard guidelines are missing. Also, construction practices remain unscientific.

To truly reduce dust, India needs:

- clear division of responsibilities

- nationwide standards for road construction and maintenance

- more mechanised sweeping

- scientific disposal of collected dust

- GIS coordination between agencies

- long-term urban planning focused on air quality

Without this, road dust will continue to blow back into cities even after cleaning.

Key Takeaways

1. Why road dust matters

- Road dust contributes **20–52% of PM10** and **8–25% of PM2.5** in many Indian cities.

- North Indian cities carry heavier silt loads than southern ones.

2. Government spending and measures

- ₹19,711 crore allocated under NCAP; **64%** spent on road dust control.

- Steps include mechanised sweeping, paving roads, repairing surfaces, greening, and Dust Control Cells.

3. Gaps and problems

- Dust is dumped unscientifically, so wind blows it back.

- Lack of national guidelines for dust disposal or use of dust suppressants.

- Mechanised sweepers are far fewer than required.

4. Fragmented responsibility

- Road maintenance is split across many agencies (12 in Delhi, 18 in UP, 22 in Haryana, etc.).

- Poor coordination reduces effectiveness despite heavy spending.

5. What needs to change

- Create a **science-based national framework** for road construction, sweeping, and dust disposal.

- Use GIS platforms for coordination.

- Develop proper guidelines for dust suppressants and disposal.

- Integrate road maintenance with long-term urban planning for clean air.

[**Moss spores survive space exposure, testing life's bounds-The Hindu Science**](#)

Science

Easy Explanation

Scientists wanted to see **how far plant life can survive in real space conditions** — a question important for climate resilience and future Moon/Mars colonies. Mosses are ancient, hardy plants, but they had never been tested *directly* in space.

Japanese researchers tested **three moss tissues** of *Physcomitrium patens*:

1. **Protonemata** (young filaments)

2. **Brood cells** (stress-induced cells)

3. **Spores inside the sporangium** (capsule)

In lab simulations of **extreme UV, deep freezing, heat, and vacuum**, only the **spores** survived well — especially when protected by the **sporangium**.

So researchers sent these spores **outside the International Space Station (ISS) for 9 months**.

Result:

- Spores kept in shade or UV-shielded conditions **germinated 95%** when brought back.

- Even spores fully exposed to harsh **space UV** still had **86% germination**.

- Space vacuum, temperature swings, and microgravity hardly affected them.

This shows moss spores are **extraordinarily resilient**, comparable to or better than famous radiation-resistant microbes and strong seeds. Their protective capsule acts like a **natural shield**, similar to seed coats in higher plants.

This suggests mosses could help "green" future space habitats and gives astrobiologists clues about how tough early land plants really were.

Key Takeaways

1. Why test moss in space?

- Climate change and future Moon/Mars bases demand plants that survive extreme environments.

- Mosses are ancient and hardy but were never tested in real space conditions.

2. What was tested?

- Young filaments, brood cells, and **spores inside the sporangium**.

- Exposed to UV, freezing, heat, vacuum, and then sent outside the ISS.

3. What survived best?

- **Spores** were the toughest, especially with the **sporangium** protecting them.

- They tolerated extreme UV, 55°C heat, deep freezing, and vacuum.

4. Space survival results

- 95% germination in shielded spores; 86% in fully exposed spores.

- Vacuum, microgravity, and temperature swings had minimal effect.

5. Why this matters

- Shows moss spores are as robust as top radiation-resistant microbes.

- Indicates bryophytes could support **extraterrestrial green habitats**.

- Helps astrobiology understand how early plants survived harsh environments.

26th November 2025

[Hayli Gubbi:Why volcanic ash is dangerous for aircraft-The Indian Express Explained Page](#)

Geography

Easy Explanation

A volcano in Ethiopia (Hayli Gubbi) erupted for the **first time in 12,000 years**, sending a huge cloud of volcanic ash up to **14 km** into the sky. Winds carried this ash across several countries, including **parts of India**. Because volcanic ash is extremely dangerous for airplanes, India's aviation regulator (DGCA) issued an urgent advisory, asking airlines to avoid ash-affected areas, monitor engine performance, and conduct inspections.

Why volcanic ash is dangerous:
 Volcanic ash is like **powdered glass**. When it enters a jet engine, it melts at high temperatures, turns into **molten glass**, and sticks to turbine blades. This blocks airflow, can cause engines to **stall or shut down**, and makes the aircraft almost like a **glider**. Ash can also scratch cockpit windows, block sensors, damage pneumatic systems, and reduce cabin air quality.

There have been past incidents where major aircraft lost all four engines after flying into volcanic ash but managed to land safely. Because of these risks, DGCA asked airlines to inspect aircraft, monitor ash movement, and delay flights if needed.

Key Takeaways

- Hayli Gubbi volcano erupted after 12,000 years, sending ash up to 14 km high.

- Ash clouds drifted over parts of India, disrupting flight schedules.

- Volcanic ash is abrasive and melts inside jet engines, forming **molten glass** that can cause engine failure.

- Ash can also damage sensors, scratch cockpit windows, and affect cabin air quality.

- Past incidents (1982 British Airways, 1989 KLM) show that volcanic ash can shut down all engines mid-flight.

- DGCA issued an urgent advisory: avoid ash-affected routes, monitor performance, inspect engines and airframes.

- Airlines cancelled and delayed flights as a safety precaution.

[How ash clouds from Ethiopia volcano reached all the way to India-The Indian Express Explained Page](#)

Geography

Easy Explanation

A volcano in Ethiopia (Hayli Gubbi) erupted and sent very fine ash and gases **high up into the atmosphere** — much higher than where normal clouds form. Because the air near the volcano becomes very hot, it rises and carries these tiny ash particles up to **15–40 km above the ground**.

At that height, **strong winds** blow in a fixed direction. These winds carried the ash **eastwards**, first reaching **Gujarat and Rajasthan**, then moving towards **Delhi and Uttar Pradesh**, and finally heading towards **China**.

This ash cloud was so high that people on the ground were not affected, but it was dangerous for airplanes because aircraft fly at similar altitudes. That's why several flights were changed or delayed.

The good thing is that volcanic ash plumes don't last long. The particles slowly spread out, become harmless, and rain/clouds wash them out within a few days. The gases also spread but are too small in quantity to cause major harm.

Key Takeaways

- The Hayli Gubbi volcano in Ethiopia erupted after ~12,000 years, sending fine ash and gases very high into the atmosphere (15–40 km).

- Because the surrounding air heats up and rises, it lifts fine ash particles to altitudes where long-distance aircraft typically fly.

- Strong high-altitude winds carried the ash **eastwards**, entering India through Gujarat and Rajasthan, then moving towards Delhi and Uttar Pradesh.

- The same winds will push the plume further into China by Tuesday evening.

- The ash stayed at very high altitudes, so there was **no threat to people on the ground**, but it posed a **significant risk to aircraft**.

- Global volcanic monitoring centres issued alerts, helping civil aviation authorities redirect flights.

- Ash plumes disperse quickly; rain and clouds wash them out, so the impact is short-lived and expected to fade within a couple of days.

- Gases like SO_2 and CO_2 remain longer but are not in quantities large enough to affect atmospheric levels significantly.

[Tejas crash:Need for& risks in high performance air manoeuvres-The Indian Express Explained Page](#)

Science and technology

Easy Explanation

A Tejas fighter jet crashed during the Dubai Airshow after performing a **negative-G manoeuvre**, which is a risky move where the pilot feels pulled *upwards* instead of into the seat. Such display flights push both the **aircraft's limits** and the **human body's limits**, and even a small delay in reaction can be fatal — especially at low altitude.

Experts say that airshow accidents can happen due to many factors: technical faults, weather, or the pilot's physical response to extreme G-forces (like blackout, redout, or loss of consciousness). At airshows, aircraft are flown very close to the ground to showcase high-performance capabilities, which reduces the safety margin.

All fighter jets can perform negative-G manoeuvres, but it is rare to display them publicly because they are difficult and dangerous. Tejas is among the few aircraft that demonstrate it.

The crash does not automatically reflect a flaw in the Tejas aircraft; only a formal inquiry can confirm the cause. However, the incident has renewed discussion about India's need to strengthen its fighter fleet and for HAL to deliver pending Tejas Mk1A orders on time.

Key Takeaways

- Airshow accidents can occur due to technical issues, weather, or pilot-related factors like blackout, redout, or G-induced loss of consciousness.

- Display flying pushes **both aircraft limits and human limits**, increasing risk, especially at low altitudes where recovery time is extremely small.

- Negative-G manoeuvres cause blood to rush to the head, leading to **redout**, and are far more dangerous at low level.

- Most fighters can perform negative-G manoeuvres, but few display them publicly; Tejas is among the rare ones that do.

- Airshow displays differ from military flypasts — safety margins in commercial airshows are tighter, and manoeuvres are more aggressive.

- The Tejas crash should not be assumed to be an aircraft fault until the official inquiry completes.

- The incident highlights broader concerns about India's combat aircraft strength and the need for HAL to deliver Tejas Mk1A orders promptly.

[What helps pigeons navigate long distances back to their home-The Indian Express Explained Page](#)

Science

Easy Explanation

Scientists have discovered how pigeons are able to find their way home over very long distances. They already knew pigeons use the **Earth's magnetic field** to navigate, but this new study shows *how* they sense it.

Researchers found that when pigeons move their heads, tiny structures in their **inner ear** detect very small electrical changes caused by magnetic fields. These signals then activate specific parts of the brain that process balance and movement (the vestibular nuclei).

So, as pigeons bob their heads while flying, their inner ears act like a built-in compass, helping them understand which direction to go and allowing them to return home accurately.

Key Takeaways

- Pigeons navigate using the **Earth's magnetic field**.

