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MESSAGE FROM DR. KHAN

Dear Students,

Concentration is a skill that can be cultivated with consistent effort and effective strategies. In today's fast-paced world, **distractions—both external and internal—make** it challenging to stay focused. Below, we explore practical techniques, real-life examples, and case studies to help individuals improve their focus and achieve their goals.

Understanding Distractions:

External Distractions: These include interruptions like **phone notifications, social media, or noisy environments**. For example, silencing your phone to block distracting websites can significantly reduce external disturbances.

Internal Distractions: These are thoughts or emotions that **divert attention from the task at hand**. Managing internal distractions involves **mindfulness techniques**, such as acknowledging wandering thoughts and redirecting focus back to the present moment.

Effective Strategies to Improve Concentration

Minimize External Distractions: A software developer used the **Pomodoro Technique** to manage distractions during coding sessions. By working in **focused intervals of 25 minutes followed by short breaks**, they reported a 25% increase in productivity.

Quiet the Internal Noise: Healthcare professionals who underwent an eight-week mindfulness meditation program experienced improved focus and reduced stress levels.

Technique: Allocate time for intrusive thoughts later instead of dwelling on them during critical tasks.

Visualizing one's objectives as the purpose of life can weaken distractions substantially. The **story of Arjun** from Indian mythology serves as an inspiring analogy for unwavering focus. Just as Arjun concentrated solely on his target despite surrounding challenges, **individuals can benefit from keeping their goals front and center in their minds**. This mental clarity can guide them through obstacles and help them stay committed to their aspirations.

Meditation is a time-tested method for improving concentration. Scientific studies have shown that regular mindfulness meditation enhances attentional control and cognitive abilities. Meditation **helps quiet the mental noise**, reduce stress, and **cultivate mindfulness**, making it an invaluable tool for anyone seeking greater clarity of thought.

Another often-overlooked factor in maintaining concentration is **quality sleep**. A well-rested mind is more capable of sustaining focus during demanding tasks. **Prioritizing sleep by maintaining a consistent schedule**, avoiding screens before bedtime, and creating a comfortable sleeping environment can rejuvenate the mind and enhance cognitive performance. **Sleep is essentially a form of meditation that allows the brain to reset and prepare for new challenges**.

Exercise also plays a vital role in boosting concentration. Studies have shown that high-intensity workouts improve brain function and attentional control. Participants in a Harvard Medical School study who engaged in regular exercise performed better on cognitive tests compared to those who did not exercise regularly.

Practical exercises like the **"Heart of the Rose" technique**—where one focuses on observing a rose in detail for 15 minutes daily—can train the **mind to concentrate on one object at a time**. Similarly, **mindful breathing exercises** help individuals anchor their attention by focusing on the sensation of air passing through their nostrils during slow inhalation and exhalation.

Remaining steadfast in one's commitment to goals may temporarily affect relationships with family and friends due to reduced availability for social interactions. However, **the rewards of success often outweigh these sacrifices in the long run**. Accepting that external factors are beyond one's control can help maintain focus without undue stress or frustration.

Improving concentration is an ongoing practice that requires consistent effort and dedication. By leveraging tools like **meditation, visualization, proper sleep, exercise, distraction management techniques, and practical exercises**, individuals can sharpen their focus and achieve remarkable results in both personal and professional domains. A clear understanding of **one's goals combined with persistent focus** forms a powerful combination that empowers individuals to overcome any hurdle in their path toward success.

**My best wishes are always with you.
Stay Blessed!**

GS CONNECT

It gives us immense pleasure to present an innovative approach to mastering current affairs. Current is a passing wind and diverse issues happen at the same time. It is to an extent chaotic. Newspapers, magazines, and various other sources report the chaos per se. With our experience of current affairs, we have tried to give "the current" a medium to travel. It is the syllabus of the UPSC with its components that are the medium through which the "Current is Passed" to the readers. **Ever since the new syllabus of the UPSC came into existence, the current has been gaining significance both at prelims as well as mains examination**. This book is meant to cover current affairs and related questions arising from those events. We have not only covered the current events for their factual contents but also presented them in such a way that any question asked from that topic gets covered. Moreover, topics are also **"peppered"** with the relevant facts/key concepts that are related to the theme.

It is a collection covering myriad sources yet in a manageable size. To use this book, we recommend you to, master the components of the General Studies (GS) syllabus as broken into rows and columns (**provided on the subsequent page**). Each cell comprising the portion of GS becomes the connection for the current and every news subsequently covered guides the reader to the address of the syllabus. It is logical to expect that the same issue may be connected to more than one topic of the syllabus. Further, the news also has some additional vistas opened for the readers by adding a box with the title **"PEPPER IT WITH"** where we expect the students to build further around the theme. We are also trying to reach the remotest part of the country with our spirit and zeal of **"Mains Answer Writing"**, which has been admired by students, CSE rank holders, and other scholars. Continuing in line with the effort, we have started **programs like KTP Mains Test Series, Destinaire, Navigator, NEEV, AWSDP plus, KOL, DL& MP, Advance Foundation Course, Weekend Courses as well as Optional Courses (PSIR, Sociology, History, and Geography)**.

Scan the QR code to revise the previous month's current affairs and test yourself.

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Team KSG

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1	Indian Culture-Art Forms, Literature and Architecture from ancient to modern times.	Indian constitution- Amendments, acts and bills.	Various measures to boost Indian economy- planning, policies, management	Ethical issues related to family society, education, Corruption etc.	
2	Indian History significant events, personalities, issues and the Freedom Struggle.	Legislative, executive and judicial processes.	Government budgeting and issues related to budget.	Ethics in public and private administration	
3	Post independence issues, National boundary and disputes.	Constitutional, non-constitutional, judicial, quasi-judicial, administrative and other types of bodies.	Agriculture, animal husbandry and transport	Issues	
4	Indian society features, issues, globalization and diversity	Federal structure and local bodies. Their powers and functions.	Food security- measures to boost food security and food processing. Issues related to land- land reforms	Related laws and rules	
5	Women - issues and developments	Government policies and various governance issues like transparency, accountability and – governance	Industries and infrastructure- their growth and investment model	Governance/e- Governance	
6	Urbanization – problems and remedies	Committees and schemes.	Space and technology, IT space, robotics and computer	Ethics in international issues	
7	Distribution of industries and resources – India and world	Non-government issues, self-help groups and role of civil society	Disease, biotechnology and human welfare	Personalities and their teachings	
8	Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc	Vulnerable sections of our society and social sector issues like Poverty, Hunger, Education, and their initiatives.	Innovations, intellectual property, Awards, POI and other important aspects of S&T	Other important topics	
9		International Relation- India and other countries, various Indian and international agreements, effects of other countries on India and international institutions.	Environment; government initiatives, various judgment, pollution, degradation and conservation efforts		
10			Disaster & Disaster Management		
11			Challenges to internal security, Various Security forces and agencies and their mandate. Cybersecurity; money laundering and its prevention.		

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POLITY

Transparency in the Judiciary

News Excerpt:

Transparency and accountability in the Indian judiciary emphasizes that for a democracy to function effectively, the **judicial system** must be transparent and open to scrutiny, ensuring that justice is not only done but also seen to be done. **Transparency** is viewed as critical in upholding the credibility of the judiciary and maintaining **public trust** in its decisions.

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Recent Initiatives Toward Transparency

Live-Streaming of Court Proceedings

- A significant step toward judicial transparency came with the **Supreme Court's decision** in the case of **Swapnil Tripathi v. Supreme Court of India (2018)**. This ruling allowed for **live-streaming** of important court proceedings, particularly those concerning constitutional matters, cases of national significance, and public interest.
- Why It Matters:**
 - Public Access to Justice:** The decision was a landmark for increasing access to the judiciary. By live-streaming, the court opened up the process to a wider audience, making it easier for the public to follow important legal proceedings. This transparency promotes accountability and ensures that the judicial process is not shrouded in secrecy.
 - Judicial Transparency:** Justice **Dhananjaya Y. Chandrachud**, who supported the decision, emphasized that live-streaming is essential for **disseminating knowledge** about judicial processes and ensuring that the court operates in the public's view.

Right to Information (RTI) Act and the Judiciary

- Former **Justice J.S. Verma**, an advocate for judicial transparency, proposed that the **judiciary should be brought under the purview of the RTI Act**. This would allow citizens to seek information regarding **judicial appointments, administrative decisions**, and the overall functioning of courts.
- Why This Is Important:**
 - Enhancing Accountability:** By making judicial processes more transparent, including the **selection of judges**, the judiciary can become more accountable to the public.
 - Informed Citizenry:** Verma's suggestion aligns with the democratic principle that an informed citizenry is crucial for ensuring justice and **effective governance**. **Challenges Hindering Transparency in the Judiciary**

Opaque Collegium System

- The **collegium system**—the process by which judges are appointed—has faced criticism for its **lack of transparency**. This system, which operates largely behind closed doors, has been accused of fostering **nepotism** and **favoritism**.
- Issues with the Collegium:**
 - Limited Pool of Judges:** The collegium system has been criticized for drawing judges primarily from a narrow circle, often from the same families, leading to concerns about **lack of diversity** in the judiciary.

WHAT'S COLLEGIUM SYSTEM

- Collegium system based on Three Judges Cases
- Under it, appointment of judges are made by Chief Justice of India and four most senior Supreme Court judges.
- Has no constitutional backing.
- Constitution of India's Article 124 says appointments to be made by President in consultation with Judges as President may deem necessary.
- Critics say it is a closed-door system which lacks transparency

WHAT'S NJAC

- NJAC was a body created to end the two-decade-old Supreme Court Collegium system of Judges appointing judges.
- Was passed by Lok Sabha on August 13, 2014. Was passed by Rajya Sabha a day later.
- Will consist of six people – CJI, two senior-most Supreme Court judges, Law Minister and two 'eminent' persons.
- Critics say judges in NJAC will need support of others to push a name through. They fear judicial independence being compromised.

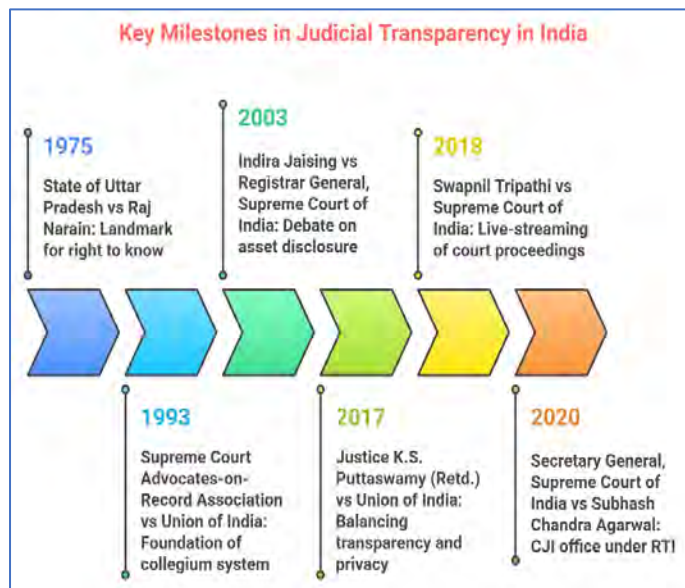


- Lack of Public Scrutiny:** The **appointments** made through this system are not open to public scrutiny, raising questions about the merit and fairness of the process. This lack of transparency has led to calls for reforming the **judicial appointment process** to ensure that appointments are based on merit and reflect a more diverse representation.

Judicial Corruption

- The **corruption** in the judiciary is another factor that contributes to the erosion of public trust. High-profile cases, such as the impeachment of a judge from the **Calcutta High Court** for **misappropriating funds** or the discovery of large sums of money at a **Delhi High Court** judge's residence, highlight the corruption problem within the judicial system.
- Why This Matters:**
 - Damage to Trust:** Corruption within the judiciary significantly undermines the public's faith in the justice system. If citizens believe that the judiciary is not impartial or is tainted by corruption, it becomes difficult to trust judicial decisions.
 - Need for Oversight:** The incidents of judicial corruption underscore the necessity for **stricter oversight mechanisms** to ensure that judges are held accountable for their actions and that corruption is rooted out.

The Path Forward: Addressing Transparency Challenges Strengthening Accountability Mechanisms



- **Oversight of Judges:** Establishing stronger, **transparent accountability mechanisms** is critical to ensuring that judges are not only independent but also responsible for their actions. The editorial calls for creating clear procedures to handle **complaints** and **allegations** against judges, ensuring that investigations into misconduct are thorough and transparent without undermining judicial independence.
- **Independent Oversight Bodies:** Creating independent bodies, similar to the **National Judicial Accountability Commission (NJAC)**, could help address transparency issues in judicial appointments and misconduct, ensuring that the judiciary remains above reproach.

Engaging the Public

- **Public Awareness:** Increasing public understanding of how the judiciary operates can help demystify the judicial system and promote greater **trust** and **confidence**. Public outreach and educational initiatives could play a significant role in bridging the gap between the judiciary and the public.
- **Transparency Through Technology:** Beyond live-streaming, the judiciary can embrace other technological tools to ensure better access to **judicial records**, **court proceedings**, and **decisions**, making the system more **accessible** and **accountable**.

Reforming the Collegium System

- **Judicial Appointment Reform:** Reforming the **collegium system** to ensure more transparency and diversity in judicial appointments is essential for restoring faith in the system.
 - More objective and publicly accountable processes could ensure that appointments are based on **merit and the need for a diverse judiciary**, reflecting the country's demographic makeup.

Conclusion

- **Truth and transparency** are critical to maintaining the **integrity** and **credibility** of the judiciary. While some positive steps have been taken, such as live-streaming and expanding the reach of the **RTI Act**, more comprehensive reforms are necessary.
- Ensuring **accountability** through transparent judicial appointments, addressing corruption, and increasing public engagement with judicial processes are steps that need to be pursued further to build a **robust and trusted judiciary** in India.

PEPPER IT WITH:

Judiciary reform, NJAC, Judiciary due process of Law.

SC ruling on Governor's power

News excerpt:

The **Supreme Court's** recent ruling on the **Tamil Nadu Governor's powers** marks a significant development in India's constitutional jurisprudence, particularly concerning the **balance of power between state governments and the office of the Governor**.

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Background of the Case

- The issue arose when the **Governor of Tamil Nadu**, R. N. Ravi, **withheld assent to 10 bills** passed by the state legislature, some of which had been pending for years.
- The Tamil Nadu government, led by Chief Minister **M. K. Stalin**, accused the Governor of obstructing the legislative process and neglecting his constitutional duties.
- This led to a prolonged legal dispute, with the state government challenging the Governor's actions in the Supreme Court.
- The case was significant as it touched upon the constitutional relationship between the **Governor** (a representative of the President of India) and the **state legislature**, particularly regarding the role of the Governor in approving state bills.

Key Aspects of the Supreme Court's Ruling

According to **Article 200** of the Indian Constitution, the Governor has three options when presented with a bill:

- Grant assent to the bill.
- Withhold assent and return the bill to the legislature for reconsideration (if it is not a money bill).
- Reserve the bill for the consideration of the **President of India**.

Rejection of the "Absolute or Pocket Veto" Power

- **Governor's Powers:** The Court clarified that the **Governor** does not possess an absolute or **pocket veto** (the power to withhold assent indefinitely).

- If a bill is returned to the legislature and re-passed by a majority, the Governor is required to assent to the bill, and cannot indefinitely withhold it.

Introduction of Time Limits for the Governor's Action

- Time Frame:** In an important move to prevent any delay in the legislative process, the Court set a **one-month deadline** for the Governor to act on bills.
- This includes granting assent or reserving the bill for Presidential consideration. The ruling aims to ensure that the Governor does not unnecessarily delay bills, thereby upholding the functioning of the state's legislative democracy.