- New research shows they detect magnetic fields through **tiny electrical currents** in their inner ears.

- A brain area called the **vestibular nuclei** becomes active when exposed to magnetic fields.

- Inner-ear proteins sensitive to electromagnetic changes help pigeons sense direction.

- Head-bobbing helps pigeons gather magnetic information, enabling long-distance navigation back home.

Science

Easy Explanation

A study found that taking just **one week off social media** can noticeably improve the mental health of young adults. Researchers asked people aged 18–24 to stay away from social media as much as they could. Their usage dropped from almost **2 hours a day to about 30 minutes**.

After this break, participants reported clear improvements:

- Less anxiety

- Less depression

- Better sleep
  The biggest improvement was seen among those who already had more severe depression.

Interestingly, loneliness did not change, likely because social media also provides some positive social connection. Experts say a social media break is **not a replacement for professional care**, but it can be a helpful extra step for improving mental health.

The study also found that the benefits came from avoiding **problematic social media habits** (doomscrolling, comparison, compulsive checking) rather than reducing screen time itself.

Key Takeaways

- A one-week social media break reduced **anxiety (16%)**, **depression (25%)**, and **insomnia (14%)**.

- Participants cut usage from nearly 2 hours to **30 minutes per day**.

- Biggest improvements were in those with **more severe depression**.

- No change in loneliness, possibly because social media offers social support.

- Benefits came from avoiding **unhealthy social media behaviours**, not screen-time reduction alone.

- Useful as an **add-on** to mental health treatment, not a replacement.

[On the journey to Viksit Bharat, our ideal guide is the Constitution-The Indian Express The Ideas Page](#)

Polity

Easy Explanation

This article explains why the **Constitution of India** should be our main guide as the country moves toward the goal of **Viksit Bharat (Developed India) by 2047**.
It highlights how the Constitution was created through **years of debate**, inputs from people across India, and learnings from other democracies.

The Constitution is praised as one of the **most progressive and inclusive** in the world — built on the ideals of **Liberty, Equality, Fraternity**, and designed to protect dignity, justice, and diversity.

It has adapted over time through amendments but has always preserved its core values.
The article argues that India's rapid economic growth and social changes must continue to be guided by the Constitution so that development remains **just, inclusive, and democratic**.

Key Takeaways

- **Samvidhan Divas (Nov 26)** marks the adoption of the Constitution and honours Ambedkar and the Constituent Assembly.

- The Constitution was shaped not just by leaders but also by **ordinary citizens** who shared ideas and concerns.

- It is built on **universal democratic principles** and ensures dignity, justice, and equality for all.

- It has grown from **395 to 472 articles**, reflecting India's ability to adapt while protecting core values.

- Provides special protections for **marginalised groups**, tribes, and cultural, linguistic, and religious diversity.

- Has enabled major reforms: **universal adult franchise, judicial interpretation of rights, affirmative action** and gender equality.

- Parliament uses the Constitution as a guide to make transformative laws for society.

- The Constitution is not just a legal text — it is a **moral and governing framework** for India's democratic journey.

- To build **Viksit Bharat by 2047**, India must remain committed to constitutional values and inclusive governance.

[Trump's Ukraine peace plan is audacious. India has a stake in its success-The Indian Express The Ideas Page](#)

International relations

Easy Explanation

Donald Trump has proposed a bold new peace plan to end the Russia-Ukraine war. His plan accepts many of Russia's demands — such as giving up eastern Ukraine and Crimea and stopping Ukraine from joining NATO. In return, he wants Russia to re-enter the global economy, rejoin the G7, and build a strong partnership with the US.

This plan has shocked Europe and angered Ukraine. Many in the US also oppose it, calling it too friendly to Russia. Trump argues that the war must end quickly and that Russia should be pulled away from China by improving ties with the West.

Russia, meanwhile, believes time is in its favour and that Ukraine will get weaker as the war continues, so it has little urgency to compromise.

For India, this situation is important. India does not want the US and Russia to remain enemies permanently. If ties improve between them, India can continue good relations with both countries more easily. It also helps reduce the China-Russia closeness, which India worries about.

But geopolitics is full of contradictions — for example, Trump is trying to woo Russia while also putting tariffs on India for buying Russian oil. So India must stay careful, avoid getting caught in big-power fights, and focus on strengthening its own power.

Key Takeaways

- Trump's Ukraine peace plan aligns closely with Russia's demands (Crimea, eastern Ukraine, NATO exclusion), creating global shock and criticism.

- The plan aims to rebuild US-Russia ties, reintegrate Russia into the global economy, and reduce its dependence on China.

- Europe and Ukraine strongly oppose the proposal; many in the US see it as appeasement.

- Russia believes time favours it and expects Ukraine and Western unity to weaken.

- Even if unpopular, the proposal reopens debate on Eurasian geopolitics and balance of power.

- For India, improved US-Russia relations would reduce pressure and help maintain balanced ties with both.

- India sees the current China-Russia closeness as a security concern; a US-Russia thaw could dilute this alignment.

- India should avoid ideological positions in great-power conflicts and instead focus on strengthening its own national power.

[Busting myths and half-truths about Poshan Tracker-The Indian Express The Ideas Page](#)

Sociology

Easy Explanation

The article explains that the Poshan Tracker — a digital system used in Anganwadi centres — is facing many myths and misunderstandings. The government introduced digital tools like e-KYC (Aadhaar-based verification) and Facial Recognition System (FRS) to stop problems such as duplicate beneficiaries, leakage of food rations, and misuse.

e-KYC is a one-time Aadhaar verification done through an OTP sent to the beneficiary's registered mobile number.
 FRS helps ensure that rations go to the correct person by matching a live photo with the registration photo. This improves transparency and prevents fraud.

Many myths exist:

- e-KYC is not required every month — only once.

- Children under six do NOT undergo facial recognition — their parent/guardian is authenticated.

- FRS works both online and offline, so poor connectivity doesn't block ration delivery.

- Photos and data are NOT stored on local phones; they are encrypted and securely stored.

- Beneficiaries do NOT need smartphones; Anganwadi workers do everything through the app.

Around 75% of beneficiaries have already completed e-KYC and FRS, showing strong adoption. The next step is improving usability, reducing burdens on workers, and enhancing digital literacy.

Key Takeaways

- Poshan Tracker is a large-scale digital nutrition monitoring system connecting 1.4 million Anganwadi centres and 88 million beneficiaries.

- e-KYC and Facial Recognition were introduced to stop fake beneficiaries, ration leakage, and fraud.

- e-KYC is a **one-time** Aadhaar-based process, not a monthly requirement.

- Children under six are **not** subjected to facial recognition; their identity is verified through parents.

- FRS works **offline and online**, removing hurdles in rural low-connectivity areas.

- No personal data or photographs are stored locally; all information is encrypted and protected.

- Beneficiaries do not need smartphones; Anganwadi workers handle authentication.

- Around **75% beneficiaries** have completed e-KYC + FRS, showing strong scale readiness.

- Focus now needs to shift to better communication, usability improvements, and digital training for workers.

What does the draft Seeds Bill entail?-The Hindu Text and Context

Economy

Easy Explanation

The government has released a new draft Seeds Bill to update India's outdated seed laws from 1966 and 1983. The goal is to ensure better seed quality, stop fraud, and modernise the seed sector while making business easier for companies.

India currently produces more seeds than it needs, and the seed industry wants modern rules that match today's technology and trade standards. Farmers' groups, however, are worried that the Bill may favour big companies and harm farmers' control over seeds.

The Bill introduces clear rules for seed production, import, sale, quality standards, testing, and penalties. Farmers can still save, sow, use and share seeds, but they cannot sell farm-saved seeds **under a brand name**. New committees at the Central and State levels will set standards and oversee seed-related activities. Seed processing units must register with the State, and there will be laboratories and inspectors for testing and enforcement.

Compared to the 2019 draft, this Bill has **much stricter punishments**, clearer links to farmers' rights under the PPVFR Act, and tighter seed quality norms.

Farmers' groups fear that the Bill may increase cultivation costs, encourage corporate dominance, threaten seed sovereignty, and weaken existing protections under biodiversity and farmers' rights laws.

Key Takeaways

- The new draft Seeds Bill aims to update old laws (1966 Act, 1983 Order) and modernise seed regulation.

- It seeks to balance **quality control**, **ease of doing business**, and **strict penalties** for violations.

- Farmers retain the right to **save, sow, share, exchange** seeds but **cannot sell farm-saved seeds under a brand name**.

- The Bill sets up **Central and State Seed Committees**, a **National Register of seed varieties**, and requires **mandatory registration of seed processing units**.

- Field trials, testing labs, and seed inspectors will ensure quality and traceability.

- Penalties are now tougher: fines from ₹50,000 to ₹30 lakh and imprisonment up to 3 years.

- The new draft tightens quality norms and liberalises seed import rules compared to the 2019 version.

- Farmers' groups fear corporatisation, higher costs, loss of seed sovereignty, and weakening of biodiversity and farmers' rights laws.

- They demand alignment with the **PPVFR Act**, **CBD**, and **International Treaty on Plant Genetic Resources**.

[For Assam tea, erratic climate and stagnant prices present a crisis -The Hindu Science](#)

Geography

Easy Explanation

Assam's tea industry is facing a **double crisis**:

1. **Climate change is disrupting the weather**, making it too hot, too dry, or too wet at the wrong times.

2. **Tea prices are not increasing**, even though the cost of growing tea is rising.

Tea grows well only within a narrow climate range — specific temperature, rainfall, and soil moisture. Assam once had perfect conditions, but now:

- Nights are warmer, rains are irregular, and soil moisture is falling.

- Dry spells alternate with sudden heavy rains.

- New pests and diseases are appearing because of higher temperatures.

- Tea leaves blacken, bushes wilt, and the timing of flushes has become unpredictable.

Even with these challenges, **tea prices have barely risen** in 30 years. Costs of labour, fertilisers, irrigation, and energy are going up, but auction prices are stagnant. This leaves growers with low profits and no money to replant ageing bushes or invest in climate-resilient varieties.

Studies show that by 2050, many of Assam's best tea-growing areas may lose suitability. Climate stress will also impact the **flavour and aroma** that make Assam tea famous.

To survive, the industry is trying solutions like drought-resistant varieties, soil conservation, shade trees, better irrigation, and diversified income sources. But **policy support is crucial**, especially with elections coming in 2026. Tea workers — a major voting group — are expected to raise concerns about wages, livelihoods, and climate impacts.

Key Takeaways

- Assam tea depends on stable climate conditions; climate change is disrupting these, threatening yields and tea quality.

- Rising temperatures, erratic rainfall, declining soil moisture, and new pests are causing blackened leaves, wilting bushes, and unpredictable flush cycles.

- Tea prices have grown slowly (4.8% annually), far below inflation and rising production costs, causing financial stress for growers.

- Studies (IPCC-based models) show that by 2050, current top tea regions may lose suitability, pushing cultivation to higher altitudes.

- Assam has already seen a **1°C rise** in minimum temperature and **200 mm rainfall loss** over 90 years.

- Climate stress affects not just yield but also **flavour and aroma**, reducing global competitiveness.

- Adaptation measures include climate-resilient varieties, mulching, shade trees, micro-irrigation, and sustainable standards like **trustea**.

- Diversifying into fruits, spices, organic teas, fisheries, livestock, and tourism can reduce risk.

- Tea workers form a major political group; their livelihood concerns will likely influence the 2026 State elections.

27th November 2025

[How Delhi's air quality monitors work,and why their readings can falter-The Indian Express Explained Page](#)

Environment

Easy Explanation

Delhi uses 40 automated air-quality monitoring stations (CAAQMS) to measure pollutants like PM2.5, PM10, NO_2, SO_2, CO, O_3, ammonia and lead. These stations use sophisticated instruments such as Beta Attenuation Monitors (BAM) for particulate matter and optical methods for gases.

However, their accuracy depends heavily on proper calibration, uninterrupted power, correct installation, and weather conditions. High humidity, extreme pollution spikes, poor maintenance, and data gaps can distort readings, sometimes causing large overestimations. Recent studies show that Delhi's extreme meteorology (like winter humidity and heavy pollution) can cause PM2.5 overestimation by more than 30%—even up to 5 times during extreme episodes.

Key Takeaways

1. How the monitoring system works

- Delhi has 40 temperature-controlled CAAQMS, each acting like an automated lab.

- They measure eight major pollutants using CPCB-approved instruments.

- PM2.5 & PM10 are measured using Beta Attenuation Monitors; gases are measured using optical absorption/emission.

2. Why accurate AQI needs reliable data

- CPCB requires at least 16 hours of valid daily data for at least three pollutants (including PM2.5/PM10).

- Any shutdown due to calibration, power cuts, or weather reduces valid data and affects AQI.

3. Common reasons for faulty or skewed readings

- **High humidity** `makes particles absorb water → appear heavier → PM readings rise artificially.`

- **Instrument drift** due to delayed calibration.

- **Wrong station placement** near buildings, vents, or trees affects airflow.

- **Power and data-transmission failures** cause real-time gaps.

- **Not measuring pollutants like lead** reduces completeness of AQI.

4. What scientific studies found

- A 2021 CSIR-NPL/AcSIR study found **overestimation above 30%** when RH > 60%.

- Bias increases in winter and post-monsoon (high humidity + high pollution).

- During severe episodes, PM overestimation may increase **up to 5 times**.

- Site-specific correction factors can reduce bias from **46% to under 2%**.

- EPA notes that very high filter loading disturbs airflow and destabilises readings.

5. Real-world impact

- On Diwali night this year, sudden pollution spikes caused **data blackouts** at several stations, as instruments could not handle extreme particulate loads.

Geography

Easy Explanation

Volcanoes behave differently depending on the **type of magma** inside them. If the magma is **low in silica**, it stays runny, allowing gases to escape easily — this produces gentle eruptions with **flowing lava**.

If the magma is **high in silica**, it becomes thick and sticky. Gases get trapped inside it, pressure builds up, and when it becomes too much, the volcano explodes violently — sending **ash, smoke, and fragmented rock (tephra)** high into the sky instead of lava.

The Hayli Gubbi volcano in Ethiopia erupted after 12,000 years and produced huge ash plumes because its magma is **silica-rich**, leading to an **explosive, ash-dominated eruption**.

Key Takeaways

1. Why volcanoes erupt differently

- Eruption style depends mainly on **magma viscosity** and **dissolved gas content**.

- Low-silica magma → runny → gases escape easily → lava-flow eruptions.

- High-silica magma → sticky → gases trapped → explosive ash-heavy eruptions.

2. Role of silica in determining viscosity

- Silica content controls how "sticky" the magma is.

- Runny magma produces gentle, effusive eruptions.

- Sticky magma builds pressure and results in sudden blasts.

3. What happened in the Hayli Gubbi eruption

- The volcano erupted after lying dormant for 12,000 years.

- It released **thick plumes of ash and gases**, not streams of lava.

- This indicates **gas-rich, silica-heavy magma** and high internal pressure.

4. Expert explanation (IIT Bombay)

- Silica-poor magma lets volatiles escape easily → no big explosions.

- Silica-rich magma traps volatiles → pressure rises → explosive ash eruption.

sociology

Easy Explanation

The Centre plans to introduce the **Higher Education Commission of India (HECI) Bill, 2025**, to create a **single regulator for higher education**. This authority will merge the functions of **UGC, AICTE, and NCTE**, simplifying regulation and reducing bureaucratic hurdles. HECI will have four verticals for regulation, accreditation, learning outcomes, and funding, aiming to make universities **independent and self-governing**.

The idea comes from the **National Education Policy (NEP) 2020**, which highlighted that the current system is "heavy-handed" and concentrates power in few bodies, causing conflicts and lack of accountability. Previous attempts in 2018 faced criticism for centralisation of power, limited stakeholder representation, and potential conflicts between national and state regulations.

Key Takeaways

1. Purpose of HECI

- Merge UGC (higher education), AICTE (technical), NCTE (teacher education) into **one regulatory body**.

- Reduce bureaucracy and help institutions gain **autonomy**.

- Ensure **standardisation** while improving governance.

2. Structure under NEP 2020

- **National Higher Education Regulatory Council** – regulates all fields except medical and legal.

- **National Accreditation Council** – accrediting institutions.

- **General Education Council** – sets learning outcomes.

- **Higher Education Grants Council** – handles funding.

- Each vertical will have experts; the main HECI body will be **small and independent**.

3. Previous attempts and concerns

- 2018 Bill faced pushback for **centralisation**, limited representation of disadvantaged groups, and keeping funding with the Ministry.

- Parliamentary committee highlighted risks for **state universities** due to insufficient state-level representation.

- Critics warn **over-regulation and central government-heavy composition** could persist.

4. Goal

- Streamline regulatory functions, reduce overlap and conflicts, and allow universities to **operate more independently** while maintaining quality standards.

Limited room-The Hindu Editorial

Economy

Easy Explanation
Since late November 2024, the **rupee has depreciated about 7%** against the dollar, sliding from ~83.4 to ~89.2. This is similar to 2018, when external pressures like **strong dollar, rising U.S. interest rates, and trade tensions** caused emerging market currencies to weaken. The RBI uses tools like **currency swaps and forex sales** to manage volatility, but under India's **managed float system**, it cannot fix the exchange rate—it can only smooth sharp swings.

The rupee's slide is driven by **external pressures** like a widening current-account deficit, higher imports (especially crude and bullion), and exporters facing high U.S. tariffs. On the positive side, India's **forex reserves are strong (~$693 billion)**, and **domestic inflation is low (0.25%)**, giving the RBI room to allow moderate depreciation without aggressive rate hikes.

Long-term, the article stresses India's **dependence on oil** as a key vulnerability and suggests strategic steps like **faster transport electrification** and well-planned trade policy to reduce external risks.

Key Takeaways

1. Recent rupee depreciation

- Rupee fell ~7% from 83.4 → 89.2 against the dollar since Nov 2024.

- Comparable to 2018 (11%-12% slide).

- Driven by **global dollar strength, rising U.S. rates, trade tensions, current-account deficit, and imports of crude/bullion**.

2. RBI actions

- Conducted **currency swaps** (e.g., $10 billion in Feb 2025) to infuse long-term rupee liquidity.

- Sold **net $50 billion in forex** to stabilize rupee.

- Can **smooth volatility**, but cannot fix the exchange rate under floating regime.

3. Domestic buffer

- **Forex reserves ~ $693 billion** – comfortable.

- **Retail inflation low (0.25%)**, allowing RBI flexibility.

4. External risks

- Heavy **dependence on oil imports** (~20% of FY25 imports).

- Trade agreements (Japan, UAE, ASEAN) may **tilt trade balance against India**.

5. Policy implications

- Monetary measures alone are insufficient.

- Long-term strategies: **electrification of transport, strategic trade policy**, reduce oil dependence, manage import/export pressures.

The INO that wasn't and the JUNO that is-The Hindu Editorial

Science and technology

Easy explanation
India's **India-based Neutrino Observatory (INO)** has been stalled for years, while China has completed its **Jiangmen Underground Neutrino Observatory (JUNO)**. Both were designed to study **neutrinos**, elusive subatomic particles that rarely interact with matter, which is why the detectors must be huge.

INO's detector was planned to be installed inside a mountain in Tamil Nadu to use rock as natural shielding, but **local opposition, political issues, and procedural missteps** stalled the project. Meanwhile, JUNO was completed, involving **international collaboration** and has already started producing results, such as precise measurements of θ–12, contributing to understanding neutrino mass ordering.