Judicial Review of the Governor's Actions

- Judicial Oversight:** The Court emphasized that the actions of the **Governor** are subject to **judicial review**. While the Governor may exercise discretion in certain cases, this discretion must align with constitutional norms. If the Governor acts contrary to the advice of the **state cabinet** or the established constitutional framework, their actions can be challenged in court.
- The **Court's assertion of judicial review** ensures that the Governor's power is exercised within the bounds of law, and is not used arbitrarily or to obstruct the legislative process.

Implications of the Ruling

Unravelling the order: What the SC said on...

TOP COURT'S AUTHORITY Apex court established its authority to review constitutional functions, defending its prescription of timelines. It said that such a measure balances the need for expedient decision-making with the right of states in a federal system to fulfil their mandate to voters.	 <p>"It is clear as a noon day, that no exercise of power under the Constitution is beyond the pale of judicial review."</p>	GOING FORWARD... <ul style="list-style-type: none"> President can obtain SC's advisory opinion on a bill received from guv, which appears to be "patently unconstitutional".
TIMELINE FOR PRESIDENT It extended the timeline discipline to the central government and held that the President must decide within three months of receiving a bill from a governor. If there is any delay beyond this period, the President's office will be required to convey reasons to the state concerned.	GOVERNOR'S POWERS Verdict clarified the constitutional role of governors, stressing that they must act on the advice of the council of ministers as they do not have discretionary powers under Article 200.  <p>"Governor cannot be vested with such a power...which would enable him to collude with the Union cabinet and ensure the death of any and all legislation initiated by the state."</p>	<ul style="list-style-type: none"> States should consider entering into pre-legislation consultation with Centre before introducing bills that might require Presidential assent. Governors should respect the will of the people expressed through the legislature.

Strengthening Federalism

- Cooperative Federalism:** By limiting the Governor's discretionary powers, the Court reinforced the idea of **cooperative federalism**, where state governments are given autonomy to pass laws that are consistent with the needs and aspirations of their people.
- This ensures that Governors **do not act in a manner that undermines state authority**, and the legislative process remains smooth and responsive to public needs.
- Reinforcing State Autonomy:** This ruling strengthens the **federal structure of India**, where the central

government and state governments share power. The ruling implies that the Governor's role should not be one of confrontation but of facilitation and cooperation with the state government.

Precedent for Future Cases

- Setting a Legal Precedent:** This judgment creates a strong precedent for future disputes between **state governments** and **Governors** across India. It clarifies that the Governor cannot act unilaterally and must respect the constitutional framework laid out in the **Indian Constitution**.
- Other States:** The ruling may also impact ongoing issues in other states, such as **Kerala**, where the Governor has similarly withheld assent to bills passed by the state legislature. The Court's judgment will likely influence how these disputes are handled going forward.

Significance for Tamil Nadu and Beyond

- Impact on Tamil Nadu:** This ruling is particularly significant for **Tamil Nadu**, where the **Governor** had been seen as engaging in a prolonged standoff with the state government over bills. The decision provides a legal framework to ensure that such disputes do not hinder governance and legislative action in the state.
- Broader National Implications:** The ruling is also part of a larger debate over the role of Governors in Indian

states, and how their powers should be exercised. With this decision, the Court has sent a strong message about the need to balance power between the **Centre** and the **States**, ensuring that constitutional provisions are respected and that the functioning of the government is not obstructed by unnecessary delays.

Conclusion

- The Supreme Court's ruling on the Tamil Nadu Governor's powers is a **milestone judgment** that aims to ensure the **smooth functioning of state legislatures** and **strengthen federalism** in India.
- By rejecting the notion of an absolute veto and imposing a time frame for the Governor's assent to bills, the Court has sent a **strong message** that Governors must act in accordance with the Constitution and

the spirit of **democratic governance**.

- This decision not only protects the **legislative rights of state governments** but also upholds the rule of law and ensures that the Governor's powers are used sparingly and responsibly.
- It will likely influence the resolution of similar cases across the country, **making it a crucial moment in India's constitutional history**.

PEPPER IT WITH:

Functioning of Constitutional entity, Executive vs Legislature.

Riots In Nagpur

News Excerpt:

Violence erupted in Nagpur on March 17 following controversies surrounding **Aurangzeb's tomb**. The situation escalated due to rumors of Quran burning, which fueled public outrage and unrest.

Amid the chaos, reports emerged of a police officer being assaulted, adding to the law-and-order crisis.

Riots in India- Manufactured, Not Spontaneous: Empirical evidence suggests that riots in India are often strategically influenced rather than being spontaneous eruptions of social tensions. The Nagpur violence, which left dozens injured, cannot be attributed solely to rumors or impulsive reactions.

Political Rhetoric and the Use of Historical Narratives Since the Maharashtra Budget session began on March 3, historical figures have been invoked as a political talking point. The fact that a medieval ruler remains central to contemporary political discourse highlights: Misplaced governance priorities.

Political Strategy: Mobilization for Electoral Gains During the recent Assembly elections, historical figures and past events were consistently referenced to create political narratives.

The intent behind this approach:

- Mobilize a broader electoral base through identity-based appeals.
- Shape public perception by linking present events to historical figures.
- Research indicates that societies with strong civic engagement and inter-community cooperation are less prone to unrest.
- The occurrence of violence in Nagpur, a city with significant historical and political importance, raises concerns about the effectiveness of conflict prevention strategies.

The Role of Cinema in Political Discourse: The recent success of a historical film depicting past conflicts has further fueled contemporary discourse. Attributing unrest to the film's popularity serves as a convenient deflection, shifting attention from broader socio-political factors influencing tensions.

Communal Mobilization as a Political Strategy: A Critical Analysis

1. Understanding Mobilization through Identity Politics: Mobilization based on religious, ethnic, or sectarian identities is used to consolidate political support. **Tactics:** Political actors exploit historical grievances, cultural symbols, and perceived insecurities to rally public sentiment. **Objective:** The goal is to polarize communities, ensuring a consolidated electoral base, while diverting focus from core governance issues.

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2. Historical Context of Identity-Based Mobilization in India Partition-era Politics (Pre-1947):

The colonial policy of divide and rule deepened social divisions. Political organizations used identity-based appeals to consolidate their respective support bases. Post-Independence Identity Politics While secularism was embedded in India's Constitution, political competition increasingly became identity-driven.

Key Strategies of Political Mobilization Through Identity:

- **Renaming of places**, streets, or landmarks is used to reshape public memory and strengthen **ideological affiliations** with a particular narrative.
- Media campaigns, public addresses, and **digital platforms** play a significant role in spreading and amplifying Coded messages, especially during election cycles.
- **Conflict-Oriented Politics:** Instances of strategic unrest before elections are often used to generate an atmosphere of communal tension or insecurity.

Legal Framework to Tackle Riots in India

1. Indian Penal Code (IPC), 1860

Key Sections: rioting.

Section 141–145: Define unlawful assembly and

Section 153A: Punishment for promoting enmity between groups on grounds of religion, race, language.

Section 295–298: Offenses related to religion, including deliberate acts to hurt religious sentiments.

Section 505: Making, publishing, or circulating statements conducive to public mischief.

2. Code of Criminal Procedure (CrPC), 1973

Section 144: Allows District Magistrates to issue

orders to prohibit assembly of more than 4 people (used widely during riots).

Section 129: Authorizes dispersal of unlawful assemblies by using civil force.

Section 151: Preventive arrest to stop possible offenses.

3. National Security Act (NSA), 1980

Allows preventive detention for up to 12 months if a person is seen as a threat to national security or public order. Often used during or before major riots.

4. Unlawful Activities (Prevention) Act (UAPA), 1967

Used in rare cases where riots are linked to terrorism or insurgency-related activities.

5. The Prevention of Damage to Public Property Act, 1984

Penalizes acts of vandalism and destruction of public property during riots or protests.

Judicial Oversight and Commissions

Judicial inquiries and fact-finding commissions are often constituted post-riot. These investigate causes, assign responsibility, and recommend action.

Impact of Identity-Based Mobilization

Electoral Gains and Vote Bank Politics

- In divided societies, electoral behavior often aligns with identity affiliations—religious, caste, regional—rather than developmental issues.
- Fragmentation along identity lines weakens opposition unity and makes it easier for dominant parties to secure electoral wins.

Erosion of Democratic and Constitutional Principles

- Identity-based politics undermines secularism and pluralism, which are foundational to India's democratic framework.
- State institutions, law enforcement, and media can become politicized, losing neutrality and supporting dominant communal narratives.

Economic and Social Disruptions

- Communal tensions impact economic stability, especially in regions with repeated incidents of unrest.
- Investors and businesses often withdraw from these areas, affecting employment and long-term development.

Rise in Hate Crimes and Social Marginalization

- Increased communal polarization results in discrimination in education, employment, housing, and public services.
- Inter-community relationships and social coexistence weaken, leading to entrenched divisions and a breakdown of trust.

Countering the Politics of Identity-Based Mobilization Strengthening Social Integration and Civic Engagement

- Promote inter-community collaboration through dialogue and shared civic initiatives.
- Encourage grassroots peacebuilding efforts to develop trust and cooperation across diverse groups.

Media Accountability and Ethical Journalism

- Reduce sensationalist reporting and ensure responsible media narratives.
- Regulate social media platforms to curb hate speech, misinformation, and communal propaganda.

Political and Electoral Reforms

- Enact stronger laws against hate speech and divisive political campaigns.
- Reform electoral processes to discourage identity-based mobilization and reward development-centric policies.

Public Awareness on Developmental Priorities

- Shift political focus from identity issues to education, employment, healthcare, and economic growth.
- Promote voter education campaigns that highlight the importance of policy-based decision-making.

Strengthening Institutional Safeguards

- Empower the Election Commission to take strict action against divisive campaigning and ensure a level playing field.
- Uphold judicial independence to ensure communal propaganda is addressed legally without political interference.

Building a Culture of Dialogue and Reconciliation

- Establish local conflict-resolution mechanisms to address grievances before they escalate.
- Use social media and digital platforms to spread positive, inclusive narratives.

PEPPER IT WITH:

Rule of Law, Police Reform, Welfare of the affected people.

Way Forward:

- Communal mobilization may bring short-term political benefits but has damaging long-term consequences for democracy, economic growth, and social cohesion.
- Addressing this requires:
 - Reforming political institutions to ensure accountability.
 - Strengthening governance and upholding democratic norms.
 - Investing in public awareness, civic education, and rational political discourse.
- Ultimately, elections should center around policy, performance, and development, not identity.
- Political accountability, an informed electorate, and resilient institutions are key to safeguarding democracy and promoting inclusive progress.

Diluting Transparency: The Controversy Around Section 44(3) of the DPDP Act and RTI

News Excerpt:

The **Right to Information (RTI) Act**, since its enactment in 2005, has been a critical tool for ensuring transparency and accountability in India's governance. However, recent amendments made through the **Digital Personal Data Protection (DPDP) Act, 2023**, particularly **Section 44(3)**, have sparked serious concerns among transparency activists, legal experts, and civil society. The amendment is being viewed as a major step back in India's transparency regime, as it introduces a **blanket exemption** on personal information under the RTI Act.

What Does the Amendment Say?

The **DPDP Act**, aimed at safeguarding digital personal data, amends **Section 8(1)(j)** of the RTI Act. Previously, this section allowed disclosure of personal information if certain conditions were met—particularly if the information was related to public activity or in the larger public interest.

Key Change Introduced by Section 44(3):

- Removes all exceptions and nuanced conditions under which personal information could be disclosed.
- Effectively creates a **category-wide exemption** for all personal information under RTI.
- Weakens the role of **public interest as a justification** for information disclosure.

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Government's Defense

Union Minister of Electronics and Information Technology, **Ashwini Vaishnaw**, responded to criticisms by citing **Section 3** of the DPDP Act. He argued that:

- Any personal data already made public under law will continue to be accessible.
- The amendment is intended to **strengthen privacy**, not curb transparency.
- The Act aligns with the **Supreme Court's Puttaswamy judgment** that recognizes privacy as a fundamental right.

However, many argue that this defense **misses the core issue**.

Counter-Arguments from Civil Society and Legal Experts Key Concerns:

- Section 3 and 44(3) must be read together**, not in isolation. The combined effect nullifies public interest as a disclosure criterion.
- The amendment turns **personal information into an automatically exempt category**, regardless of public interest.
- It provides **discretionary powers** to the state to determine what qualifies for disclosure, risking misuse.

Voices of Opposition:

- Venkatesh Nayak**, Commonwealth Human Rights Initiative: Called the explanation "unconvincing" and a misreading of statutory interpretation.
- Apar Gupta**, Internet Freedom Foundation: Described the government's justification as "circular logic" not grounded in law and in conflict with the **original balance** of the RTI Act.

Why This Matters: Threats to Transparency

The amendment may restrict access to critical information that has previously been disclosed under the RTI Act and used to expose governance failures or fraud.

Potential Consequences:

- Shielding **fake caste certificates, degrees, and corruption in appointments**.
- \Blocking disclosure of **government contracts, spending, and internal decision-making processes**.
- Protection of **public officials from scrutiny**, reducing administrative accountability.

Notable Past RTI Disclosures That Could Be Blocked:

- 80% of IIT/IIM faculty were from the general category despite reservation mandates.
- ₹14 crore spent on promoting the controversial **Electoral Bond Scheme**.
- Home Ministry delayed compensation to **Manipur violence victims**.
- Proof that data on **migrant worker deaths during the COVID lockdown** was collected, contrary to government claims.

Technical Misalignment: RTI vs DPDP

Another legal flaw pointed out by experts is the **technical incompatibility** between the RTI and DPDP Acts:

- The **RTI Act** applies to both **digital and non-digital** data, including paper records.
- The **DPDP Act**, however, applies only to **digital data**.
- Therefore, using the DPDP Act to amend the RTI Act is both **overbroad** and **unnecessary**.

Conclusion: A Blow to Citizen Empowerment

The amendment introduced via Section 44(3) is not just a legal issue—it is a **democratic concern**. It signals a shift from **citizen empowerment** to **state discretion**, eroding the public's right to know. While **privacy must be protected**, it should not come at the cost of **transparency and accountability**.

Way Forward:

- Repeal or revise Section 44(3)** to restore balance.
- Reintroduce the concept of **larger public interest** as a valid ground for information disclosure.
- Strengthen, not weaken, the RTI framework in line with the **Puttaswamy ruling**.
- Ensure **parliamentary and public consultations** on any future legal changes affecting citizen rights.

PEPPER IT WITH:

Free speech debate, RTI reform, Grievance Redressal.

Supreme Court's Intervention in a Custodial Death Case

News Excerpt:

The **Supreme Court of India's recent decision to reinstate the conviction** of former Gujarat IPS officer **Sanjiv Bhatt**, who was earlier **acquitted by the Gujarat High Court** in a **1990 custodial death case**. This decision by the apex court is seen as a **strong reaffirmation of judicial commitment to accountability in custodial violence cases**.

Background of the Case

- The incident occurred in **1990** during a period of **communal unrest** in **Jamnagar**, Gujarat. Several individuals were taken into custody by the police, including **Prabhudas Vaishnani**, who later **died shortly after being released**.
- Allegations emerged that Vaishnani's death was due to **custodial torture**, with Sanjiv Bhatt being one of the officers held responsible.
- A **sessions court** in 2019 had **convicted Bhatt** and sentenced him to **life imprisonment**. However, the **Gujarat High Court overturned this conviction**, citing inconsistencies in the evidence.