The article highlights that missing a major project like this sets India back in the global race for neutrino research. The lesson is that **scientific readiness alone isn't enough**; local conditions, public engagement, and governance also determine the success of large-scale "Big Science" projects.

Key Takeaways

1. INO vs JUNO

- Both observatories designed to study **neutrino oscillations** and mass ordering.

- INO stalled due to **massive scale, local opposition, and bureaucratic challenges**.

- JUNO completed in China, already producing initial scientific results.

2. Scientific goal

- Neutrinos exist in **three flavours** and can oscillate between them.

- Determining **neutrino mass ordering** was the primary goal.

- JUNO measured θ–12 precisely; INO was meant to complement this research.

3. Reasons for INO delay

- 50-kiloton detector required **mountain installation**, not feasible in lab.

- **Local protests and political interference** slowed approvals.

- **Procedural missteps** and underestimation of controversy by the collaboration.

4. Implications for India

- Missing the project delayed India's entry into global neutrino research.

- Future "Big Science" projects require **scientific readiness + local, administrative, and social preparedness**.

- India has the **expertise and resources**, but conditions on the ground must also be supportive.

5. Broader lesson

- Large-scale scientific projects are not just about research; **community engagement, bureaucracy, and logistics** are equally critical for success.

[Presidential opinion versus the federal structure-The Hindu Editorial](#)

Polity

Easy Explanation
 The article discusses the **Supreme Court's opinion on the powers of Governors and the President of India**, warning that unchecked powers could **weaken India's federal structure**. Under the Constitution, **States and the Union are equal partners**, and Governors are meant to act within constitutional limits, not as extensions of the central government.

Delays in giving assent to State legislation, or the use of "unwritten powers" by Governors and the President, risk undermining **democracy and state autonomy**. The article also highlights broader trends: the Centre controlling finances, conditional schemes, and using investigative agencies politically, all of which put pressure on States. The piece stresses that **reasonableness, fairness, and judicial review** must guide the exercise of powers to protect the **federal structure**, which is a part of India's **basic constitutional framework**.

Key Takeaways

1. Federalism under threat

- Union and States are **equal partners**; States enjoy autonomy over their subjects (e.g., land, law & order).

- Governors are **unelected** and often act on the Centre's political agenda.

- Delays in assent to legislation can **undermine elected State governments**, effectively giving Governors a "pocket veto."

2. Principles at stake

- Powers must be exercised **reasonably and within timelines**.

- **Fairness, non-arbitrariness, and judicial review** are essential.

- Governors/President cannot claim immunity from judicial review.

3. Broader context of centralisation

- Refusal to compensate States for GST losses.

- Non-sharing of cesses collected exclusively by Centre.

- Conditional central schemes demanding State contributions.

- Misuse of investigative agencies against opposition governments.

- Governor's office being used as a tool for central control.

4. Implications

- Weakening federalism turns States into administrative outposts.

- Democracy suffers if the **will of the people is subjugated to unelected officials**.

- Preservation of federalism is critical for the **survival of India's constitutional democracy**.

How to navigate a complex global paradigm-The Hindu Text and Context

International relations

Easy Explanation
The article covers the **sixth U.S.-China Hong Kong Forum (CUSEF)** held on November 17–18, 2025, discussing the complex, tense, and mistrustful relationship between the U.S. and China. Traditional

engagement methods no longer suffice, as **strategic anxieties, technology (especially AI), and geopolitics** dominate discourse. Hong Kong serves as a neutral "middle space" for dialogue and **people-to-people contact**, even as its China-centric shift continues.

Key takeaways include the need for **new governance frameworks for AI and space**, crisis-prevention mechanisms for incidents like Taiwan or military encounters, and an acknowledgment that the **U.S.-China relationship won't return to its previous state**. India, while unable to control this great-power rivalry, can **strengthen itself economically, technologically, and institutionally** to maintain strategic autonomy and navigate a fractured global order.

Key Takeaways

1. Complex U.S.-China rivalry

- Trust is low; traditional engagement and managed competition are insufficient.

- Strategic anxieties now influence **domestic politics** and shape public narratives.

- Decline in student exchanges weakens **familiarity and people-to-people ties**.

2. Technology and governance

- AI is a global public good; requires **equity, transparency, and accountability** in governance.

- Civilian innovation overlaps with defence applications, requiring international mechanisms.

- Similar concerns apply to space governance.

3. Taiwan and crisis prevention

- Military tensions and incidents (e.g., EP-3) risk escalation.

- New vocabularies and mechanisms are needed to prevent crises.

4. Role of Hong Kong

- Acts as a **neutral space** for dialogue and exchanges.

- Preserves transparency, connectivity, and cultural hybridity.

- Highlights the importance of **middle spaces** in global diplomacy.

5. Lessons for India

- Cannot control U.S.-China dynamics but can **navigate them strategically**.

- Build domestic **technological, economic, and institutional strength**.

- Avoid rigid binaries; focus on **steady engagement, cultural ties, and practical cooperation**.

6. Future global order

- The relationship will remain turbulent; alternative to managed rivalry leads to **cascading risks** (climate, pandemics, supply chains).

- Requires **responsibility, dialogue, and cooperation** rather than reflexive competition.

- Steady, nuanced diplomacy and middle-ground spaces are essential.

29th November 2025

[How Nvidia vs Google AI chip rivalry could unfold-The Indian Express Explained Page](#)

Science and technology

Easy Explanation

American chip company **NVIDIA** and tech giant **Google** are competing to become the main supplier of computer chips used for artificial intelligence (AI).

AI systems need extremely powerful chips to process huge amounts of data. NVIDIA has been the dominant company because its GPUs are very powerful and flexible. Most AI companies use NVIDIA chips to train their models.

Google, however, has designed its own AI chips called Tensor Processing Units (TPUs). These chips are used inside Google's data centres and cloud services. Recently, Google also trained its latest AI system using its own TPUs instead of NVIDIA chips. This showed that Google wants to reduce its dependence on NVIDIA.

There are also reports that Meta, a big customer of NVIDIA, may start using Google's chips. This created panic among investors and caused NVIDIA's share price to fall temporarily.

NVIDIA says it is still "a generation ahead" because it not only sells chips but also provides a complete software platform (CUDA) that many developers rely on. This makes it difficult for companies to move away from NVIDIA.

Google's main problem is manufacturing. It does not make chips in its own factories and depends on TSMC, the world's largest chip maker. Since TSMC is cautious about expanding factories, Google may struggle to produce enough chips to challenge NVIDIA quickly.

For now, NVIDIA remains the market leader, but Google's slow and steady rise means stronger competition in the future.

Key Takeaways

1. Market Leadership

- NVIDIA controls almost 90% of the global AI chip market.

- Its GPUs are the most trusted and widely used chips for AI.

- NVIDIA became powerful because its gaming chips also worked well for AI.

2. Google's Strategy

- Google built its own AI chips called TPUs.

- It is reducing dependence on NVIDIA chips.

- Google trained Gemini on TPUs, not NVIDIA GPUs.

3. Threat from Big Customers

- Reports suggest Meta may use Google chips.

- Losing major customers could hurt NVIDIA.

- Investor confidence was affected by this news.

4. Software Power

- NVIDIA provides CUDA software along with chips.

- Many AI applications are written only for NVIDIA systems.

- Switching to a different platform is difficult.

5. Manufacturing Bottleneck

- Google depends on TSMC to produce its chips.

- Chip factories are expensive and slow to build.

- Limited production capacity can slow Google's expansion.

6. Investor Worries

- NVIDIA's share price dropped after rumours.

- Investors fear the AI boom may be slowing.

- The company's valuation is under closer scrutiny.

7. Future Outlook

- NVIDIA remains the leader for now.

- Google is a strong long-term competitor.

- The AI chip market is moving from monopoly to competition.

[Golfcarts,3D exhibits:How Chhattisgarh's Sirpurisaiming forUNESCOtag-The Indian Express Explained Page](#)

Art and Culture

Easy Explanation

Sirpur is an ancient archaeological town in **Chhattisgarh** that is now being developed as a modern heritage tourism destination. The state government has applied for Sirpur to get the UNESCO World Heritage Site tag, which would give it international recognition. If approved, Sirpur would become the first UNESCO heritage site in Chhattisgarh.

Sirpur is located in the Mahasamund district, about two hours from Raipur. The site contains remains from the 5th to 12th centuries and includes Hindu, Buddhist, and Jain monuments. The area was once a major religious, cultural, and commercial centre.

To improve tourist facilities, the government plans to introduce battery-operated golf carts, organised heritage pathways, digital displays, and 3D exhibits. At present, tourists face difficulty moving around the unplanned and scattered site.

Sirpur stands out because it shows early urban planning. It had temples, monasteries, markets, water systems, and residential areas. The Lakshmana Temple, built in the 7th century, is regarded as one of the finest brick temples in India. The Surang Tila complex with its steep stairs and multiple shrines is also an architectural highlight.

An Interpretation Centre is being developed with digital storytelling and 3D reconstructions to explain Sirpur's Buddhist, Shaiva, and royal past. The focus is on eco-tourism, cultural promotion, local employment, and heritage awareness.

The Archaeological Survey of India (ASI) and the Sirpur Special Area Development Authority recently inspected the site to support its UNESCO nomination.

Key Takeaways

1. UNESCO World Heritage Goal

- Sirpur is being proposed for UNESCO status.

- It would be Chhattisgarh's first World Heritage Site.

- UNESCO recognition increases tourism, funding, and protection.

2. Historical Importance

- Sirpur dates from the 5th to 12th centuries.

- It includes Hindu, Jain, and Buddhist monuments.