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DYING IN HANDS OF THE STATE

States with most deaths in police custody in 2020-2021

Madhya Pradesh 8, Gujarat 15, Maharashtra 11, Odisha 4, West Bengal 8

CUSTODIAL DEATHS

POLICE CUSTODY

In police custody, an accused stays in the lockup of a police station or remains in the physical custody of cops or the other investigating agency inquiring into an offence. This is the time of police remand or the time where the accused is yet to be produced before a court

Custodial deaths in Gujarat between 2017-2018 and 2020-2021

Year	Deaths in police custody	Deaths in judicial custody	Custodial deaths
2017-2018	14	50	64
2018-2019	13	67	80
2019-2020	12	53	65
2020-2021	15	78	93

JUDICIAL CUSTODY

This means the accused has been lodged in jail either as an accused or convict in an offence and he or she is considered in the custody of a court

It is not necessary that all deaths that have taken place were due to police torture. There are cases where people have died due to illness or they themselves inflicted injuries on themselves. In all the cases where the cops were found to be responsible, stern legal action was taken

Ashish Bhatia | DGP, GUJARAT

I have not read the figures tabled in the Lok Sabha so it is not proper to comment on them at this juncture

Pradipsinh Jadeja | MOS, HOME, GUJARAT

SOCIAL ISSUES

CAG Report on ICDS Implementation

News Excerpt:

The Comptroller and Auditor General (CAG) conducted a performance audit of the Integrated Child Development Services (ICDS) Scheme in Gujarat, covering the period from 2015-16 to 2022-23.

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The report identified **severe deficiencies** in infrastructure, manpower, program implementation, and financial management, prompting recommendations for **corrective action**.

The ICDS, implemented by the **Women and Child Development (WCD) Department**, is a **flagship government program** designed to **combat malnutrition and improve early childhood development**. However, the audit found **serious lapses**, affecting service

delivery and impacting **children, pregnant women, and lactating mothers**.

Key Findings of the CAG Report

1. Infrastructure Deficiencies in Anganwadi Centres (AWCs)

Structural Issues and Unsafe Conditions

- Gujarat has a total of **53,029 Anganwadi Centres (AWCs)**, but many are in **poor condition**, making them unsafe for children and staff.
- 3,381 AWCs** operate from **temporary structures**, increasing the risk of **disruptions** in service delivery.
- 30 AWCs** function in **open spaces**, exposing children to **harsh weather conditions**.
- 8,452 AWCs** have **dilapidated buildings**, jeopardizing the **safety** of young children and workers.

Lack of Adequate Space

- As per ICDS norms, each AWC must have a **minimum covered area of 600 square feet** for **30 children**.
- None of the AWCs in Gujarat** constructed during **2015-2023** meet this requirement, resulting in **overcrowding and unhygienic conditions**.

Lack of Basic Amenities

- 1,299 AWCs (2.45%)** lack **toilets**, making hygiene and sanitation a **major concern**.
- 1,032 AWCs (1.95%)** do not have **drinking water facilities**, affecting the **health and nutrition** of children.

2. Severe Manpower Shortages

- Many AWCs **do not have adequate staff**, hampering **service delivery**.
- The absence of **trained personnel** affects the **quality of early childhood education, nutritional support, and maternal health services**.

Supreme Court's Reasoning and Verdict

- The **Supreme Court disagreed** with the High Court's acquittal, stating that the evidence—both **testimonial and circumstantial**—was enough to support the conviction.
- The bench stressed that **police accountability** must be upheld and that **violations of human rights**, especially those occurring in custody, cannot be excused or ignored.

Broader Significance

- It highlights the **alarming frequency of custodial deaths** in India and the **culture of impunity** that sometimes protects police officials from prosecution.
- It applauds the Supreme Court's action as a **"timely restatement"** of the legal principle that **no one is above the law**, including law enforcement officers.
- The judgment also reasserts that **justice must prevail over institutional complacency or political influence**.

PEPPER IT WITH:

Custodial Death, Jail Reforms, Role of Judiciary.

Conclusion: A Step Toward Upholding the Rule of Law

- The editorial views the verdict as a necessary corrective, which **restores faith in the judiciary's role** as a protector of fundamental rights.
- It sends a **clear message** that **custodial violence is unacceptable** and must be met with firm legal consequences.
- Ultimately, it is a call for **greater transparency, independent investigation** of police misconduct, and **strengthening accountability mechanisms** within the justice system.

3. Unmet Program Targets and Poor Implementation Supplementary Nutrition Programme (SNP) Failing to Meet Objectives

- The **SNP**, a crucial component of **ICDS**, has failed to achieve its intended goals, leaving many **children and mothers without adequate nutritional support**.
- Inconsistent food supply, lack of proper monitoring, and logistical challenges** have worsened the **nutritional crisis** in many regions.

Supplementary Nutrition Programme (SNP)

Objective:

To bridge the gap between the **Recommended Dietary Allowance (RDA)** and the **Average Daily Intake (ADI)** of children and women by providing food supplements.

Category	Type of Food Supplied
Children (6 months–6 yrs)	Morning snacks + hot cooked meals
Severely malnourished children	Energy-dense food with micronutrients
Pregnant & lactating women	Take-home ration (THR) or cooked meals

Early Childhood Care and Education (ECCE) Deficiencies

- The **ECCE program**, aimed at providing **pre-school education**, is **underperforming**, with **poor learning outcomes** among enrolled children.
- Many **AWCs lack proper teaching materials, trained teachers, and structured learning plans**.

Inadequate Ante-natal and Post-natal Care for Mothers

- ICDS programs** that support **pregnant and lactating mothers** have **not been implemented effectively**, leading to **high maternal and infant malnutrition rates**.

MISSION POSHAN 2.0 & SAKSHAM ANGANWADI

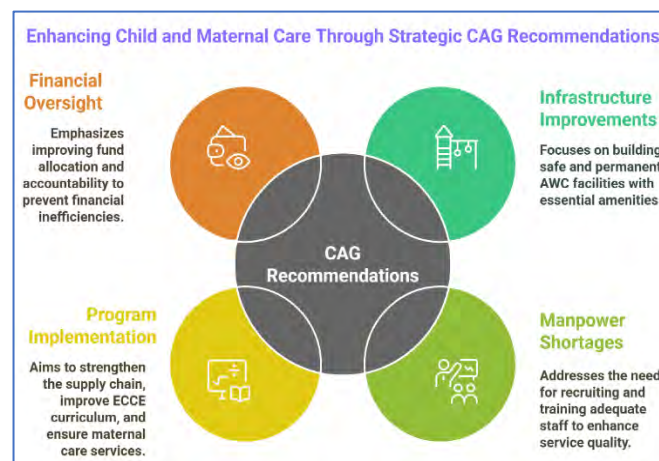
- 2 lakh Anganwadis to be upgraded as 'Saksham Anganwadis'
- Nutritional norms and standards to be improved
- Quality and testing of Take-home Ration to be strengthened
- Traditional community food habits to be promoted
- Delivery of food under the Supplementary Nutrition Program to be optimised

- The absence of **regular health check-ups, iron and folic acid supplementation, and postnatal nutritional support** has affected maternal and infant health outcomes.

4. Financial Mismanagement and Inefficiency

- The CAG report found **unspent funds** lying in **Personal Ledger Accounts (PLAs)** of development officers.
- This indicates **inefficiencies in fund allocation and utilization**, leading to **delays in essential services**.
- Failure to properly distribute allocated funds** has resulted in **gaps in program execution**, affecting **millions of beneficiaries**.

Recommendations by the CAG



Conclusion

- The **CAG report** highlights **critical weaknesses** in the **implementation of the ICDS Scheme** in Gujarat. **Severe infrastructure deficiencies, lack of manpower, poor execution of key programs, and financial mismanagement** are affecting millions of **children, pregnant women, and lactating mothers**.
- To **achieve the ICDS objectives**, the **Gujarat government** must take **immediate corrective measures** by **improving AWC facilities, addressing staff shortages, ensuring proper implementation of nutrition and education programs, and streamlining financial management**.
- Without **urgent reforms**, the scheme will **fail to deliver its intended benefits**, impacting the **health, education, and well-being of vulnerable sections of society**.

PEPPER IT WITH:

Nutrition security, IMR, MMR, Women Nutritional Support.

Gender Gap in Blue-Collar Jobs

News Excerpt:

A recent study has revealed that **only 20% of blue-collar jobs in India are held by women**, underlining a

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significant **gender imbalance** in the country's industrial and labor-intensive workforce. Despite growing awareness and efforts to promote workplace diversity, **systemic inequalities** persist across wage structures, recruitment, and career growth.

Wage Gap and Economic Inequality

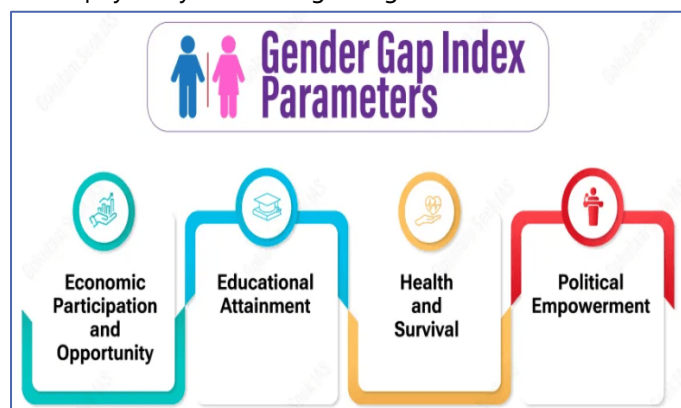
- Women working in **blue-collar roles** are often paid **less than their male counterparts**, even for the **same type of work**.
- The **wage gap** remains a key barrier to women's full participation and motivation in the workforce.
- This reflects the broader pattern of **gender-based economic inequality** across various sectors in India.

Career Advancement Barriers

- The study highlights **limited opportunities** for women to rise to **supervisory or leadership roles** in traditionally male-dominated sectors.
- **Lack of training, mentorship, and supportive policies** at the workplace contributes to stagnation in women's career trajectories.
- Women are often **overrepresented in lower-paid, repetitive roles** with fewer chances of promotion.

Socio-Cultural and Structural Challenges

- **Social norms and cultural expectations** often restrict women's mobility and job choices, especially in sectors considered "unfeminine."
- **Safety concerns, rigid work hours, and lack of transport** further reduce access to blue-collar jobs for women.
- Many employers still carry **biases** around hiring women for physically demanding or night-shift work.



Why Inclusion Matters

- Increasing **female workforce participation** in blue-collar sectors can:
 - Boost **household incomes**.
 - Improve **economic resilience**.
 - Lead to more **diverse and productive workplaces**.
- Gender-balanced teams have been shown to enhance **innovation, efficiency, and employee satisfaction**.

Recommendations for Improvement

- **Equal Pay Policies:** Enforce **transparent wage structures** and **mandatory equal pay laws**.
- **Skill Development:** Provide **targeted training** for women in high-demand trades.
- **Support Systems:** Improve **workplace safety, transport, and childcare facilities**.
- **Employer Incentives:** Offer benefits or tax breaks for companies that **actively recruit and retain women** in blue-collar roles.

PEPPER IT WITH:

Blue Collar Jobs, Gender Equity, Labour Laws for Women Welfare.

Conclusion

- Despite ongoing progress in **women's empowerment**, this study reveals that **blue-collar employment** remains deeply **gender-skewed** in India.
- Addressing the **wage gap, societal norms, and workplace biases** is essential for achieving a **more inclusive and equitable workforce**.

The Crisis in Indian Education

News Excerpt:

The three pervasive issues—

Commercialization,

Commodification, and Corruption—

are undermining the **quality, equity, and ethical integrity** of the Indian education system. These **"3Cs"** have created a landscape where education is no longer a **public good**, but a **profitable industry** with questionable practices.

Commercialization: Education as Big Business

- The education sector has seen the **unchecked growth of private players**, especially in **coaching centres, private universities, and ed-tech startups**, which prioritize **profit over pedagogy**.
- With **exorbitant fees**, parents are pushed to invest heavily in tuition and coaching in hopes of securing seats in prestigious institutes like **IITs and medical colleges**.
- This has made education a **financial burden** rather than a right, intensifying **class divides** in access to quality education.

Commodification: Degrees Over Learning

- Education is increasingly seen as a **commodity**—a product to be bought and sold—rather than a means for **intellectual development or social mobility**.
- Institutions often market themselves with a focus on **placement packages, foreign tie-ups, and brand value**, sidelining academic rigor and **student welfare**.
- This shift in mindset encourages a **"credential culture"**, where the goal is to acquire certificates rather than **skills or values**.

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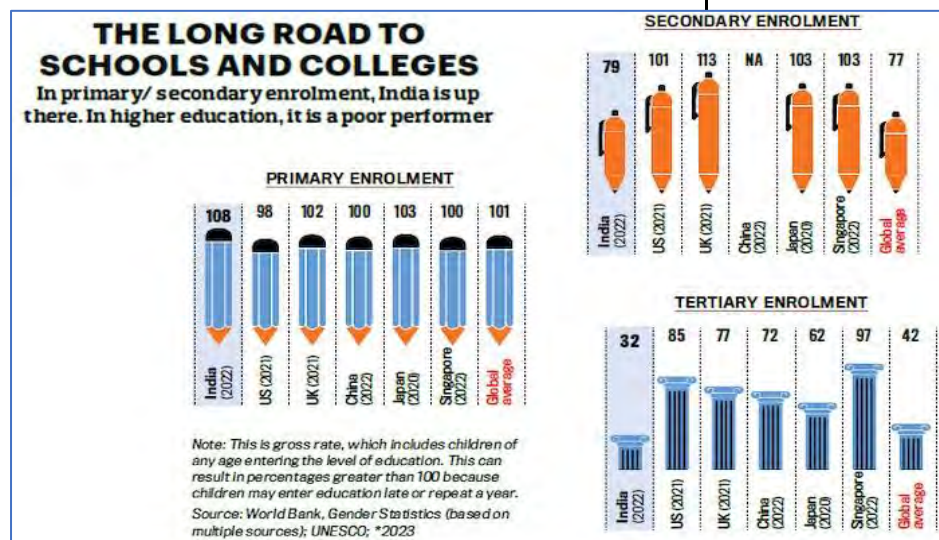
Corruption: Undermining Merit and Fairness

- **Admission scandals, exam paper leaks, fake degree rackets, and politically influenced faculty appointments** have become disturbingly common.
- Corruption not only affects the **credibility of institutions**, but also **demoralizes genuine students and educators**, weakening public trust in the system.
- The **lack of transparency** in funding, accreditation, and governance contributes to this culture of **unethical shortcuts**.

Recent data suggests significant progress, but controversies persist due to methodological differences and data gaps.

What is Poverty?

- **Definition:** Poverty is generally defined as the inability to meet basic needs such as food, clothing, and shelter.
- **Perspectives on Causes:**
 - Some schools blame the poor themselves, labeling them as **"lazy" or "unwilling"** to take risks."
 - Economists like Martin Ravallion argue that such blame justifies public inaction and deepens systemic injustice.



- **Global Poverty Line:** The World Bank defines extreme poverty as living on less than \$2.15 per day (updated in 2022 from \$1.90) based on purchasing power parity (PPP)1.

Global and Indian Poverty Trends

- **Global Context:**
 - About 8.5% of the world's population (682 million people) live in extreme poverty.
 - China and India have seen the largest reductions, with over 1 billion people moving out of extreme poverty between 1990 and 2022.

Impact: Deepening Inequality and Educational Decay

- These 3Cs collectively threaten the **core purpose of education**—to foster a well-rounded, ethical, and informed citizenry.
- They result in **mental stress among students, loss of trust in institutions**, and the **widening gap** between urban and rural or elite and marginalised learners.
- Moreover, the system produces graduates who may lack **critical thinking, creativity, or ethical grounding**, weakening the national workforce.

Way Forward:

- **Stronger regulations** are needed to curb exploitative practices and ensure **affordability and access**.
- **Merit-based and transparent systems** for admission, assessment, and faculty selection must be institutionalized.
- A **return to value-based education**, focused on **creativity, ethics, civic responsibility, and well-being**, is essential.

PEPPER IT WITH:

Education Reforms, Job Security, Learning Outcome.

- **India's Progress:**
 - According to the 2022-23 Household Consumption Expenditure Survey, less than 5% of Indians live below the poverty line.
 - The World Bank notes a decline in extreme poverty in India from 431 million in 1990 to approximately 129 million in 20241.