- It was once the capital of Dakshina Kosala.

- Archaeological remains include temples, monasteries, markets, and water systems.

3. Unique Architecture

- Lakshmana Temple is a top example of brick temple architecture.

- Surang Tila has multiple shrines arranged in the Panchayatana style.

- Sirpur reflects early medieval town planning.

4. Tourism Infrastructure Plans

- Battery-operated golf carts to reduce walking time.

- Paved heritage pathways for easier navigation.

- Four heritage zones: Buddhist, Hindu, Administrative, Riverine.

- One central route to connect all clusters.

5. Digital and Visitor Facilities

- Interpretation Centre with 3D exhibits and digital storytelling.

- Guided tours with trained local youth.

- Eco-friendly landscaping and cultural promotion.

6. Role of ASI and Land Management

- ASI and SADA are jointly developing the site.

- ASI has requested 30 hectares of land for unified management.

- Buffer zones and corridors will protect the monuments.

7. Wider Impact

- Boost to local economy through tourism.

- Employment for local youth.

- Increased national and global recognition.

- Stronger conservation and heritage education.

Aravallis are precious, need SC's shield-The Indian Express The Ideas Page

Environment

Easy Explanation

The Aravalli range is one of India's oldest mountain systems and stretches for almost 700 kilometres from Gujarat to Haryana through Rajasthan and Delhi. It plays a crucial role in supporting life by recharging groundwater, blocking hot desert winds, controlling pollution, and stopping the Thar Desert from spreading toward fertile northern plains.

A recent recommendation by a government panel, accepted by the Supreme Court, has narrowed the definition of what counts as the Aravalli range. The panel says that only land elevated above 100 metres

should be recognised as part of the mountain system. This new definition could exclude nearly 90% of the Aravalli area in Rajasthan, which has the largest share of the range.

The Forest Survey of India has mapped over 12,000 hills in the Aravallis that are more than 20 metres high, but under the new definition, only about 1,000 of those would qualify. This raises fears that large parts of the mountain range will be removed from legal protection, especially from restrictions on mining.

Several reports, including one by the Supreme Court's Central Empowered Committee, have shown that the Aravallis have already lost around one-fourth of their hills due to mining and construction. Environmentalists fear that redefining the range will lead to even faster destruction.

There is also a contradiction in government policy. On the one hand, there is an official restoration plan which calls for protecting the Aravallis from deforestation, grazing, mining, and encroachment. On the other, the new definition weakens protection by shrinking legally recognised areas.

The Supreme Court has played a strong role in protecting the environment in the past. That is why the article argues that the Court should intervene again firmly to protect the Aravallis, which are described as the "green lungs" of North India.

Key Takeaways

1. Ecological Importance

- The Aravalli range is vital for groundwater recharge, climate control, and checking desert expansion.

- It protects North India from pollution and extreme desert winds.

2. New Government Definition

- Only land above 100 metres is now proposed as "Aravalli land".

- This would cut down protected area in Rajasthan by nearly 90 percent.

3. Conflict with Official Data

- The Forest Survey of India maps hills above 20 metres, not 100 metres.

- The new rule ignores scientific mapping done by government agencies.

4. Existing Damage

- Around 25 percent of Aravalli hills are already destroyed due to mining.

5. Policy Contradiction

- The government also has a restoration plan to protect the Aravallis.

- The new rule undermines its own conservation policy.

6. Supreme Court's Responsibility

- The SC has earlier recognised Aravallis as a single ecosystem.

- The article urges the Court to give stronger legal protection again.

7. Overall Message

- The Aravallis are not just hills but an ecological shield for North India.

- Weak legal definitions could permanently damage this natural barrier.

[In a multipolar world,technology is power-The Indian Express The Ideas Page](#)

International relations

Easy Explanation

At the G20 Summit in Johannesburg, the Prime Ministers of India, Canada, and Australia announced a new partnership called the Australia–Canada–India Technology and Innovation (ACITI) Partnership. The leaders involved were **Narendra Modi**, **Mark Carney**, and **Anthony Albanese**.

The aim of ACITI is to strengthen cooperation in important areas such as clean energy, artificial intelligence, and critical minerals like lithium and rare earth elements. These resources are necessary for electric vehicles, batteries, electronics, and renewable energy technologies.

This partnership must be understood in today's global situation, where countries no longer depend on free trade alone. Instead, they prioritise national security and technological control. The US–China rivalry has turned into a technology war, where countries fear overdependence on a single nation for vital supplies.

India has experienced this vulnerability because it depends heavily on China for rare earth elements and pharmaceutical ingredients. Canada and Australia have also become cautious about relying too much on China after facing economic pressure.

ACITI brings together Canada and Australia's mineral wealth with India's large talent pool and manufacturing capacity. It is based on the idea of "technological sovereignty"—countries want control over key technologies instead of depending on rivals.

The agreement also reflects a global shift away from large international institutions towards small, focused partnerships (called "minilateralism"), where like-minded countries work together on specific goals.

In today's multipolar world, military power alone is not enough. Control over technology is now the main source of influence and power.

Key Takeaways

1. Birth of ACITI

- India, Canada, and Australia have formed a technology and innovation partnership called ACITI to strengthen cooperation in critical sectors.

- The partnership focuses on clean energy, artificial intelligence, and secure supply chains for essential minerals.

2. Shift in Global Order

- The world is moving from open globalisation to techno-nationalism, where countries prioritise security over economic efficiency.

- The US–China trade conflict has evolved into a full-scale technology rivalry, reshaping global cooperation.

3. Weaponisation of Interdependence

- Countries depending on one nation for critical supplies have become vulnerable to political pressure and economic shocks.

- India, Canada, and Australia have all reassessed their dependence on China for raw materials and manufacturing.

4. Strategic Value of Technology

- Technologies such as semiconductors, AI, and quantum computing are now core components of national security.

- Technology has become a tool of power, influence, and economic independence for nations.

5. Mineral and Manufacturing Balance

- Canada and Australia supply raw materials like lithium and cobalt needed for clean energy technologies.

- India offers manufacturing capacity and skilled manpower to process these resources.

6. Move Towards Minilateralism

- Countries are preferring smaller and flexible partnerships instead of large institutions like WTO or UN.

- ACITI represents this new model of cooperation focused on practical strategic outcomes.

7. Technology = Power

- In a multipolar world, influence is no longer measured only by military or territory.

- Control over digital and industrial technology defines national strength.

[Tense waters-The Hindu Editorial](#)

International relations

Easy Explanation

Relations between **China** and **Japan** have worsened after Japan's newly elected Prime Minister **Sanae Takaichi** said that a Chinese military attack on **Taiwan** would also threaten Japan's survival. This was important because Japan had earlier avoided making such direct statements and preferred a policy of staying unclear about whether it would intervene.

China reacted strongly. It demanded that Japan withdraw the statement, banned imports of Japanese seafood, and warned Chinese citizens not to travel to Japan. Chinese coast guard ships also increased patrols near the disputed **Diaoyu/Senkaku Islands**, which both countries claim. China further warned that if Japan helps Taiwan militarily, it would treat it as an act of aggression.

Behind this tension lies history. Taiwan was ruled by Japan from 1895 to 1945, a period remembered bitterly in both Taiwan and China. After the Chinese Civil War, Taiwan came under separate administration, but China still considers it part of its territory. Most countries, including the **United States**, follow the "One-China policy", which recognises China's claim while maintaining informal ties with Taiwan.

Despite political hostility, China and Japan are economically connected and trade heavily with each other. However, strong statements from Japan's new government and sharp Chinese retaliation have raised fears of a wider conflict in East Asia.

The article argues that peace depends on preserving the current situation: China maintaining its claim, Taiwan governing itself without declaring independence, Japan avoiding direct military action, and the United States balancing security support with diplomacy. Any misstep could increase instability in the region, so restraint and dialogue are essential.

Key Takeaways

1. Cause of the Diplomatic Crisis

- Tensions spiked after Japan's Prime Minister stated that a Chinese attack on Taiwan could threaten Japan's survival, suggesting possible Japanese military involvement.

- This marked a major shift from Japan's earlier strategic ambiguity, making China view the remark as a direct provocation.

2. China's Strong Reaction

- China demanded that Japan retract the statement and imposed measures such as banning Japanese seafood imports and issuing travel warnings.

- It increased coast guard patrols near the disputed Diaoyu/Senkaku Islands and warned that Japanese intervention in Taiwan would be treated as aggression.

3. Historical Sensitivities

- China's anger is partly shaped by memories of Japan's colonial rule over Taiwan and brutal occupation of parts of China during the early 20th century.

- Taiwan's unresolved political status, claimed by China but self-governed since 1949, remains a deeply emotional and strategic issue for Beijing.

4. Current Strategic Reality

- Both China and Japan rely heavily on each other economically, with trade worth over $300 billion, making conflict risky for both sides.

- The rise of a hardline Japanese leader and China's assertive military posture increases the danger of miscalculation.

5. Importance of the Status Quo

- The long-standing balance — China's sovereignty claim, Taiwan's self-rule, and America's strategic ambiguity — has helped maintain peace for decades.

- Preserving this status quo is essential because any abrupt change could destabilise East Asia and heighten the risk of conflict.

6. Role of the United States

- As Japan's treaty ally, the U.S. must manage a delicate balance between supporting Japan's security needs and preventing escalation.

- Diplomatic efforts are necessary to ensure that competition does not turn into open confrontation.

7. Need for De-escalation

- China and Japan must reduce tensions and focus on rebuilding trust through economic and diplomatic engagement.

- Avoiding aggressive rhetoric and military signalling is crucial to ensuring peace in an already volatile region.