Measuring Poverty in India

Poverty Line Concept

- The poverty line is the minimum income or consumption level necessary to meet basic needs.
- Two types of poverty lines:
 - **Absolute Poverty Line:** Fixed threshold based on basic needs like nutrition.
 - **Relative Poverty Line:** Varies with societal standards of living, capturing social inclusion.

Evolution of Poverty Estimation Methods

- **1971 (Dandekar and Rath):** Poverty line based on calorie consumption (2,250 calories/day), set at Rs 15 (rural) and Rs 22.5 (urban).
- **1979 (Y K Alagh Task Force):** Adjusted calorie norms to 2,400 (rural) and 2,100 (urban).
- **1993 (Lakdawala Committee):** Introduced state-specific poverty lines adjusting for regional price differences but faced criticism for calorie norms.
- **2005 (Tendulkar Committee):** Major methodological changes including:

Understanding Poverty Debates in India

News Excerpt:

Poverty remains a critical issue in India, with ongoing debates about its measurement, causes, and trends.

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- Shift from calorie-based to nutritional outcomes.
- Uniform poverty basket for rural and urban areas.
- Adjusted price corrections.
- Inclusion of private health and education expenditures.
- Use of Mixed Reference Period for consumption data.
- **2012 (Rangarajan Committee):** Reintroduced separate rural and urban poverty baskets, raising poverty lines to Rs 972 (rural) and Rs 1,407 (urban) per capita per month¹.

PEPPER IT WITH:

Poverty Eradication Measures, Niti Aayog MDP report.

Key Poverty Estimates in India

Year	Committee	Rural Poverty Line (Rs/month)	Urban Poverty Line (Rs/month)	Estimated Poverty Rate (%)
2004-05	Tendulkar	446.68	578.80	41.8 (rural), 25.7 (urban)
2004-05	Lakdawala	-	-	28.3 (rural), 25.7 (urban)
2011-12	Tendulkar (updated)	816	1,000	21.9 (national)
2014	Rangarajan	972	1,407	Not officially adopted
2022-23	Household Survey	-	-	Less than 5%

Note: The Rangarajan report was not officially adopted, and the latest official data is from 2011-12 based on Tendulkar's method. The 2017-18 survey data was leaked but never officially released.

Debates and Challenges in Poverty Measurement

- **Economic Growth vs Poverty Reduction:**
 - Some argue rapid GDP growth since the 1990s has reduced poverty significantly.
 - Others contend growth has increased inequality and not sufficiently benefited the rural poor.
- **Agricultural Growth:** Debates exist on whether agricultural growth has "trickled down" to reduce rural poverty or exacerbated disparities.
- **Data Gaps:**
 - No official Consumption Expenditure Surveys were published between 2011-12 and 2022-23.
 - This data absence creates a "data limbo," complicating accurate poverty assessment.

- **Judicial Concerns:** The Supreme Court has questioned whether benefits for below-poverty-line populations reach the intended recipients, highlighting the need for reliable, scientific data.

Conclusion

India has made remarkable progress in reducing poverty, but debates continue due to methodological differences, data gaps, and divergent views on economic growth's impact. Understanding the evolution of poverty measurement and the complexities involved is crucial for informed policy-making and effective poverty eradication efforts.

The Three Language Policy in India: Key Arguments, Facts, and Data**News Excerpt:**

India's New Education Policy 2020 (NEP 2020) has brought the three language formula back to the forefront of educational debate. This policy aims to balance the need for national unity, cultural diversity, and global competitiveness by promoting multilingualism in schools.

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What is the Three Language Formula?

- The three language formula was first introduced in the National Education Policy of 1968 and reaffirmed in NEP 2020.
- It mandates that every student learns three languages during their schooling:
 - One Indian native language (e.g., Hindi)
 - One regional language or mother tongue
 - One modern language, typically English
- The goal is to promote linguistic diversity, cultural exposure, and national integration.

Key Arguments in Favor**1. Promotes Multilingualism and Cognitive Benefits**

- Research highlights that being multilingual provides social, educational, and long-term cognitive benefits for children.
- Early childhood education in the mother tongue significantly enhances learning, especially in subjects like mathematics and science.

2. Strengthens National Unity and Cultural Identity

- Learning regional and national languages fosters a sense of unity and national pride while respecting India's linguistic diversity.
- Exposure to different languages and cultures nurtures mutual respect and understanding among students from various backgrounds.

3. Prepares Students for a Globalized World

- English is considered a 'key language' for international communication and opportunities, but the importance of Indian languages is also recognized.

- The policy aims to ensure that students are equipped to participate in both local and global contexts.

Implementation Features and Flexibility

- Early Childhood Focus:** Children aged 3 to 8 are encouraged to learn in their mother tongue or regional language, which research shows is crucial for foundational learning.
- Teacher Training:** NEP 2020 emphasizes training teachers in multiple languages and hiring those fluent in local languages.
- Assessment:** Students' proficiency in all three languages is tested, ensuring balanced development.
- Flexibility:** While two languages must be Indian, the third language can be chosen based on student preference, which is especially important in non-Hindi-speaking states.
- Use of Technology:** The policy encourages the development of online resources in regional languages to support learning.

PEPPER IT WITH:

Indian education, 3 Language formulae, Learning Outcome.

Initiatives to promote multiLinguism

Initiative	Objective	Key Features
ASMITA Initiative	Augmenting Study Materials in Indian Languages through Translation and Academic Writing	Aims to produce 22,000 books in 22 scheduled languages over five years.
Bahubhasha Shabdkosh	Creation of a multilingual dictionary repository	Supports language learning and cross-linguistic accessibility.
Real-Time Translation Architecture	Develop real-time translation technology for Indian languages	Led by NEFT in collaboration with Bharatiya Bhasha Samiti .
Bharatiya Bhasha Pustak Scheme	Provides digital textbooks and study materials in Indian languages	Promotes accessibility to educational resources in multiple languages.
Bhashini	AI-led language translation system enabling multilingual communication	Allows people to speak in their own language while interacting with speakers of other languages.

Challenges and Criticisms

- Implementation in Multilingual Regions:** States like Odisha, with over 20 tribal languages, face challenges in providing education in the mother tongue, contributing to high dropout rates among tribal children.

- Resource Constraints:** There is a need for more teachers proficient in multiple languages and for educational materials in various regional languages.

- Balancing English and Regional Languages:** While English is essential, overemphasis may undermine the status and development of Indian languages.

Supporting Data and Outcomes

- Learning Outcomes:** National Achievement Survey (2014) found that Class III students answered 64% of language items correctly, with significant variation across states.
- Mother Tongue Advantage:** Studies show that students understand subjects better when taught in their mother tongue, especially in early years.
- English Proficiency:** The British Council and Pratham-ASER report found a strong positive relationship between reading skills in the language of instruction and English performance, suggesting that a solid foundation in the mother tongue supports learning English.

Conclusion

The three language policy under NEP 2020 is a strategic approach to equip Indian students with linguistic versatility, cultural awareness, and global readiness. While the policy has clear cognitive and social benefits, its success depends on effective implementation, adequate resources, and sensitivity to India's complex linguistic landscape. The evidence underscores the importance of mother tongue education in early years and the need to balance local and global language priorities for holistic development.

Drop the Piecemeal Ways to Social Security for Workers: Towards a Universal, Robust System

News Excerpt:

India is at a pivotal moment in redefining social security for its workforce, especially as the nature of work evolves with the rise of gig and platform-based employment. While recent reforms signal progress, the continued reliance on fragmented, piecemeal approaches exposes deep systemic flaws and risks leaving millions of informal workers unprotected.

Current Landscape: From Exclusion to Incremental Inclusion

India's traditional social security system has been largely tethered to formal employment, sidelining the vast informal workforce—nearly 90% of all workers.

Recent policy moves, such as **proposed schemes for gig workers (including health coverage under Ayushman Bharat, registration on the eShram portal, and a transaction-based pension policy)**, represent a significant departure from this exclusionary model.

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Systemic Flaws in the Existing Framework

- Over-Reliance on Welfare Boards:** Welfare boards, the main vehicles for delivering social benefits to informal workers, have been plagued by inefficiency, underutilization of funds, and weak governance. For example, large sums collected as cess for construction workers have remained unspent or delayed in disbursement, even in states with a strong welfare tradition like Kerala.
- Fragmented, Piecemeal Schemes:** Creating separate welfare boards or funds for each new category of informal worker may offer temporary relief but fails to address the root issues of poor governance, lack of transparency, and outdated benefit structures. This approach risks creating arbitrary distinctions between types of informal work, leading to gaps in coverage and inconsistent protections.
- Ambiguous Legislation:** The **Code on Social Security, 2020**, while intended as a comprehensive reform, has faced criticism for ambiguous definitions, diluted protections, and implementation challenges. It retains many of the segmented structures of previous laws and does not fully implement recommendations to abolish wage ceilings or integrate benefit administration.

Why Piecemeal Approaches Fall Short

- Inadequate Coverage:** More than half of India's salaried workforce lacks any social security benefits.
- Wastage and Underutilization:** Funds meant for worker welfare often remain unused due to administrative bottlenecks and lack of accountability.
- Short-Term Fixes:** Piecemeal schemes quickly become outdated as new forms of work emerge, requiring constant policy catch-up rather than proactive, resilient systems.
- Artificial Distinctions:** Dividing informal workers into narrow categories (e.g., gig vs. domestic workers) leads to arbitrary thresholds for eligibility, leaving many vulnerable workers without support.

Scheme Name	Type	Target Group	Key Benefits / Features	Launch Year / Notes
Atal Pension Yojana (APY)	Pension	Poor, underprivileged, unorganized workers	Voluntary contributions with government co-contribution; pension after retirement	Launched 2015; 7.25 crore enrolled as of 2024
Employees' State Insurance Scheme (ESI)	Health & Disability Benefits	Employees earning ≤ ₹21,000/month	Covers sickness, maternity, disablement, death due to employment injury	Covers 132 million beneficiaries
Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)	Life Insurance	Individuals aged 18-50	Annual renewable life insurance cover; ₹2 lakh coverage	Launched 2015
e-Shram Portal	Worker Registration & Social Security	Unorganized and informal workers, including gig workers	Universal Account Number (UAN) for workers; facilitates access to multiple social security schemes	Launched 2021; 30.68 crore registered as of 2025
Pradhan Mantri Matru Vandana Yojana (PMMVY)	Maternity Benefit	Pregnant and lactating women	Direct cash transfer of ₹5,000 for maternity assistance	Ongoing
Social Security Scheme for Gig and Platform Workers	Social Security	Gig and platform workers	Registration via e-Shram; healthcare under PM-JAY; identity cards; push for aggregator contributions	Announced in Union Budget 2025
Indira Gandhi National Disability Pension Scheme (IGNDPS)	Disability Pension	Disabled individuals below poverty line	Monthly financial assistance of ₹300-₹500	Ongoing
Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)	Food Security	Vulnerable populations	Free food grains distribution	Launched during COVID-19 pandemic

The Case for Universal Social Protection

To future-proof India's workforce and ensure true inclusivity, a universal social protection system is essential. Such a system should:

- Cover All Workers:** Move beyond employment type or sectoral distinctions to guarantee basic protections (health, pension, insurance) for every worker, formal or informal.
- Leverage Technology:** Use platforms like the **eShram portal** for universal registration and benefit delivery, reducing leakage and improving transparency.
- Strengthen Governance:** Reform welfare boards and benefit administration to ensure efficient, timely, and accountable use of funds.
- Set a Minimum Baseline:** Treat the Social Security Code as a floor, not a ceiling, and encourage states to innovate and expand coverage based on local needs.
- Adapt to Future Disruptions:** Build flexibility into the system to accommodate new forms of work arising from technological and economic shifts.

Way Forward

- Ratify International Standards:** India should consider ratifying the **ILO Social Security (Minimum Standards) Convention, 1952**, to align with global best practices.

- **Universalize Social Security:** Shift from fragmented, welfare-board-driven schemes to a universal, rights-based approach that guarantees social protection for all workers, regardless of employment status or sector.
- **Integrate and Modernize Systems:** Streamline existing schemes, ensure interoperability of databases, and use digital tools for registration, benefit delivery, and monitoring.
- **Focus on Implementation:** Prioritize the actual delivery of benefits, closing the gap between policy intent and on-ground impact through better oversight and grievance redressal mechanisms.

PEPPER IT WITH:

Welfare issue for Labour Productivity, Labour security.

Conclusion

India's recent efforts to extend social security to gig workers mark a significant policy transition, but the persistence of piecemeal, fragmented approaches threatens to undermine these gains. To truly make its workforce "future ready," India must embrace a universal, robust, and adaptable social protection system that leaves no worker behind—transforming social security from a privilege of the few to a right for all.

ECONOMY**US Reciprocal Tariffs to Affect Select Indian Sectors****News Excerpt:**

The United States' recent decision to impose **reciprocal tariffs** is expected to have a **limited impact on India**, primarily affecting **specific sectors**. According to **Pravakar Sahoo**, Programme Director at **NITI Aayog**, India's export landscape is **better positioned** compared to countries like **China, Mexico, and Canada**, which together account for nearly **50% of US imports**. However, the tariffs could still bring **challenges and opportunities** for Indian exporters.

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Key Insights from NITI Aayog

- **Impact on Select Sectors Only**
 - The **reciprocal tariffs** will target **specific industries**, minimizing the **overall impact** on **India's exports**.
 - The sectors most likely to be affected include **steel, aluminium, and automobiles**.
- **Potential Export Gains for India**
 - Historical data suggests that when the **US imposed tariffs on China in 2018**, several countries, including **India, Taiwan, Vietnam, Thailand, and Mexico**, benefited by **expanding their exports to the US**.
 - A similar trend could emerge, giving Indian exporters **new opportunities** in the global market.

U.S. reciprocal tariff:

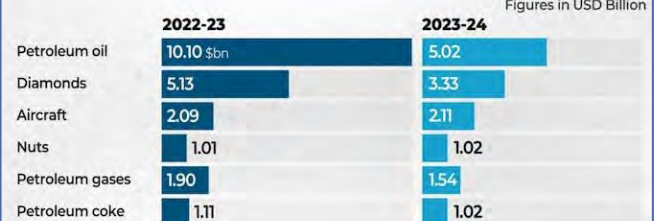
- The U.S. has introduced a reciprocal tariff system, which comprises of two parts.
- Commodity-wise tariffs and
- Additional country-wise tariff.
- India's reciprocal tariff rate is calculated at 26%, which is added to existing tariffs, affecting multiple exported goods.
- For countries that are not listed in the reciprocal tariff list, a floor rate of 10% has been announced.
- The reciprocal tariffs announced are now on hold and limited to 10% for 90 days, except for China who is facing up to 245% for certain commodities.

Ongoing US-India Trade Negotiations

- A **US trade delegation**, led by **Brendan Lynch, Assistant U.S. Trade Representative for South and Central Asia**, is currently in **New Delhi** to discuss the implications of these tariffs.
- Both nations are working on a **bilateral trade agreement**, with an aim to finalize its **first phase by autumn 2025**.
- India and the US have set a target to **more than double their bilateral trade** from the current **\$190 billion to \$500 billion by 2030**.

Implications for India

- **Short-term challenges** for industries like **automobile manufacturing, steel, and aluminium** due to higher tariffs.
- **Long-term opportunities** as Indian exporters could gain market share in sectors where **China and Mexico** face higher barriers.
- **Strengthened trade ties with the US**, as ongoing negotiations could lead to **mutually beneficial agreements** reducing tariff burdens.

What India Buys and Sells From the U.S.**India Top Imports From U.S.****India Top Exports To U.S.**

Source: Ministry of Commerce and Industry | Graphic: Dipu Rai, Sarfaraz

DIU

India's 26% Tariff Impact

- **Tariff Calculation:** Under this new policy, India faces a **26% tariff** on its exports to the U.S., a rate based on halving the average tariff India imposes on U.S. imports. The **U.S. Trade Department** estimates India's tariff on U.S. goods to be **52%**, though this method of calculating tariffs has drawn criticism.
- **Criticism:** Experts argue that the tariff calculation is flawed, as it considers **proportional deficits** instead of the actual tariff rates countries impose on each other.