[Data deficiencies-The Hindu Editorial](#)

Economy

Easy Explanation

The International Monetary Fund (IMF) has given India a low 'C' grade for its national accounts statistics, which measure important data like GDP, production, spending and investment. This grade suggests that there are weaknesses in India's economic data that make it difficult for global institutions and policymakers to correctly understand how India's economy is performing.

The biggest problem is that India still uses 2011–12 as the base year for many economic indicators such as the Consumer Price Index (CPI), Index of Industrial Production (IIP), and national accounts. Over more than a decade, India's economy has changed significantly, but outdated data fails to reflect shifts in consumption patterns, industry structures, and inflation trends accurately.

Because of incorrect inflation tracking, the Reserve Bank of India's monetary policy is also affected. When CPI does not reflect real price changes properly, decisions on interest rates may be misinformed.

Another major issue is that India's data system does not adequately capture the informal sector, which employs a large share of India's population. Since most informal work is unregistered and cash-based, it is difficult to measure—but ignoring it leads to inaccurate GDP numbers.

The government has said that new data series for GDP, CPI, and IIP will be introduced in early 2026. The incorporation of GST data into GDP estimation is expected to improve accuracy and credibility.

Although India's data systems have improved over time, the IMF's warning highlights the urgent need for faster data updates and better measurement methods.

Key Takeaways

1. IMF's Assessment

- India received a 'C' grade for national accounts, indicating weak data reliability and limited economic transparency.

- This places India among countries with inferior statistical quality despite having better capacity than most.

2. Outdated Base Year

- India still uses 2011–12 as the base year for GDP, CPI, and IIP.

- This prevents accurate measurement of today's economy.

3. Inflation Measurement Problems

- The Consumer Price Index uses outdated weights, especially for food.

- This distorts real inflation trends.

4. Impact on Policy

- Weak data reduces the effectiveness of fiscal planning.

- RBI's interest-rate decisions may suffer due to flawed CPI data.

5. Informal Sector Blind Spot

- A large section of India's economy remains poorly measured.

- This leads to underestimation or misrepresentation of livelihoods.

6. Reform Efforts

- The government is revising methodologies and base years.

- New data series are expected in 2026.

7. Way Forward

- Using GST and corporate databases will increase accuracy.

- Faster data updates will improve trust and decision-making.

30th November 2025

[How will new codes change labour laws?: TH FAQ](#)

Economy

Easy Explanation

The Union government has announced that India's four new Labour Codes will finally be implemented. These laws were passed by Parliament between 2019 and 2020 but could not be enforced earlier because labour comes under the **Concurrent List**, meaning both the Centre and States must frame their own Rules for implementation.

While the Centre prepared its draft Rules by late 2020, most States took much longer. As of July 2025, 32 States and Union Territories have issued draft Rules under the four Codes. However, West Bengal and Lakshadweep have not published Rules under any Code, Delhi has done so only for the Code on Wages, and Tamil Nadu is yet to notify Rules under the Code on Social Security. The Centre says this delay by States is the main reason implementation took so long.

The four Labour Codes merge and replace **29 older labour laws**, some of which dated back to the colonial period. The government says the aim is to simplify complex labour laws, promote formal employment, expand social security, ensure timely and minimum wages, and make India a more attractive destination for business.

Employers' bodies have largely welcomed the Codes, saying they will reduce legal complexity, improve industrial harmony, and boost job creation. But MSME groups fear higher compliance costs and disruption to small businesses unless there is a transition period with relaxed penalties.

Trade unions, except the Bharatiya Mazdoor Sangh, strongly oppose the Codes. They fear loss of States' powers over minimum wages, weaker social security coverage, restrictions on trade union functioning, curbs on the right to strike, and increased contractualisation. Several nationwide strikes have already been held against these reforms.

The government has now said that the draft Rules will be re-published, and all stakeholders will get 45 days to respond. Some opposition-ruled States have openly opposed the Codes, and trade unions want the long-pending Indian Labour Conference to be convened for wider consultation.

Key Takeaways

1. What are the four Labour Codes
- Code on Wages, 2019
- Industrial Relations Code, 2020
- Code on Social Security, 2020
- Occupational Safety, Health and Working Conditions (OSHWC) Code, 2020
   Together they replace 29 older labour laws.
2. Why implementation was delayed
- Labour is in the Concurrent List
- States must frame Rules along with the Centre
- Many States delayed issuing draft Rules
3. Major reforms introduced
- Mandatory appointment letters
- Statutory minimum wages and national floor wage
- Social security extended to gig and platform workers
- Gender-neutral pay and night work for women
- Shift from punishment to compliance-based regulation
4. Employers' response
- Large industry bodies support the Codes
- MSMEs fear higher costs and demand transition support
5. Trade unions' concerns
- Loss of State powers over wages
- Weak social security for 93% informal workers
- Restrictions on trade unions and right to strike
- Greater contractualisation and fewer worker protections
6. What lies ahead
- Draft Rules to be re-published
- 45 days for stakeholder feedback
- Political resistance from some States
- Demand to revive the Indian Labour Conference for broader dialogue

What are the facts on uranium in breast milk?: TH FAQ

Science

Easy Explanation

A recent scientific study from Bihar found small amounts of uranium in the breast milk of mothers from six districts of the State. When this news came out, many people became scared because uranium is known as a radioactive substance. However, doctors and scientists have clarified that while the finding needs attention, it does not mean that babies are currently at a high risk of cancer or serious immediate harm.

The study collected breast milk samples from 40 mothers between October 2021 and July 2024 from districts like Begusarai, Katihar, Nalanda, Samastipur, Khagaria and Bhojpur. All samples were tested in a cancer research laboratory in Patna. Every sample showed the presence of uranium, but the amount ranged between 0 and 5.25 micrograms per litre. This level is far below the World Health Organization's safe limit of 30 micrograms per litre set for drinking water. Katihar had the highest level among the districts tested.

Scientists explained that the uranium found in breast milk is mainly coming from contaminated groundwater. Uranium is naturally present in small amounts in rocks, soil and water. In many parts of India, groundwater already contains traces of uranium. People are exposed to it mainly through drinking water and food. When uranium enters the body, most of it is removed through urine. Only a very small fraction reaches the breast milk.

Doctors involved in the study said that the health risk to infants is currently low. Although risk calculations showed that about 70 percent of infants had some level of potential non-cancer risk, the actual amount of uranium was so small that it is not expected to cause serious health problems right now. They clearly advised that mothers should continue breastfeeding, as stopping breastfeeding would be far more dangerous for a child's health.

Experts also warned that the word "uranium" can cause unnecessary panic. They explained that adults who drink large amounts of groundwater daily actually consume much more uranium than babies who depend on breast milk. Yet adults safely pass it out of their bodies. Babies receive only a tiny fraction of that exposure.

However, the study also warned that long-term exposure to uranium over many years could affect kidney development and mental growth in children. Therefore, regular testing of groundwater and monitoring of metal contamination in food and water is very important. The researchers have recommended more detailed studies across Bihar and other States to better understand how uranium moves from the environment into the human body.

Key Takeaways

What the study found

Uranium was detected in breast milk samples from six districts of Bihar
Levels ranged from 0 to 5.25 micrograms per litre
All values were much lower than the WHO safe limit for drinking water
Katihar district recorded the highest levels

Source of uranium

Main source is contaminated groundwater
Uranium is a naturally occurring metal found in rocks, soil and water
People are exposed mainly through drinking water and food

Type of uranium detected

Uranium-238 was found
It is the most common natural uranium isotope
It is weakly radioactive but toxic in high quantities

Health impact on mothers and infants

Most uranium absorbed by mothers is excreted through urine
Only a very small amount reaches breast milk
Immediate cancer risk is considered very low
Around 70 percent infants showed only potential non-cancer risk at very low levels
Long-term exposure may affect kidneys and brain development

Breastfeeding advice

Doctors strongly advised mothers to continue breastfeeding
Stopping breastfeeding can increase infant deaths, infections and malnutrition
Risk from not breastfeeding is much higher than current uranium exposure

India's broader uranium problem

About 151 districts in 18 States report groundwater uranium contamination
Around 1.7 percent groundwater sources in Bihar are affected

Economic and social aspect

Public panic is the biggest immediate danger
Misinterpretation of scientific data can harm public health decisions

What needs to be done

Regular groundwater testing across affected regions
Monitoring of metals in water, soil and food
Larger studies with more samples
Detailed tracking of uranium movement from environment to humans

Vital vanguard: TH Profiles

Internal Security

Easy Explanation

A Tejas Mk-1 fighter aircraft crashed during an air display at the Dubai Air Show on November 21, leading to the tragic death of Indian Air Force pilot Wing Commander Namansh Syal. After the incident, questions were raised about the safety of the Tejas aircraft and the capability of Hindustan Aeronautics Limited to build reliable indigenous fighter jets. However, both Hindustan Aeronautics Limited and the Indian Air Force have strongly defended the aircraft's safety and performance.

HAL's leadership stated that Tejas remains one of the safest fighter aircraft in its category and that the Dubai crash should be treated as an unfortunate isolated incident. Aviation experts have also said that modern fighter flying always carries risks, and one accident should not be used to judge the entire programme. They believe this crash is unlikely to damage the export potential of Tejas.

This was the second Tejas crash in less than two years. The first accident happened in March 2024 in Rajasthan. Before that, the aircraft had flown for more than 20 years without a single major crash since its first test flight in 2001. This long accident-free record had built strong confidence in India's indigenous fighter aircraft programme, which began in the early 1980s to replace the ageing MiG-21 fleet.

Over time, the Tejas programme went through extensive testing and upgrades. Today, it exists in multiple versions such as Mk-1, Mk-1A, and the upcoming Mk-2, along with trainer and naval variants. The Mk-1A is a significant upgrade with advanced radar, electronic warfare systems, mid-air refuelling, and improved combat capability.