Sectors Affected by Reciprocal Tariffs

- **Smartphones:** Manufacturers like **Foxconn** and **Tata Electronics** have worked to adjust their export strategies to counter the effects of these tariffs.
- **Gems and Jewelry:** This sector could face **cost increases** and a **decline in market share** as the U.S. imposes higher tariffs on imports.
- **Solar Modules:** India's **solar energy exports** may become less competitive in the U.S. market, affecting the growth of this emerging industry.
- **Apparel and Auto Components:** Both industries could see reduced demand for their exports as a result of the new tariff structure.

Economic Consequences

- **Impact on GDP:** Experts suggest that India's **GDP growth** could drop by **30 to 60 basis points**, as the tariffs are expected to reduce **export demand** and increase **production costs**.
- **Inflation:** As U.S. goods become more expensive due to tariffs, **inflationary pressures** could rise in India, affecting both **consumers** and **businesses**.
- **Global Trade Shifts:** With the U.S. imposing tariffs, countries affected by these changes may seek alternative markets, leading to shifts in global trade patterns and potentially changing the **supply chain dynamics**.

Strategic Responses by India

In response to these tariffs, India is considering several strategies to protect its economic interests:

- **Trade Negotiations:** India might engage in **diplomatic discussions** with the U.S. to either **reduce the tariffs** or seek **exemptions** for key sectors.
- **Diversification of Export Markets:** To reduce dependency on the U.S., India may actively **explore new export markets** in regions like **Europe** and **Asia**.
- **Domestic Adjustments:** India could introduce policies to **support domestic industries** affected by tariffs, such as providing incentives or improving **infrastructure**.

Global Trade Considerations:

- The **WTO must take the lead** in ensuring a **low-tariff trade system** for global economic stability.

- Regional trade agreements serve as a **secondary solution**, but a **unified global approach is preferable**.
- With increasing **uncertainty in tariff policies**, India must remain **agile and adaptive** in trade negotiations.

Policy suggestions & way forward:

- A **multi-pronged approach** is essential to adapt to changing trade policies.
- **Increasing imports from the U.S.**, such as **shifting petroleum imports**, can help lower India's reciprocal tariff rate **from 26% to 11.8%**, improving trade competitiveness.
- India should **pursue bilateral trade agreements** to secure mutually beneficial trade terms with the U.S.
- **Monitoring dumping practices by heavily affected countries like China** is necessary to protect domestic industries.

PEPPER IT WITH:

Tax wars, Policy implications on India.

Challenges Faced by MSMEs and Exporters Under GST

News Excerpt:

A recent report by the **Parliamentary Public Accounts Committee (PAC)** has flagged several issues that **Micro, Small, and Medium Enterprises (MSMEs)** and **exporters** face under the **Goods and Services Tax (GST)** regime. The committee has proposed **key recommendations** aimed at simplifying **compliance procedures**, **fast-tracking refunds**, and **enhancing transparency** to improve the overall GST framework.

The report was tabled in **Parliament**, urging the **Ministry of Finance** to take immediate action to resolve these concerns.

Key Issues Identified by the Parliamentary Committee

Complex Compliance Burden on MSMEs

- **MSMEs struggle with frequent return filings** and **complicated online reporting systems**, which add to their operational burden.
- Many small businesses **lack the resources** to handle complex tax filing requirements, leading to **delays and penalties**.
- The panel noted that the current **GST system favors large enterprises**, while **MSMEs face disproportionate administrative challenges**.

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Challenges faced by MSMEs

Limited access to financial services (35%)

- High collateral requirements
- Products not customised to needs
- Bankers wary of lending to micro and small enterprises
- Usually informal structures
- Suppress income on accounts to evade taxes

Poor infrastructure (10%)

- Lack of infrastructure such as Road, Electricity among others



Lack of skills and market awareness (25%)

- Poor business development and management skills
- Rely heavily on contacts for market-related information
- Inability to interpret statistical data

Lack of skilled human resources (15%)

- Primarily promoter driven
- Lack skilled management and staff

Limited use of technologies (15%)

- Entrepreneurs unfamiliar with new technologies

Delayed GST Refunds for Exporters

- Exporters face delays in receiving Input Tax Credit (ITC) refunds, leading to cash flow issues.
- The current refund system lacks efficiency, with unclear processing timelines, creating uncertainty for businesses.
- Several exporters have complained about long verification procedures and excessive documentation requirements that slow down the refund process.

Decline in Indirect Tax Revenue Share

- The committee observed a decline in the share of indirect taxes in total revenue receipts, which fell from 38.76% in FY18 to 36.92% in FY20, with fluctuations in later years.
- This drop has been attributed to factors like reductions in import duties, changes in tax policies, and global economic conditions.

Key Recommendations from the PAC Report

Simplified Compliance Framework for MSMEs

- The Ministry of Finance should introduce a simplified compliance structure tailored for MSMEs.
- The frequency of GST return filings should be reduced, and the online reporting system should be made more user-friendly.
- A dedicated helpline and support system should be established to assist MSMEs in understanding and complying with GST rules.

PEPPER IT WITH:

RBI liquidity moves, MSME Sector, Employment Generator.

Fast-Tracking GST Refunds for Exporters

- The PAC recommended setting up a dedicated mechanism for fast-tracking ITC refunds related to exports.
- Clear time-bound refund processing timelines should be implemented to avoid liquidity crises for exporters.
- The committee suggested introducing an automated system to monitor refund statuses and notify businesses about their claims.

Enhanced Transparency and Use of AI in Tax Monitoring

- The return filing and refund processing system should be automated, reducing manual intervention and chances of errors.
- The government should use Artificial Intelligence (AI) and data analytics to improve GST compliance monitoring and predict revenue collection trends.
- AI-based fraud detection mechanisms should be deployed to prevent tax evasion and improve efficiency in tax collection.

Government's Response and Next Steps

- The Ministry of Finance acknowledged the challenges but cited macroeconomic factors such as global economic slowdown, lower import volumes, and reduction in duty rates under various Free Trade Agreements (FTAs) as reasons for the decline in GST revenue.

- Officials have stated that they are working on streamlining GST procedures and expediting refund claims, but no formal policy changes have been announced yet.
- The committee has urged the government to implement reforms swiftly to boost MSME growth and support exporters, ensuring a more business-friendly GST system.

Conclusion

- The Parliamentary Panel's findings highlight key structural challenges in India's GST framework, especially for MSMEs and exporters. Addressing these issues with simplified compliance procedures, faster refunds, and greater transparency could significantly enhance the ease of doing business in India.
- The Ministry of Finance now faces pressure to implement reforms that support small businesses and exporters while ensuring sustained tax revenue collection.

India Lacks Enough Medium-Sized Companies

News Excerpt:

NITI Aayog CEO B.V.R. Subrahmanyam has expressed concerns about India's business ecosystem, pointing out a significant shortage of medium-sized enterprises that can scale into large corporations.

Speaking at the launch of the Dx-EDGE initiative, he described this issue as a structural and institutional challenge that could slow down economic growth and industrial transformation.

Current Landscape of MSMEs in India

The Dx-EDGE (Digital Excellence for Growth and Enterprise) initiative is a national program launched in India to digitally empower Micro, Small, and Medium Enterprises (MSMEs). It is a collaboration between the Confederation of Indian Industry (CII), NITI Aayog, and the All India Council for Technical Education (AICTE).

Key Objectives of Dx-EDGE

- Enhancing MSME Competitiveness:** Helps MSMEs adopt digital tools to improve efficiency and resilience.
- Public-Private-Academia Partnership (PPAP):** Encourages collaboration between industry, academia, and government.
- Digital Transformation Facilitation Centres (DTFCs):** Establishes centers to guide MSMEs in adopting digital technologies.
- Skill Development:** Provides training to MSMEs and students, ensuring a digitally skilled workforce.

Impact and Future Prospects

- Boosts MSME participation in the global market.**
- Supports India's vision of Viksit Bharat 2047** by fostering innovation and economic growth.
- Encourages affordable access to technology** for MSMEs.

This initiative is expected to strengthen India's MSME sector, making it more competitive and future-ready.

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India has a massive base of Micro, Small, and Medium Enterprises (MSMEs), but the distribution is heavily skewed:

- **Total MSMEs: 61.8 million**
 - Micro Enterprises: 60.9 million
 - Small Enterprises: 744,000
 - Medium Enterprises: 70,000

This pyramid-like structure shows a strong foundation at the micro level but a narrow and weak middle—indicating that many businesses struggle to scale up from micro to small, and from small to medium enterprises.

Key Challenges Hindering MSME Growth

Regulatory and Compliance Burdens

- MSMEs face disproportionate regulatory challenges compared to larger firms.
- Complex compliance requirements make it difficult for small businesses to scale.
- Many MSMEs struggle to navigate tax structures, labor laws, and financial regulations, adding to operational costs.

Limited Access to Technology and Innovation

- Many small businesses lack the capital and expertise to adopt advanced technologies.
- Digital transformation is slow, making MSMEs less competitive in global markets.
- The cost of automation, AI, and cloud-based solutions remains high for smaller enterprises.

Skilling and Talent Gaps

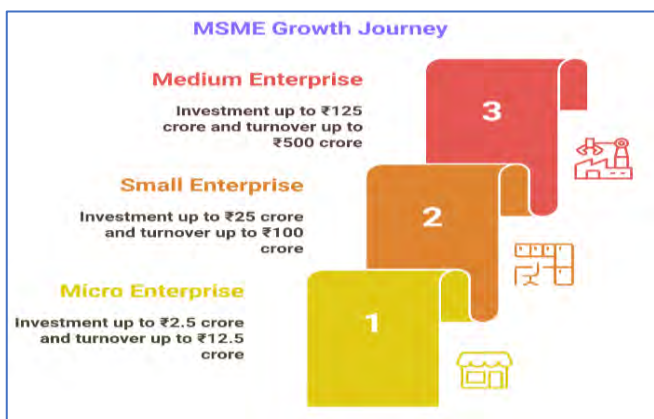
- The availability of skilled labor is a major challenge, preventing MSMEs from scaling operations efficiently.
- Lack of specialized training programs hinders productivity improvements.
- Entrepreneurs often lack exposure to best management practices and strategic growth planning.

Financial Constraints and Lack of Funding

- Limited access to credit prevents businesses from expanding beyond a certain scale.
- Many MSMEs struggle to secure loans due to strict lending norms and lack of collateral.
- High interest rates make capital investment difficult for medium-sized enterprises.

Recent Policy Changes to Support MSMEs

The Union Budget 2025-26 introduced revised MSME definitions to help businesses transition into larger categories:



This new classification expands the investment and turnover limits, allowing businesses to grow without losing MSME benefits.

Dx-EDGE Initiative: A Step Toward Strengthening Medium-Sized Enterprises

To tackle these challenges, the government launched the Dx-EDGE Initiative, a collaboration between:

- Confederation of Indian Industry (CII)
- NITI Frontier Tech Hub
- All India Council for Technical Education (AICTE)

Key Focus Areas of Dx-EDGE

Public-Private-Academia Partnership (PPAP)

- Brings together industry leaders, government agencies, and academic institutions to support MSMEs.
- Focuses on knowledge sharing, policy recommendations, and funding support.

Technology Integration & Digital Adoption

- Helps MSMEs adopt AI, automation, and digital platforms.
- Reduces the technology gap between large corporations and small businesses.

Skill Development & Workforce Training

- Provides training programs to bridge the talent gap in the MSME sector.
- Aims to improve workforce efficiency and enhance competitiveness.

Conclusion: The Need for a Stronger Middle Segment in India's Economy

- While India has a large number of micro enterprises, the lack of medium-sized companies is a bottleneck for economic growth. Addressing regulatory burdens, financial constraints, and technology adoption is crucial to help small businesses scale up.
- Initiatives like Dx-EDGE and the revised MSME classification aim to create an ecosystem where MSMEs can grow sustainably, contributing to India's global economic aspirations.

PEPPER IT WITH:

India's economy
sectoral Reforms,
Skilled Labour.

Indian Start-up Ecosystem Facing Headwinds

News Excerpt:

India's startup ecosystem, following criticism by Union Commerce and Industry minister and tries to address concerns about limited innovation and challenges in scaling up.

Indian government focus on startups:

The Indian government has been actively fostering the startup ecosystem through policy measures, financial support, and ecosystem development.

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- **Dedicated Startup Policies and Government Support**
 - At least **20 Ministries of the Central government** have policies or programs targeted at startups.
 - Large states have their own **startup policies**, ensuring widespread support across India.
- **Financial Aid and Investment Flow**
 - Programs like **Startup India Seed Fund Scheme** provide **₹50 lakh** for activities such as **market entry, commercialization, and scaling up**, but follow-up funding is required.
 - Capital flow has diversified beyond **equity investments**, with **significant debt capital now entering startups**.
 - Banks investing in startups signal a shift toward **long-term financial backing**, making startups a central part of India's **growth strategy**.

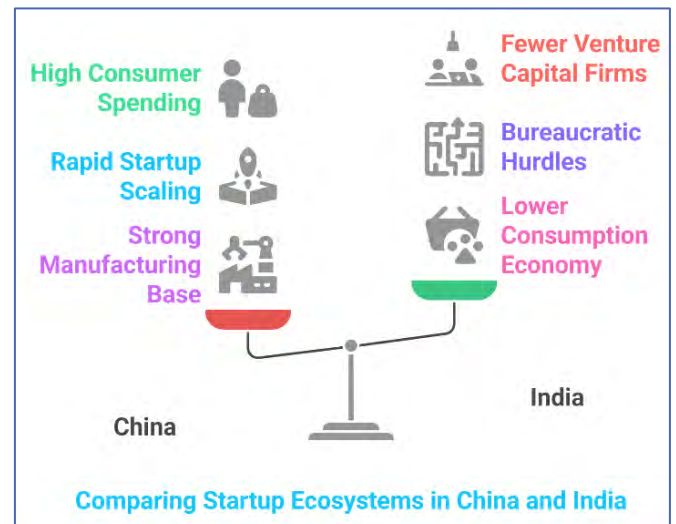
Importance of Venture Capital:

Venture capital (VC) plays a crucial role in fostering **innovation, entrepreneurship, and economic growth** by providing financial and strategic support to startups and early-stage businesses.

- **Funding for High-Risk Ventures**
 - Startups, particularly in **technology and deep-tech sectors**, require **large initial investments**.
 - Venture capital funds businesses with **high potential but uncertain returns**, bridging the gap between **idea stage and profitability**.
- **Driving Innovation and Entrepreneurship**
 - VC funding enables entrepreneurs to focus on **product development and scaling**, accelerating **technological advancements**.
 - Industries such as **AI, blockchain, electric mobility, and biotech** thrive due to VC-backed investments.
- **Mentorship and Strategic Guidance**
 - Venture capitalists offer **expert mentorship, industry insights, and networking opportunities**.
 - Investors help refine **business strategies, governance, and market positioning**, ensuring sustainable growth.

Challenges Faced by Startups:

- **Limited Innovation and Scaling Issues**
 - Many startups focus on **consumer-driven services** like grocery delivery rather than **deep-tech innovation**.
 - High **capital requirements for deep-tech startups** make scaling difficult, as **revenues don't come early, and risk levels are high**.
 - The **Startup India Seed Fund** provides ₹50 lakh, but this is **not adequate**, requiring further private sector investment.