Tejas is the smallest and lightest supersonic fighter in its class. It uses a digital fly-by-wire control system and a delta-wing design that improves manoeuvrability. It can carry up to 4,000 kg of weapons and is mainly designed for air combat and ground attack, with additional roles like reconnaissance and anti-ship operations.

The Indian Air Force currently operates Tejas Mk-1 squadrons at Sulur Air Force Station in Tamil Nadu. Production has been scaled up with three dedicated assembly lines in Bengaluru and Nashik to meet both domestic and export requirements. The more advanced Tejas Mk-2 is being developed as a 4.5-generation fighter to replace older jets like Mirage-2000, Jaguar and MiG-29, though it has faced delays and is now expected to fly around 2026.

Despite the Dubai crash, defence analysts continue to view the Tejas programme as a major technological success for India and a key part of the country's defence self-reliance. The final conclusions will depend on the official investigation into the crash, but for now, both HAL and the Indian Air Force remain confident in the safety and strategic importance of Tejas.

Key Takeaways

What happened at Dubai Air Show

Tejas Mk-1 crashed during an air display on November 21
Wing Commander Namansh Syal lost his life
Raised public debate on aircraft safety and indigenous defence manufacturing

Response from HAL and IAF

HAL stated Tejas is completely safe and has a strong safety record
IAF and aviation experts called the crash an isolated incident
Experts advised against drawing quick conclusions

Accident history of Tejas

Second crash in less than two years
First crash occurred in March 2024 in Rajasthan
No major crash in the first 23 years since its maiden flight in 2001

Purpose of the Tejas programme

Designed to replace the ageing MiG-21 fleet
Development began in the early 1980s
Aimed at building India's indigenous fighter capability

Variants of Tejas

Mk-1 is the basic operational version
Mk-1A has advanced radar, electronic warfare, and refuelling capability
Mk-2 is a more powerful 4.5-generation fighter under development
Trainer and naval variants also exist

Key technical features

Smallest and lightest supersonic fighter in its category
Delta-wing design and digital fly-by-wire system
Maximum payload of 4,000 kg
Used mainly for air combat and offensive support roles

Operational status

IAF operates Tejas Mk-1 from Sulur Air Force Station
More squadrons planned in future
Mk-1A entered series production in March 2024

Manufacturing and production

Three production lines set up in Bengaluru and Nashik
Meant to meet growing domestic and export demand

Tejas Mk-2 development

Planned as a replacement for Mirage-2000, Jaguar and MiG-29
First prototype expected around 2026
Will be India's most advanced indigenous fighter when operational

Strategic significance

Tejas is a key pillar of India's self-reliant defence strategy
Considered a major technological achievement
Crash investigation findings will shape future assessment, but confidence remains intact

International Relations

Easy Explanation

Tensions have flared again between Pakistan and Afghanistan after the Taliban accused Pakistan of carrying out air strikes inside Afghan territory on the night of November 24–25. These strikes reportedly killed 10 people in the Afghan provinces of Paktika, Khost and Kunar, all located close to the Durand Line. This boundary is the main reason behind the long-standing hostility between the two neighbours.

The Durand Line is the international border between Pakistan and Afghanistan. It was drawn in 1893 by an agreement between the British government of India and Afghan ruler Abdur Rahman Khan, and is named after Sir Henry Mortimer Durand. The border stretches nearly 2,600 km from Iran in the west to China in the east, cutting across mountains, deserts, and tribal regions. When it was created, Afghanistan sat at the heart of the "Great Game" — the strategic rivalry between British India and Russia for dominance over Central Asia.

The British invaded Afghanistan twice in the 19th century. After the second Anglo-Afghan War, the Afghan ruler Yaqub Khan signed the Treaty of Gandamak in 1879, which gave the British control over Afghanistan's foreign policy. Later, in 1893, the Durand Line was drawn to separate British India from the Afghan Emirate. Its demarcation between 1894 and 1896 split Pashtun tribes across both sides and gave Balochistan to British India while creating the Wakhan Corridor as a buffer between Russia and British India.

After Abdur Rahman Khan's death and the Third Anglo-Afghan War in 1919, Afghanistan regained control over its foreign policy through the Treaty of Rawalpindi, which also reaffirmed the Durand Line as the official border. However, when India was partitioned in 1947, Pakistan inherited this border. Afghanistan then rejected the Durand Line, declaring it a colonial-era agreement that was no longer valid. It also supported demands for an independent "Pashtunistan" covering Pashtun areas on both sides of the border.

Since then, successive Afghan governments — including the current Taliban regime — have refused to formally accept the Durand Line as a legitimate international border. Pakistan, on the other hand, treats it as its official western boundary. In 2017, Pakistan began fencing the border to control militant movement, which further angered Afghanistan.

Over the decades, the Durand Line has remained unstable, witnessing frequent insurgency, militant crossings, and exchange of fire. Earlier this year, clashes between the two sides ended only after a ceasefire mediated by Qatar in October. However, Afghan officials objected to the ceasefire statement calling the Durand Line a border, leading to a revised wording by Qatar to ease tensions.

Now, with renewed air strikes, increased troop deployment and surveillance, the fragile peace along the Durand Line is once again under threat, raising fears of a broader security crisis in the region.

Key Takeaways

Recent Trigger

Taliban accused Pakistan of air strikes on November 24–25
10 people reportedly killed in Afghan border provinces
Strikes occurred near the Durand Line

What is the Durand Line

2,600 km long border between Pakistan and Afghanistan
Drawn in 1893 under British rule
Named after Sir Henry Mortimer Durand
Divides Pashtun tribal regions across both countries

Historical Background

Border emerged during the British-Russia rivalry in Central Asia
Second Anglo-Afghan War led to British control over Afghan foreign policy
Treaty of Gandamak and later the Durand Agreement reshaped boundaries
Third Anglo-Afghan War ended with the Treaty of Rawalpindi in 1919

Post-1947 Dispute

Pakistan inherited the Durand Line after Partition
Afghanistan rejected it as a colonial-era imposition
Demand for Pashtunistan emerged
Afghanistan continues to claim Pashtun regions and parts of Balochistan

Pakistan's Measures

Started fencing the border in 2017
Aimed at preventing militant infiltration
Further strained relations with Afghanistan

Ongoing Instability

Frequent cross-border firing and insurgent movement
Cold War period also saw persistent unrest
Recent clashes were paused through Qatar-mediated ceasefire

Current Situation

Afghanistan objected to Durand Line being called an official border
Revised ceasefire statement issued
Fresh military escalation now threatens regional stability

Strategic Significance

Border lies at a crucial geopolitical crossroads
Any escalation affects South Asia and Central Asia security
Durand Line remains one of the world's most unresolved colonial borders

How much plastic is too much for marine birds, mammals, turtles?: TH Science

Science

Easy Explanation

A large scientific study has shown that plastic pollution is killing marine animals on a massive scale. Nearly 1,300 marine species — including all families of seabirds and marine mammals — are now known to ingest plastic, rubber, and fishing debris. When these materials enter the body, they can block the digestive system, tear internal organs, or twist the intestines, often leading to slow and painful deaths.

The study was published in the journal Proceedings of the National Academy of Sciences and was carried out by researchers from the University of Toronto. The researchers studied data from more than 10,000 post-mortem examinations (necropsies) of marine animals collected from 57 different research sources around the world.

The dataset included 1,537 seabirds from 57 species, 7,569 marine mammals from 31 species, and 1,306 sea turtles from seven species. The results were deeply alarming. About 35% of seabirds, 12% of marine mammals, and 47% of sea turtles had plastic inside their bodies. Among these, 1.6% of seabirds, 0.7% of marine mammals, and 4.4% of sea turtles had actually died because of plastic ingestion.

The animals most commonly affected among marine mammals were the striped dolphin, sperm whale, South American fur seal, and Florida manatee. Among seabirds, albatrosses, gulls, and terns were the most frequent victims. All seven species of sea turtles studied were affected by plastic ingestion.

The researchers also calculated how much plastic is enough to be deadly. They found that just 6 to 405 pieces of large plastic (macroplastic), depending on the animal's size, can lead to a 90% chance of death. In terms of volume, this ranged from 0.044 to nearly 40 millilitres of plastic per centimetre of body length.

Different materials caused different types of damage. Rubber was the most deadly for seabirds. Soft plastics and fishing debris were the most harmful for marine mammals. For sea turtles, both hard and soft plastics were extremely dangerous.

Unlike microplastics, whose effects can be studied in laboratories, macroplastics are difficult to test experimentally because it is unethical and impractical to deliberately feed large plastic items to animals. This makes real-world data from dead animals especially important for understanding how dangerous large plastic waste really is.

Sea turtles were found to be the most vulnerable group. Almost half of all turtles studied had plastic inside them, and they also showed the highest rates of injury and death from plastic ingestion. Seabirds ranked second, and marine mammals were third.

Dr. Erin Murphy, an Ocean Plastics Research manager at Ocean Conservancy and one of the study's authors, said that the findings strongly support the need for strict policies to reduce plastic pollution. She stressed

that especially dangerous items like plastic bags must be targeted first. The researchers hope this data will help governments set science-based national targets to reduce plastic waste entering the oceans.