- **Market Limitations and Consumer Economy**
 - India's **consumer economy is weaker** compared to developed startup ecosystems like **China**, which has a **higher per capita GDP (\$12,000-\$15,000) compared to India (\$3,500)**.
 - Indian **cash-rich companies hesitate to invest**, slowing startup expansion and market development.
 - Unlike China, India lacks a **nationalistic approach to technology** and self-reliance in innovation.
- **Dependence on Foreign Venture Capital**
 - **Most risk capital comes from external markets**, particularly the U.S., while **domestic venture capital firms remain scarce**.
 - **Indian venture capital needs expansion**, as strong homegrown investment is essential for sustained growth.
- **Bureaucratic Hurdles**
 - While the government supports startups, **bureaucracy makes operational processes difficult**.
 - **Regulatory inefficiencies slow down implementation**, making it harder for startups to function smoothly.

Policy suggestions & way forward:

- **Encourage Deep-Tech Innovation:** Focus on scaling AI, blockchain, and electric mobility startups beyond consumer-driven services.
- **Expand Domestic Venture Capital:** Build more homegrown venture capital firms to reduce dependence on foreign funding.
- **Increase Follow-Up Funding:** Strengthen financial support mechanisms beyond the **Startup India Seed Fund Scheme**, which provides ₹50 lakh.
- **Improve Bureaucratic Processes:** Streamline **regulatory and administrative hurdles** to make scaling startups easier.

PEPPER IT WITH:
Startup India, Venture Capital, Innovation Economy.

- **Nationalistic Approach to Technology:** Create policies to make Indian startups more **self-reliant** in technological innovation.

India's Bioeconomy

News Excerpt:

India's bioeconomy has been steadily growing and reached an impressive **\$165.7 billion** in **2024**, marking a **9.75% growth** from the previous year. This sector now contributes to more than **4.2% of India's GDP**. Projections indicate a bright future for the bioeconomy, with the sector set to grow to **\$300 billion by 2030** and potentially reach **\$1 trillion by 2047**. This expansion is being fueled by innovations in **biotechnology, sustainability practices**, and the rise of **bio-industrial products**.

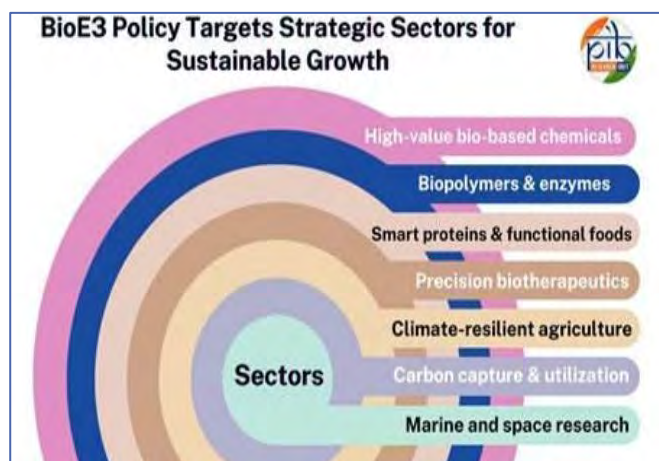
BioE3 Policy: India's Vision for Global Leadership in Biotechnology

In August 2024, India introduced the **BioE3 Policy (Biotechnology for Economy, Environment, and Employment)**. The policy's primary goal is to position India as a **global leader in biotechnology**. The focus areas of the policy include:

- **High-performance biomanufacturing**
- Supporting **biotech research and development** through initiatives like **Bio-AI Hubs** and **Biofoundries**
- Boosting the **economy**, ensuring **environmental sustainability**, and generating **employment**.

These initiatives are designed to increase India's contribution to global biotechnology innovation and strengthen its domestic industries.

Regional Contributions: Southern India Leads the Way



India's **southern region** is the primary contributor to the country's bioeconomy, accounting for **45.4%** of the total bioeconomic value in 2024. This region is home to states like **Maharashtra, Karnataka, Andhra Pradesh, Gujarat**, and **Uttar Pradesh**, which offer the right infrastructure, access to funding, and a skilled workforce—key factors in driving growth in the bioeconomy.

Key Sectors Driving Bioeconomy Growth

India's bioeconomy is supported by several critical sectors, including:

- **Bio-industrial Products:** This includes biofuels, biodegradable plastics, and bio-based chemicals. It is the largest contributor to the bioeconomy.
- **Biopharmaceuticals:** The biopharmaceutical sector, covering vaccines, **biosimilars**, and **monoclonal antibodies**, has seen significant expansion due to growing healthcare demands, both domestically and internationally.
- **Agricultural Biotechnology:** Focusing on **genetically modified crops** and **bio-pesticides**, this sector has helped improve agricultural productivity and sustainability across the country.
- **Environmental Biotechnology:** This involves waste treatment, pollution control, and **bio-remediation**—addressing environmental concerns and offering sustainable solutions.
- **Bioinformatics and Synthetic Biology:** Emerging fields in **personalized medicine**, data analysis, and **designing novel biological systems** are set to revolutionize health and environmental management.

Bio-agriculture

Agricultural biotechnology in India is advancing rapidly through innovations in genomics, transgenics, and gene editing under the Department of Biotechnology's Agriculture Biotechnology programme.

- **Climate-Smart Crops:** A drought-tolerant, high-yielding chickpea variety SAATVIK (NC 9) has been approved for cultivation.
- **Genome-Edited Rice:** Loss-of-function mutations in yield-limiting genes have led to improved rice lines like DEP1-edited MTU-1010, showing higher yields.
- **Genotyping Arrays:** India's first 90K SNP arrays—IndRA for rice and IndCA for chickpea—enable DNA fingerprinting and variety identification.
- **Amaranth Resources:** A genomic database, NIRS techniques, and a 64K SNP chip aid nutritional screening and development of anti-obesity amaranth varieties.
- **Biocontrol:** A nano-formulation from Myrothecium verrucaria offers eco-friendly control of powdery mildew in tomato and grape.
- **Kisan-Kavach:** An anti-pesticide protective suit enhances farmer safety from toxic exposure.

Challenges Facing India's Bioeconomy

Despite the remarkable growth, there are several challenges that India needs to address to ensure the continued success of its bioeconomy:

- **Regulatory Uncertainty:** There are concerns about the regulatory framework, particularly regarding the use of **genetically modified organisms (GMOs)**.

- **Infrastructure Gaps:** A lack of robust infrastructure, especially in emerging biomanufacturing sectors, poses challenges.



- **Skilled Workforce:** The need for a highly skilled workforce to drive innovation in biotechnology and related fields is critical for long-term success.

The **BioE3 Policy** aims to address these challenges by promoting innovation, establishing **biomanufacturing hubs**, and facilitating necessary **regulatory reforms**.

The Road Ahead

- India's bioeconomy is on an upward trajectory, with the government's strategic policies, technological advancements, and increasing global demand for bio-based products all contributing to the sector's growth.
- The country is well-positioned to become a leader in **sustainable biotechnology** and **innovative solutions** for global challenges in healthcare, agriculture, and the environment.

PEPPER IT WITH:

BioE3, Biotechnology Sector, Bioagriculture

India to Abolish 6% "Google Tax"

News Excerpt:

The Indian government has proposed abolishing the 6% Equalisation Levy, commonly referred to as the "Google Tax", starting **April 1, 2025**. This move is included in the **Finance Bill, 2025**, which introduces **35 amendments** to align India's tax policies with **global trade norms** and ease **India-US trade tensions**.

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The decision comes amid **persistent pressure from the United States**, which views the levy as **discriminatory against American tech giants like Google, Meta, Amazon, and Microsoft**. By removing the tax, India aims to **strengthen bilateral trade relations** and **comply with global tax reforms** under the **OECD/G20 Inclusive Framework**.

Background of the Equalization Levy

Introduction in 2016

- The **Equalisation Levy** was introduced in **2016** as a **6% tax on online advertising revenues** earned by **non-resident digital service providers** from Indian businesses.
- The goal was to **create a level playing field** between **foreign tech firms** and **Indian companies** that were subject to domestic taxation.

Expansion in 2020

- In **2020**, India expanded the levy by introducing a **2% tax on revenues earned by foreign e-commerce platforms** operating in India.
- This move was seen as **targeting US-based tech firms**, leading to **strong opposition from Washington**.
- As part of an **India-US agreement in 2024**, this **2% levy was already abolished**.

US Opposition and Trade Pressure

- The **US government** has long criticized India's **digital services tax**, arguing that it **unfairly targets American companies** while **favoring local businesses**.
- The **Office of the United States Trade Representative (USTR)** has even considered **imposing retaliatory tariffs on Indian goods** in response.

Reasons for Abolishing the Google Tax

Strengthening India-US Trade Relations

- India is currently in talks with the **US government** to **finalize a trade agreement** and **avoid potential tariffs** on Indian exports.
- The removal of the tax is seen as a **strategic move to ease tensions** and **improve diplomatic ties** between the two nations.

Aligning with Global Tax Norms

- India is part of the **OECD/G20 Inclusive Framework**, which seeks to **establish global tax regulations** for the **digital economy**.
- The **two-pillar global tax reform**, agreed upon in **October 2021**, aims to **replace unilateral digital taxes** like the **equalisation levy** with a **standardized global corporate tax system**.
- By **eliminating the levy**, India aligns itself with this **international tax framework**, ensuring a **fair and uniform taxation system** for all digital companies.

Encouraging Foreign Investment in India's Digital Economy

- India's **digital market** is one of the fastest-growing in the world, attracting **significant investments from global tech giants**.

- By removing this tax, the Indian government hopes to **make the country more attractive** to foreign investors.
- A **friendlier tax environment** can encourage **Google, Meta, Amazon, and other firms** to **expand their presence in India**, leading to **job creation and technological advancements**.

Boosting India's Position as a Global Tech Hub

- India's **IT and digital economy** are central to its **economic growth strategy**.
- Eliminating **barriers for global tech firms** can enhance India's role as a **global technology and innovation hub**.
- This move could also **strengthen India's startup ecosystem**, as more foreign capital and expertise enter the market.

Implications of the Tax Removal

Benefits for US Tech Companies: This may lead to lower advertising costs **for Indian businesses that rely on these platforms for digital marketing**.

Short-Term Revenue Loss for India

- The Indian government may experience a **temporary loss in tax revenues** from digital services.
- However, the expectation is that **greater foreign investment and economic growth** will **compensate for this loss in the long run**.

Boost to India-US Economic Ties

- The **removal of the tax** eliminates a **key point of friction** in India-US economic relations.
- This could **open doors for further trade agreements**, particularly in the **technology and e-commerce sectors**.

Shift Towards a Global Taxation Framework

- With India scrapping its **digital services tax**, the focus will now shift to **global tax regulations**, such as the **OECD/G20 tax framework**, which aims to **ensure fair taxation of multinational corporations worldwide**.

Conclusion: A Strategic Move for Economic Growth

- India's decision to **abolish the 6% Equalisation Levy** is a **significant step toward fostering a more open and competitive digital economy**.
- By **aligning with global tax reforms**, improving relations with the **US**, and **attracting foreign investment**, India is positioning itself as a **major player in the global technology and e-commerce sectors**.
- While **short-term revenue losses** may be a concern, the **long-term benefits of increased investments, trade cooperation, and technological growth** are expected to **outweigh the costs**, making this a **strategic economic decision for India's future**.

PEPPER IT WITH:

Tax Harmonisation, Reciprocal taxes, Policy Reforms to boost economy.

India's \$23 Billion PLI Scheme Set to Expire

News Excerpt:

The Indian government's flagship **Production-Linked Incentive (PLI)** scheme, launched in **2020** to boost **domestic manufacturing** and challenge **China's dominance** in global supply chains, is now set to **lapse without extension** after falling short of its intended goals.

About the PLI Scheme

- **Launched in 2020**, the PLI scheme aimed to:
 - Incentivize **manufacturing across 14 key sectors** (like mobile phones, pharma, textiles, steel, solar modules).
 - Attract global supply chains to **"Make in India"**.
 - Increase the **manufacturing sector's contribution** to India's GDP from **15.4% to 25% by 2025**.
 - Compete with **China's export ecosystem**.

Performance So Far: Mixed Outcomes

Success Stories:

- **Mobile phone manufacturing** witnessed a major boost: Production surged to **\$49 billion in 2023-24**, a **63% increase** from 2020-21.
- **Pharmaceuticals** also recorded **robust performance**.

Underperformance in Other Sectors:

- Sectors like **textiles, steel, and solar modules** struggled due to:
 - **Stiff global competition**, especially from **Chinese manufacturers**.
 - **Delays in production ramp-up and infrastructure readiness**.
 - **Slower than expected investment realization**.

Financial Snapshot

- Total incentive payout so far: **\$1.73 billion** (less than **8%** of the total allocation).
- Actual production under PLI: **\$151.93 billion** — only **37%** of the initial targets.

Government's Position

- The **government has decided not to extend** the scheme beyond the originally notified sectors.
- The focus now is on maintaining **accountability** and avoiding **policy drift**.
- Companies requesting **deadline extensions** were denied to uphold the scheme's **time-bound discipline**.

India's \$23 Billion PLI Scheme: Milestones, Examples, and Benefits

Key Milestones

- **Investment Realization:** As of August 2024, **₹1.46 lakh crore** has been invested across **14 sectors**.
- **Production Growth:** The scheme has led to **incremental production/sales of ₹12.50 lakh crore**.

- **Employment Generation:** Over **9.5 lakh jobs** have been created due to PLI incentives.
- **Export Boost:** Exports under PLI have surpassed **₹4 lakh crore**, strengthening India's global trade.
- **Sectoral Expansion:** **764 applications** have been approved across **14 sectors**, including **electronics, pharmaceuticals, food processing, and textiles**.

Real Examples

- **Electronics & Mobile Manufacturing:** Companies like **Foxconn and Reliance** have benefited from PLI incentives, boosting domestic production.
- **Pharmaceuticals:** The sector has seen **explosive growth**, with **94% of ₹620 million in incentives** directed toward pharma and mobile manufacturing.
- **Automobiles & Auto Components:** The industry has received **95 approvals**, enhancing India's position in EV and component manufacturing.
- **Food Processing:** The sector leads with **182 approvals**, supporting domestic food production and exports.
- **Textiles & Specialty Steel:** Textile products received **74 approvals**, while specialty steel secured **67 approvals**, strengthening India's industrial base.

Benefits

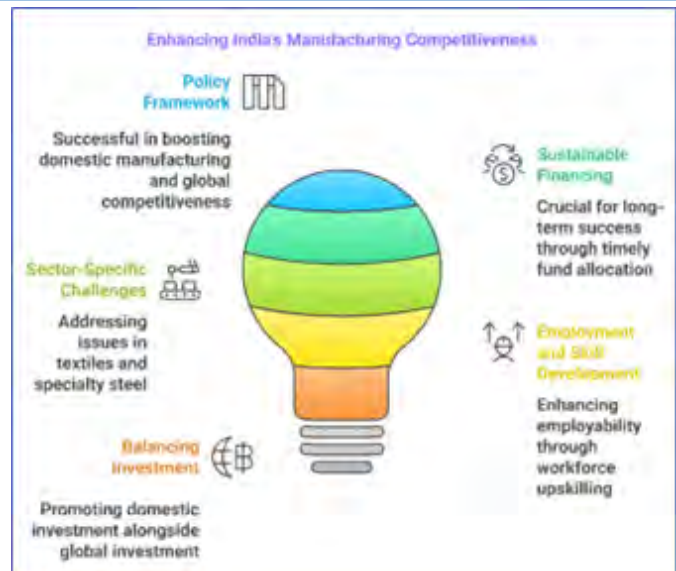
- **Boosts Domestic Manufacturing:** Reduces reliance on imports and strengthens India's **self-reliance (Atmanirbhar Bharat)**.
- **Enhances Global Competitiveness:** Positions India as a **manufacturing hub**, rivaling China.
- **Encourages Innovation:** Supports **high-tech industries** like **solar PV modules, advanced batteries, and drones**.
- **Strengthens Supply Chains:** Improves **domestic production capabilities**, reducing dependency on foreign suppliers.

Economic Growth & Job Creation: Expands employment opportunities and contributes to India's **GDP growth**.

Exploring Alternative Strategies

Even as the PLI scheme is phased out, the government is reportedly exploring:

- **Capital-linked support** — offering **partial reimbursement** for investments in manufacturing plants.
- **More focused sectoral incentives** where India has a **competitive edge**.
- Policies to promote **supply chain infrastructure** and reduce **import dependency**.



Conclusion

- While the PLI scheme achieved notable successes in some sectors, overall results were **below expectations**, leading to its **discontinuation**.
- India now faces the challenge of redesigning its industrial policies to support **domestic manufacturing**, **attract investment**, and **diversify away from China**—with more **targeted, efficient, and flexible frameworks**.

PEPPER IT WITH:

Boost to Manufacturing, Jobs Creation.

AGRICULTURE

India's Agricultural Trade Policies and US Corn: A Complex Negotiation

News Excerpt:

India's agricultural sector, a cornerstone of its economy, faces external pressures as the US pushes for greater access to its farm market. At the heart of this debate is the US demand for India to import American corn, a move India resists to protect its **food security, rural livelihoods, and smallholder farmers**.

India's Agricultural Transformation

- **From Scarcity to Surplus:** In the 1950s and 1960s, India relied on food aid to feed its population. Agricultural breakthroughs, including the Green Revolution, transformed India into a **food-surplus nation**.
- **Global Exporter:** Today, India is the **eighth-largest agri-produce exporter**, shipping grains, fruits, and dairy worldwide.
- **Challenges Persist:**
 - **Low Productivity:** Indian crop yields lag behind global standards due to small landholdings (less than 1 hectare on average compared to 46 hectares in the US).

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- **Infrastructure Gaps:** Limited investment in irrigation, storage, and market access hampers growth.
- **Climate Change and Price Volatility:** These factors exacerbate vulnerabilities in the agricultural sector.

India's Trade Policies

- **High Tariffs to Protect Farmers:**
 - India imposes **moderate to high tariffs (0-150%)** on agricultural imports to shield small farmers from cheap foreign goods.
 - The **weighted average tariff on US farm products is 37.7%**, compared to 5.3% on Indian goods in the US.
- **Bilateral Trade:**
 - Farm trade between India and the US is modest, valued at **\$8 billion**.
 - India exports rice, shrimp, and honey, while the US exports almonds, walnuts, and lentils.

US Demands and India's Resistance

- **US Push for Market Access:**
 - The US seeks to export "big-ticket" items like **corn, wheat, and cotton** to narrow its **\$45 billion trade deficit** with India.
 - It also advocates for India to lower tariffs, reduce price support, and open up to **genetically modified (GM) crops**.
- **India's Concerns:**
 - **Livelihoods at Risk:** Over **700 million Indians** depend on agriculture, and cheap imports could devastate smallholder farmers.
 - **Uneven Playing Field:** US farmers benefit from heavy subsidies, sometimes exceeding **100% of production costs**, creating unfair competition.
 - **Food Sovereignty:** India prioritizes self-reliance in staples like wheat, rice, and dairy to ensure food security.

Domestic Challenges in Agriculture

- **Smallholder Dominance:** Over **85% of Indian farmers** own less than 2 hectares, limiting investment capacity.
- **Underfunded Sector:**
 - Agriculture receives less than **6% of total infrastructure investment**, leaving irrigation and storage facilities inadequate.
 - Farmers frequently protest for better prices and legal guarantees of **minimum support prices (MSP)**.
- **Structural Imbalance:** Agriculture employs nearly **50% of India's workforce** but contributes only **15% to GDP**, reflecting inefficiencies.

The Way Forward:

- **Modernize Agriculture:**
 - Invest in **irrigation, storage, and digital technologies** to boost productivity.
 - Promote **cluster-based farming** and **Farmer Producer Organizations (FPOs)** for better market access.

Strengthen Trade Negotiations:

- Maintain high tariffs to protect small farmers while exploring trade-offs in **industrial goods**.
- Negotiate from a position of strength, balancing US export interests with India's domestic priorities.

PEPPER IT WITH:

Agri Trade Policies, Bilateral Trade Negotiations.

Enhance Competitiveness:

- Focus on improving crop yields and reducing production costs to make Indian agriculture globally competitive.
- Expand exports of high-demand products like rice and shrimp.

Play Hardball:

- Resist US pressure to open the agricultural market prematurely.
- Advocate for fair trade practices and highlight the **asymmetry in global agriculture**.

Conclusion

India's agricultural policies reflect its commitment to **protecting smallholder farmers, ensuring food security, and maintaining policy autonomy**. While the US pushes for greater market access, India must prioritize its **national interest and rural economy**. By modernizing agriculture and negotiating strategically, India can safeguard its agricultural backbone while engaging in global trade. Timing and patience, as in farming, will yield the best outcomes.

Challenges and Recommendations in India's Fertilizer Subsidy Policies

News Excerpt:

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Agriculture is the backbone of India's economy, and fertilizers play a vital role in ensuring high crop yields and food security. However, recent discussions in Parliament, led by the **Standing Committee on Chemicals and Fertilizers**, have highlighted concerns regarding **underfunding of subsidy schemes, inefficiencies in production, and the need for domestic self-sufficiency** in fertilizer supply.

Concerns Over Underfunding of Subsidies

The **Union Fertilizers Ministry** has been urged to **seek additional funds** for subsidy schemes to avoid disruptions in farmer support.

- The **projected budget for 2025-26** was ₹1,84,704.63 crore, but the **Ministry of Finance reduced it by 7.38% to ₹1,71,082.44 crore**.
- Cuts have been made in both **Nutrient-Based Subsidy (NBS) Scheme** and **Urea Subsidy Scheme**, affecting affordability for farmers.

Impact of Underfunding

- Reduced subsidy allocation can **increase the cost of fertilizers**, making them less accessible for small and marginal farmers.
- Market instability** in fertilizer pricing may impact food production and agricultural profitability.
- Lower government investment could **slow the adoption of modern fertilizers** such as **Nano Urea** and **Nano DAP**.

Expansion of Nano Fertilizers

The Committee has emphasized the **need for expanding production capacity** of **Nano Urea** and **Nano Diammonium Phosphate (DAP)**.

Key Recommendations:

- Timely establishment of production units** for nano fertilizers.
- Awareness programs** to educate farmers on the benefits of using Nano Urea and Nano DAP.
- Encouraging farmers to **combine conventional urea with nano variants**, as trials show yield improvements in peas (**6.14% to 14.82%**) and sugarcane (**1.65% to 4%**).

Why Nano Fertilizers Matter:

- Efficient nutrient absorption**, reducing wastage and environmental damage.
- Lower consumption of conventional fertilizers**, making farming more sustainable.
- Boosts soil health**, enhancing long-term agricultural productivity.

Strengthening Domestic Production & Raw Material Security

While agreements exist between Indian fertilizer companies and **resource-rich countries** for raw material imports, **no mining lease agreements** have been secured for **extraction, refining, and production**.

Committee Recommendations:

- Secure **mining lease agreements** for raw material extraction to reduce import dependency.
- Introduce **public and private sector investment** for domestic fertilizer production capacity.
- Develop policies to ensure **self-sufficiency** in fertilizer supply through **physical infrastructure and financial incentives**.

Why Domestic Production Is Critical:

- Reduces dependence on imports**, ensuring stable fertilizer prices.
- Strengthens India's supply chains**, mitigating global market fluctuations.
- Creates employment opportunities**, boosting rural and industrial economies.

FARM SUPPORT

Benefit to farmers through subsidy/ support in 2022-23

Dept	Total expenditure (in ₹)	Benefit per farmer (in ₹)	Benefit per acre (in ₹)
Fertilizer (subsidy)	2.55 lakh cr	21,233	7,313
Food (MSP)	2.73 lakh cr	5.45 lakh	2 lakh
Agriculture (PM-Kisan etc)	1.02 lakh cr	8,478	2,920
Consumer affairs (PSF)	81.7 cr	1.81 lakh	67,967
Rural development (NRLM)	1,766 cr	2,523	995
All depts	6.31 lakh cr	52,574	18,108

Note: Figures have been rounded off. Total no. of farmers benefitted: 12 crore. Total agriculture area: 34.8 crore acre

Efficient Utilization of Allocated Funds

Despite the budget cuts, the Committee observed **underutilization** in key subsidy areas:

- Indigenous PK fertilizers: 20% underutilized.**
- Imported PK fertilizers: 12% underutilized.**
- Indigenous Urea: 14.76% underutilized.**
- Market Development Assistance (MDA): 59.57% underutilized.**

PEPPER IT WITH:

India's Fertilizer Sector, Nutrient Based Subsidy.

Recommendations for Better Implementation:

- Ensure full utilization of allocated funds** for uninterrupted subsidy schemes.
- Improve the **planning and execution** of fertilizer subsidy programs.
- Monitor fund distribution** to maintain continuity across different fertilizer categories.

Conclusion

The **Committee's report** highlights the urgent need for **adequate funding, efficient fertilizer production, and strategic policy interventions**. By improving domestic supply chains, expanding nano fertilizer production, and ensuring financial sustainability, India can **strengthen its agricultural sector and reduce dependency on global markets**. The continuation of the **Urea Subsidy Scheme** remains essential to supporting food grain production and securing farmer welfare.

India's Commitment to Sustainable Agriculture at the 15th BRICS Meet

News Excerpt:

At the **15th BRICS Agriculture Ministers' Meeting**, India reaffirmed its dedication to **inclusive, equitable, and sustainable agriculture**. Union Agriculture Minister Shri Shivraj Singh Chouhan emphasized the importance of placing **small and marginal farmers** at the center of global agricultural strategies, highlighting

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agriculture as a source of **livelihood, dignity, and food security** for millions of families.

Key Highlights from India's Address

Empowering Smallholder Farmers

- **Global Importance:** Smallholder farmers, numbering **510 million worldwide**, are the backbone of the global food system but face challenges like **climate change, price volatility, and resource scarcity**.
- **Policy Support:** Shri Chouhan stressed the need for **cluster-based farming, Farmer Producer Organizations (FPOs)**, cooperative models, and **natural farming** to empower small farmers and improve market access.

Fair Agricultural Trade and Price Stability

- **Global Price Volatility:** The meeting emphasized the need to control **price fluctuations** and ensure **remunerative prices** for small farmers.
- **Public Food Stockholding:** Shri Chouhan highlighted the importance of **minimum support prices (MSP)** and value chains connecting smallholders directly to consumers.
- **COVID-19 Example:** India's **food storage and distribution system** provided free rations to over **800 million people** during the pandemic, showcasing its capacity for crisis management.

Technological Innovations

- **Digital Agriculture Mission:** Initiatives like **AgriStack, drone technology, and Climate-Resilient Villages** have improved service delivery, transparency, and farmer incomes.
- **Empowering Women:** Programs like **Lakhpati Didi and Drone Didi** focus on the **social and economic empowerment of rural women**, aligning with India's mission to empower women politically and economically.

Combating Climate Change

- **Key Programs:** India shared its initiatives, including:
 - **National Mission for Sustainable Agriculture (NMSA).**
 - **National Innovations on Climate Resilient Agriculture (NICRA).**
 - **Waste to Wealth and Circular Economy** models.
 - Promotion of **bio-fertilizers** and traditional farming practices.
- **BRICS Land Restoration Partnership:** Launched to address **land degradation, desertification, and soil fertility loss**, benefiting small farmers and tribal communities through the convergence of **traditional knowledge and scientific innovation**.

Joint Declaration and Global Commitments

- **BRICS Nations' Resolve:** The Joint Declaration emphasized:
 - **Food security** and **climate adaptation**.

- Empowerment of **women and youth**.
- Sustainable fisheries and livestock development.
- Soil and land restoration.
- **Digital agriculture certification** and financial mechanisms for agricultural economies in the Global South.
- **Land Restoration Partnership:** Reinforces the commitment to halt **land degradation** and promote sustainable agriculture.

India's Leadership Role

- **Global Collaboration:** Shri Chouhan invited BRICS nations to participate in **World Food India 2025** and the **World Audio-Visual Entertainment Summit 2025**, fostering innovation and partnerships.
- **Vedic Values:** Concluding his address, Shri Chouhan invoked India's ancient values: **"May all be happy, may all be healthy, may there be welfare and well-being for all."** This reflects India's leadership in promoting global agricultural welfare.

PEPPER IT WITH:

Sustainable Agriculture,
Marginal Farmer benefit.

Conclusion

India's participation in the **15th BRICS Agriculture Ministers' Meeting** underscores its commitment to **sustainable agriculture, climate resilience, and farmer empowerment**. By combining **technological innovation, policy support, and global collaboration**, India aims to lead efforts in achieving **inclusive and equitable agricultural development**.

INTERNATIONAL RELATIONS

India-Sri Lanka ties

News excerpt:

Prime Minister Narendra Modi's three-day state visit to Sri Lanka from April 4–6, 2025, marked a significant step in strengthening the longstanding relationship between the two nations.

PM Modi's Visit to Sri Lanka: Key Highlights

India-Sri Lanka Relations: Timeline

1948 – Sri Lanka Gains Independence from British.

- India and Sri Lanka establish formal diplomatic relations.

1954 – First Bilateral State Visits

- Jawaharlal Nehru visits Ceylon. Strong cultural ties and Buddhist connections are emphasized.

1964 – Sirima-Shastri Pact

- India and Sri Lanka sign agreement on repatriation of stateless Tamils of Indian origin in Sri Lanka.

1983–1987 – Ethnic Conflict and Indian Involvement

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- India becomes involved in Sri Lanka's civil conflict between government and Tamil separatists.
- India sends humanitarian aid to Tamil areas in 1987.

1987 – Indo-Sri Lanka Accord & IPKF Deployment

- PM Rajiv Gandhi and President Jayewardene sign the **Indo-Sri Lanka Accord**.
- Indian Peace Keeping Force (IPKF) deployed in northern Sri Lanka (1987–1990).
- **2004 – Tsunami Cooperation**

2009 – End of Civil War

- Sri Lanka ends its civil war against LTTE.
- India begins engaging in reconstruction, particularly in the North and East.

2014–2015 – Renewed Strategic Focus

- PM Modi launches *Neighbourhood First Policy*.
- Focus on maritime cooperation (**MAHASAGAR** vision), connectivity, and development aid.

2015 – PM Modi's First Visit to Sri Lanka

- First Indian PM to visit Jaffna.
- Announcements on railways, housing, and cultural heritage projects.

2020–2022 – COVID-19 and Economic Crisis Support

- India supplies vaccines and medicines under Vaccine Maitri.
- Extends over **\$4 billion** in aid during Sri Lanka's 2022 economic collapse.

Strengthening Bilateral Ties

Prime Minister Narendra Modi concluded a productive three-day visit to Sri Lanka on April 6, 2025. He was warmly received by President Anura Kumara Dissanayake and held extensive talks focused on boosting cooperation across key sectors.

Prime Minister Modi the 'Sri Lanka Mitra Vibhushana' medal — a top civilian honour — recognizing his consistent support to Sri Lanka and its people.

'Neighbourhood First' and 'MAHASAGAR' Vision

- The visit reinforced Sri Lanka's crucial role in India's Neighbourhood First Policy and MAHASAGAR vision for maritime and regional cooperation.
- President Dissanayake's office described the visit as a strong reflection of the enduring ties between the two countries.

Seven MoUs Signed for Sectoral Cooperation

India and Sri Lanka signed **seven MoUs** during the visit, covering a broad range of sectors aimed at long-term collaboration.

Key areas of agreement:

- **Defence cooperation** (umbrella framework for structured engagement)
- **Energy sector** (grid interconnection, Trincomalee hub with UAE)
- **Digitisation initiatives**
- **Healthcare development**

- **Cold storage plant** (Dambulla)
- **Solar power plant** (Trincomalee)
- **Support for Eastern Province development**

Railway Projects Inaugurated

Modi and Dissanayake jointly inaugurated key Indian-funded infrastructure upgrades:

Maho–Omanthai Railway Line (Northern Province)

- Cost: \$91.27 million
- Funded by an Indian Credit Line

Maho–Anuradhapura Railway Signalling System

- Cost: \$14.89 million
- Funded by the Government of India

These upgrades aim to improve connectivity and economic integration in Sri Lanka.