Key Takeaways

Scale of the Problem

Nearly 1,300 marine species ingest plastic and debris
Includes all families of seabirds and marine mammals
Plastic causes gut blockage, organ damage, and twisted intestines

Study Details

Published in Proceedings of the National Academy of Sciences
Conducted by University of Toronto researchers
Based on over 10,000 necropsies from 57 sources

Animals Studied

1,537 seabirds from 57 species
7,569 marine mammals from 31 species
1,306 sea turtles from seven species

Plastic Ingestion Rates

35% of seabirds had plastic inside their bodies
12% of marine mammals showed plastic ingestion
47% of sea turtles had ingested plastic

Deaths Due to Plastic

1.6% of seabirds died due to plastic
0.7% of marine mammals died
4.4% of sea turtles died from plastic ingestion

Most Affected Species

Marine mammals: striped dolphin, sperm whale, South American fur seal, Florida manatee
Seabirds: albatross, gull, tern
Sea turtles: all seven species affected

Lethal Quantity of Plastic

As few as 6 to 405 plastic pieces can cause death
A 90% mortality risk observed at these levels
Deadly plastic volume ranged up to nearly 40 ml per cm of body length

Material-wise Danger

Rubber most fatal for seabirds
 Soft plastics and fishing debris most dangerous for marine mammals
 Hard and soft plastics both highly lethal for sea turtles

Research Challenges

Macroplastic effects cannot be tested safely in laboratories
 Scientists depend on real-world post-mortem data for risk assessment

Policy Implications

Strong need for reducing plastic pollution at the source
 Special focus suggested on plastic bags and large plastic waste
 Study supports science-based national action plans to protect marine life

[Hormone therapy can alter proteins in transwomen's blood: TH Science](#)

Science

Easy Explanation

A new scientific study published in Nature Medicine has shown that feminising gender-affirmative hormone therapy (GAHT) changes not only the visible appearance of transgender women but also the proteins circulating inside their blood. These changes happen deep inside the body at a molecular level.

Transgender people are those whose gender identity does not match the sex assigned at birth. Transgender women are assigned male at birth but identify as women. Many of them take feminising GAHT to align their physical traits with their gender identity. This therapy usually includes estrogen along with medicines called anti-androgens, such as cyproterone acetate (CPA) or spironolactone (SpiroL). These medicines block testosterone, the hormone responsible for many male physical characteristics such as facial hair, muscle mass, and fat distribution.

Doctors have known since the 1970s that GAHT causes visible changes like breast development, reduced body and facial hair, and fat redistribution. This new study shows that GAHT also changes the internal protein profile in the blood, making it more similar to that seen in cisgender women (women whose gender identity matches their birth sex).

The research was conducted by a team led by endocrinologist Ada Cheung at the University of Melbourne. According to the researchers, transgender health has been under-studied for decades. Also, the advanced technology required to measure thousands of proteins at once has only recently become available and is still expensive.

The study involved 40 transgender women in Melbourne. Half were given estrogen with CPA, and the other half were given estrogen with SpiroL. Blood samples were taken before starting hormone therapy and again after six months. The scientists isolated blood plasma and measured the levels of more than 5,000 proteins.

They found that in the CPA group, 245 proteins changed, while in the SpiroL group, 91 proteins changed. In most cases, protein levels decreased. These changes were linked to lower testosterone levels, higher body fat percentage, and increased breast volume caused by the hormones.

To understand whether these changes truly resembled female biology, the researchers compared the results with data from the UK Biobank. They found that many protein levels in transgender women using GAHT shifted towards patterns typically seen in cisgender women.

The study also suggested possible long-term health effects. Some protein changes were linked to a higher potential risk of allergic asthma and autoimmune diseases. Only the CPA group showed protein changes that might reduce the risk of atherosclerosis (hardening of blood vessels). However, the researchers stressed that these are only biological signals, not proven medical outcomes. No clinical evidence currently shows that transgender women on hormones actually develop these diseases at higher rates.

Indian endocrinologist Sanjay Kalra noted that such risks have not been seen clearly in real clinical practice. The researchers explained that autoimmune and allergic diseases often take many years to develop and depend on many genetic and environmental factors.

The scientists strongly recommended long-term studies that follow transgender women for many years to see whether these protein changes translate into real health outcomes. Doctors in India, including specialists from Fortis Hospital, said such studies are important because access to GAHT in India is still uneven and often lacks regular medical monitoring.

The researchers emphasised that the most important contribution of this work is showing how urgently high-quality, inclusive scientific research is needed so that transgender people receive safe and evidence-based healthcare.

Key Takeaways

What the Study Shows

Feminising GAHT changes blood protein levels
 Changes occur deep inside the body, not just externally
 Protein patterns shift towards those seen in cisgender women

What is Feminising GAHT

Uses estrogen with anti-androgens
 Common anti-androgens: cyproterone acetate (CPA) and spironolactone (SpiroL)
 Blocks testosterone and male-type physical traits

Study Design

40 transgender women studied
 Two groups: estrogen + CPA and estrogen + SpiroL
 Blood samples taken before treatment and after six months
 Over 5,000 proteins measured per sample

Protein Changes Observed

245 proteins changed in the CPA group
 91 proteins changed in the SpiroL group
 Most protein levels decreased
 Changes linked to lower testosterone, higher body fat, and breast growth

Comparison with Female Biology

Protein data compared with UK Biobank records
 36 proteins in CPA group and 22 in SpiroL group shifted toward cisgender female patterns

Possible Health Links

Protein shifts may indicate higher asthma and autoimmune risk
 Only CPA showed possible lower atherosclerosis risk
 These are biological signals, not proven medical risks

Current Clinical Reality

Doctors have not yet observed higher autoimmune disease rates in practice
 Such diseases may take years to develop

Importance for India

GAHT access in India is uneven
 Regular medical monitoring is often lacking
 Indian experts call for local long-term studies

Broader Significance

Transgender health remains under-researched
 Advanced protein testing is new and costly
 Study highlights the need for inclusive, data-based healthcare policy

The many roles of sugarcane in India and the world: TH Science

Science

Easy Explanation

A recent scientific study led by Olivier Garsmeur, published in the journal Cell, has mapped the genetic history of sugarcane by analysing the genomes of 390 sugarcane varieties collected from countries such as Australia, Brazil, China, France, India, Japan, and the United States. The study helps scientists understand how sugarcane was domesticated, how it diversified, and how modern breeding has shaped today's varieties.

The researchers found that modern sugarcane plants are genetically complex. Many of them contain multiple sets of chromosomes, a condition known as polyploidy. This happened mainly because humans transported

sugarcane across regions and countries for cultivation and trade over centuries, leading to repeated cross-breeding. Sugarcane moved not just within countries but also across regions such as Afghanistan, Sri Lanka, and Indonesia.

Sugarcane is best known as a cash crop grown for sugar. However, it is also a major raw material for producing bioethanol, which is used as a cleaner alternative to petrol and diesel in vehicles. Because of this dual role in food and energy, sugarcane is now seen as an important crop for sustainable development.

India is one of the world's largest producers of sugarcane. It is grown across about 13 States, with Uttar Pradesh, Maharashtra, Karnataka, Tamil Nadu, and Gujarat being the top five producers. During the 2024–25 season, around 4,400 lakh tonnes of sugarcane were produced in the country.

To improve yield and develop better varieties, India has set up a network of sugarcane research centres under the Indian Council of Agricultural Research. The oldest among these is the Sugarcane Breeding Institute in Tamil Nadu. As early as 2006, scientists from this institute studied the genetic diversity of sugarcane from Arunachal Pradesh, Odisha, and Tamil Nadu. Their work showed that Arunachal Pradesh had the highest genetic diversity of sugarcane varieties.

Later, in 2018, scientists from the Indian Institute of Sugarcane Research studied 92 sugarcane varieties from subtropical India and again confirmed the richness of genetic diversity in Indian sugarcane.

Beyond agriculture and energy, sugarcane also has medicinal value. Traditional medicine systems in China, India, and Pakistan have used sugarcane in therapies for a long time. A recent Chinese review paper highlighted that traditional Chinese medicine is facing sustainability problems due to environmental changes and over-harvesting. Because of this, crops like sugarcane with both medicinal and agricultural value are becoming more important for future research.

The review discussed the chemical composition of sugarcane, its biological activities, and its possible applications in medicine. It also mapped future directions for research into new medicinal uses of sugarcane.

In addition to using sugarcane juice for ethanol, India has also started producing bioethanol using sugarcane waste, rice, and wheat. The Ministry of Petroleum and Natural Gas has initiated bioethanol production in Assam as part of India's clean energy transition.

Overall, sugarcane today is not just a crop for sugar. It is a key resource for energy security, medical research, and sustainable development. Scientific studies on its genetics and uses are shaping the future of greener agriculture and transport in India and across the world.

Key Takeaways

Global Genomic Study on Sugarcane

Genomic analysis of 390 sugarcane varieties across several countries
Study published in the journal Cell
Tracks domestication, diversification, and modern breeding

Genetic Nature of Sugarcane

Sugarcane shows polyploidy (multiple chromosome sets)
 Caused by centuries of human transport and cross-breeding
 Spread across Asia and other regions through trade

Sugarcane as an Energy Crop

Used to produce bioethanol
 Bioethanol is a cleaner alternative to fossil fuels
 Supports green transport and lower emissions

India's Sugarcane Production

India is one of the top sugarcane producers globally
 Top States: Uttar Pradesh, Maharashtra, Karnataka, Tamil Nadu, Gujarat
 Production in 2024–25: about 4,400 lakh tonnes

Indian Sugarcane Research

Research coordinated under ICAR
 Oldest institute: Sugarcane Breeding Institute, Coimbatore
 2006 study showed highest genetic diversity in Arunachal Pradesh
 2018 study in Lucknow confirmed rich subtropical genetic diversity

Medicinal Importance of Sugarcane

Used in traditional medicine in India, China, and Pakistan
 Contains bioactive chemical compounds
 Potential for future medicinal research

Sustainability and Resource Pressure

Traditional medicine resources under stress due to over-harvesting
 Need for sustainable use and new crop-based solutions

India's Bioethanol Mission

Bioethanol now made from sugarcane waste, rice, and wheat
 Ministry of Petroleum and Natural Gas started production in Assam
 Part of India's clean energy strategy

Overall Significance

Sugarcane is now a food crop, energy crop, and medicinal resource
 Key to India's agriculture, clean fuel policy, and sustainability goals