Support for Debt Recovery

India announced key financial measures to support Sri Lanka's economy and ongoing debt restructuring efforts.

Key financial decisions:

- **Interest rates on Indian loans reduced**
- **Over \$100 million in loans converted into grants**
- **Support for external debt treatment**

Cultural and Religious Engagement

- PM Modi visited the **Jaya Sri Maha Bodhi temple** in Anuradhapura and paid homage at the sacred Bodhi tree.
- He met **Most Ven Pallegama Hemarathana Nayake Thera**, Chief Incumbent of the Great Eight Shrines.

Key discussion points:

- Exhibition of Buddha relics from Gujarat in Sri Lanka
- Development of **Bodh Gaya as a spiritual city**
- Buddhist administrative control over the Bodh Gaya temple.

PEPPER IT WITH:

India-Srilanka, Neighbourhood First Policy.



India to fund renovation of:

- Thirukoneswaram Temple (Trincomalee)
- Anuradhapura Mahabodhi Sacred City
- Sita Eliya Temple (Nuwara Eliya)

Goodwill Gesture on Fisheries Issue

- India urged a humanitarian resolution to the fisheries conflict.
- Sri Lanka released 11 Indian fishermen** as a goodwill gesture.
- PM Modi appreciated President Dissanayake's sensitivity to Indian concerns.

Way Forward:

- The visit was guided by the theme: **"Friendship of centuries, commitment to a prosperous future."**
- It reaffirmed cultural, historical, and strategic bonds between the two nations.
- Focus going forward: **Mutual growth, people-to-people ties, and regional cooperation.**

Iran Nuclear Programme

News Excerpt:

Since the U.S. withdrawal from the **Joint Comprehensive Plan of Action (JCPOA)** in 2018, Iran's nuclear programme has advanced rapidly and largely unchecked. The JCPOA, signed in 2015, had imposed strict limits on Iran's uranium enrichment, capped its stockpile, and subjected its facilities to intrusive monitoring.

Background and Recent Developments

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Nuclear facilities in Iran

- Research facility
- Nuclear power plant
- Uranium mine
- Uranium conversion plant
- Uranium enrichment plant



- By 2025, Iran is enriching uranium up to 60%—far above the JCPOA's 3.67% limit but below the 90% required for weapons-grade material.
- Its stockpile of **highly enriched uranium (HEU)** and the installation of advanced centrifuges have dramatically shortened its "breakout time," the period needed to produce **enough fissile material for a nuclear weapon.**

- As of early 2025, Iran could amass enough material for one bomb in less than a week and for several weapons within a month, a significant reduction from the year-long breakout time under the JCPOA.
- Timeline of Events**

Year	Key Event
1957	Iran signs civilian nuclear cooperation agreement with the U.S.
1967	Tehran Research Reactor begins operation; Iran signs Nuclear Non-Proliferation Treaty (NPT)
1974	Atomic Energy Organization of Iran (AEOI) established; uranium enrichment deal with France
1979	Islamic Revolution halts nuclear projects; Bushehr contract terminated
1982-1995	Plans for indigenous reactors; cooperation with China and Russia; Bushehr completion deal
2002	Natanz enrichment facility revealed
2003-2006	IAEA inspections begin; Iran suspends then resumes enrichment up to 3.5%
2010-2013	Uranium enrichment up to 19.75% at Natanz and Fordow; stockpile growth
2015	JCPOA signed: limits enrichment, stockpile, and centrifuges in exchange for sanctions relief
2018	U.S. withdraws from JCPOA; Iran breaches limits, accelerates enrichment
2021-2025	Uranium enriched up to 60%; stockpile sufficient for multiple warheads; renewed talks

Diplomatic and Strategic Context

The current situation is shaped by several factors:

- Diplomatic Overtures and Tensions:** Under mounting economic and regional pressure, Iran has agreed to **new talks with the U.S. President Donald Trump**, who has threatened military action if diplomacy fails.
- The U.S. and its allies, particularly Israel, remain deeply concerned about Iran's nuclear advances and have signaled readiness for military intervention if Iran moves toward weaponization.
- Technical Progress and Proliferation Risk:** The risk of a "sneakout"—using hidden facilities to produce bomb material—has increased as Iran's technical capabilities have grown.
- Monitoring and Compliance:** Iran has limited cooperation with the **International Atomic Energy Agency (IAEA)**, reducing transparency and increasing uncertainty about its intentions. While U.S. intelligence assesses that **Iran has not yet decided to build a bomb**, the shrinking breakout time and lack of oversight raise the stakes for regional security.

The 2025 Decision Point

A critical deadline looms in October 2025, when world powers can trigger the "snapback" mechanism to reimpose UN sanctions on Iran. Tehran has warned that activating snapback would likely prompt it to withdraw from the Nuclear Non-Proliferation Treaty (NPT), escalating the crisis and removing remaining international constraints on its nuclear programme.

Prospects for Diplomacy

Despite the heightened risk, both Iranian and U.S. officials have expressed willingness to negotiate. **Iranian President Masoud Pezeshkian** supports talks aimed at sanctions relief, and Supreme Leader **Ayatollah Khamenei** has signaled openness to diplomacy, though with caution about trusting the U.S.

A new agreement would likely need to focus on:

- Limiting enrichment levels and uranium stockpiles
- Allowing some advanced centrifuge infrastructure with intrusive monitoring
- Ensuring rapid detection and response to any weaponization activity.

Regional and Global Ramifications

If talks fail and Iran's programme continues unchecked, the likelihood of military confrontation rises.

PEPPER IT WITH:

Iran Nuclear Deal, India-Middle East Relationship.

Israel has made clear it will act to prevent an Iranian bomb, and the U.S. has indicated support for such action if diplomacy collapses. Conversely, a negotiated deal could stabilize the situation, though it would not restore the longer breakout times of the original JCPOA due to Iran's irreversible technical advances.

Conclusion

Iran's nuclear programme in 2025 stands at a crossroads. The next several months will be decisive: either renewed diplomacy can contain the crisis, or the region risks sliding toward conflict and proliferation. The outcome will shape not only Iran's nuclear trajectory but also the broader security architecture of the Middle East

Strengthening IORA Under India's Chairmanship: A Strategic Roadmap

Introduction

The **Indian Ocean Rim Association (IORA)** is a pivotal regional organization fostering cooperation among nations across **Asia, Africa, and Australia** through **trade, security, and sustainable development**. As India prepares to assume **IORA's Chairship from November 2025**, it faces the challenge of **strengthening governance, expanding funding, and integrating technology** to make the organization more impactful.

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IORA's Geostrategic Importance

Economic Significance:

- The **Indian Ocean transports 75% of global trade** and **50% of daily oil consumption**.
- Generates **\$1 trillion in goods and services** annually, with intra-IORA trade amounting to **\$800 billion in 2023**.

Security & Environmental Challenges:

- **Piracy, terrorism, human and drug trafficking** threaten maritime stability.
- **Climate change-induced disasters** and **environmental degradation** impact coastal communities.
- Political instability in member nations slows regional development.

Challenges Faced by IORA

Funding Constraints:

- IORA relies on **member contributions**, which are inadequate to sustain growing initiatives.



- Compared to the **\$1.3 billion budget** of the **Indian Ocean Commission**, IORA's funding is insufficient.
- **Few financially strong nations** (Singapore, UAE, France) contribute significantly, while others struggle.

Limited Institutional Capacity:

- The **IORA Secretariat in Mauritius** has limited staff and operational bandwidth.
- **Data management inefficiencies** hinder decision-making.
- **Lack of private sector engagement** restricts financial resources.

India's Priorities as IORA Chair

Expanding Funding Mechanisms:

- Encourage **private sector participation** in maritime governance.
- Leverage industries such as **shipping, oil and gas, and marine tourism** to contribute financially.
- Establish a **Blue Economy Fund** to support key initiatives.

Integrating Technology for Better Governance:

- o Implement **digital record-keeping** for efficient policy analysis.
- o Use **big data analytics** and **AI-driven maritime surveillance** to enhance security measures.

Building Maritime Education & Research Networks:

- o Collaborate with **academic and research institutions** to create specialized courses.
- o Promote **marine accounting** and **blue economy disciplines** for skill development.
- o Strengthen **knowledge-sharing** with countries like **Australia, France, Singapore, UAE, and Oman**.

Strategic Policy

Recommendations

Strengthening Maritime Security:

- o Enhance **regional anti-piracy cooperation**.
- o Establish joint **disaster response mechanisms** for climate resilience.

PEPPER IT WITH:

SAGAR initiative, IORA, Indian Ocean symposium.

Leveraging SAGAR Vision:

- o India's **Security and Growth for All (SAGAR)** vision aligns with IORA's objectives.
- o Strengthen India's diplomatic outreach with **member-states and dialogue partners** (US, China, EU).

Fostering Sustainable Marine Governance:

- o Promote **traditional knowledge systems** from nations like **Sri Lanka, Seychelles, and Mauritius** for ecological balance.
- o Implement **marine conservation** and **smart fisheries management**.

Boosting Employment & Skill Development:

- o Encourage **industry-led collaborations** with universities for maritime skill-building.
- o Create **employment opportunities** in marine-related sectors.

Conclusion

India's chairship of IORA presents a unique opportunity to **transform regional governance**, promote **economic and security resilience**, and elevate **marine research and education**. With robust funding models, technological integration, and **collaborative frameworks**, India can drive IORA toward long-term **sustainability and global relevance**.

Violence Erupts in Kathmandu

Supporters of Former King

Gyanendra gathered in Kathmandu's **Tinkune area** on March 28, 2025.

They **demand the restoration of the monarchy**, which was **abolished**

in 2008, transforming Nepal into a federal republic. The rally was spearheaded by controversial figure **Durga Prasai**, a former medical entrepreneur turned political activist.

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Clashes with Police and Security Forces

Police Response and Crowd Control

- Protesters attempted to **march towards the Parliament House**, violating a **government-imposed prohibition** on gatherings in sensitive zones.
- The **police responded with tear gas, water cannons, and rubber bullets** to disperse the demonstrators.
- Protesters retaliated by **setting vehicles on fire, vandalizing party offices, and attacking journalists**.

Casualties and Injuries

Deaths and Impact on Media

- **Two people were killed**, including **Suresh Rajak**, a cameraman from **Avenues Television**, who died reportedly from a tear gas shell impact.
- **Over a dozen protesters and police officers were injured**, escalating tensions further.
- Several **media outlets and journalists were targeted**, fueling concerns over press freedom.

India-Nepal Relationship Timeline

Year	Event/Milestone	Key Issues/Challenges
1950	India-Nepal Treaty of Peace and Friendship	Concerns in Nepal over sovereignty and calls for treaty revision.
1955	Nepal joins the United Nations	Nepal seeks a more independent foreign policy, reducing India's influence.
1965	India assists Nepal in setting up Military Academy	Rising anti-India sentiment in Nepal over perceived military control.
1989	India imposes trade blockade after Nepal buys arms from China	Nepal faces economic hardship, leading to strained bilateral ties.
1996	Signing of Mahakali Treaty (water-sharing agreement)	Nepal alleges disproportionate benefits favor India.
2005	India withdraws support for Nepal's monarchy amid political unrest	Nepal sees it as interference in internal affairs.
2015	India-Nepal Border Blockade amid Nepal's constitution adoption	Nepal accuses India of economic pressure; worsens public perception.
2019	Nepal objects to India's new political map , including Kalapani	Territorial disputes escalate, with Nepal releasing its own map.
2020	Nepal formally claims Kalapani, Lipulekh, and Limpiyadhura	India rejects the claim; border tensions rise.
2023	Strengthened ties with trade and infrastructure projects	Ongoing discussions on border disputes, hydropower cooperation.

Government's Emergency Response

Curfew and Military Deployment

- The **government declared curfew** in major parts of Kathmandu including **Koteshwor, Tinkune, Baneshwor, Airport Area, and Gaushala**.
- The **Nepal Army was deployed** to assist local police in **containing the unrest** and preventing further violence.

Legal Actions

- An **arrest warrant was issued against Durga Prasai**, accusing him of instigating violence and organizing an illegal protest.
- The government also hinted at possible **legal consequences for inciting anti-republic sentiments**.

Political Reactions and Backlash

Left Front's Peaceful Rally

- On the same day, the **Left Democratic Alliance** (including parties like **CPN-Maoist Centre** and **CPN-Unified Socialist**) held a **peaceful counter-rally**.
- **Former Prime Ministers Pushpa Kamal Dahal and Madhav Kumar Nepal** spoke against **monarchist**

revivalism and **warned Gyanendra** not to disrupt the republican order.

Blame on Government Mismanagement

- Left leaders blamed the **K P Sharma Oli-led government** for **ineffectiveness, corruption, and deteriorating governance**, which they say is **fueling nostalgia for monarchy**.

PEPPER IT WITH:

Ukraine ceasefire with Russia, India-Ukraine, Indian initiatives for peace.

Conclusion

- The events mark a **serious challenge to Nepal's republican system**, showing how **discontent with governance** is opening **space for monarchist revival**.
- The **deployment of the army**, casualties, and media targeting raise **serious concerns about political stability and civil liberties** in Nepal.

India-China Historical Ties Rooted in Culture and Philosophy

The **India-China relationship** has deep civilizational roots going back **over two thousand years**. Cultural exchanges, especially through the **spread of Buddhism**, created a foundation of mutual admiration and philosophical dialogue. Notably, **monks and scholars** such as **Xuanzang** and **Faxian** traveled to India, establishing **spiritual and academic connections**. These ancient ties reflect a shared **Asian heritage**, which remains relevant in current diplomatic narratives.

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Post-Independence Hopes and Disillusionment

- After both countries emerged from colonialism—India in **1947** and the People's Republic of China in **1949**—there was a sense of solidarity as **Asian nations rising together**.
- The **Panchsheel Agreement (1954)**, built on principles like **mutual respect** and **non-interference**, captured this early optimism.
- However, the **1962 Sino-Indian War** over border disputes shattered that trust, creating a rift that continues to affect bilateral relations.

Persistent Border Tensions and Strategic Distrust

- One of the most critical sticking points remains the **unresolved border**, particularly along the **Line of Actual Control (LAC)**.
- Incidents like the **Doklam standoff (2017)** and **Galwan Valley clashes (2020)** have intensified distrust and prompted **military build-up** on both sides.
- The article underscores how the **lack of a final boundary settlement** complicates even peaceful coexistence.

Economic Engagement Amid Strategic Competition

- Despite political friction, **economic ties have grown rapidly**—China remains one of India's **largest trading partners**.
- However, the **trade imbalance heavily favors China**, leading to Indian concerns over **economic dependence** and the need for **self-reliance (Atmanirbhar Bharat)**.
- While economic interdependence offers scope for cooperation, **strategic rivalry**, including China's ties with **Pakistan** and involvement in the **Indian Ocean**, adds layers of complexity.

Geopolitical and Global Forums

- India and China are both influential voices in **multilateral platforms** like **BRICS, SCO**, and the **G20**.
- These forums offer avenues for **dialogue and coordination** on global issues like **climate change, health crises, and development finance**.
- The author argues for **leveraging these spaces** to build confidence and reduce friction.

Resumption of High-Level Dialogue India-China

After a **five-year pause**, India and China resumed the **Special Representatives' talks** on the boundary issue in Beijing. This is significant considering the ongoing tensions post the **Galwan Valley clashes of 2020**. The meeting marks a **milestone** in re-establishing communication channels at a high diplomatic level.

Six Key Consensuses Reached

- De-escalation with broader perspective:** Both sides acknowledged that border issues should be managed while **preserving overall bilateral ties**.
- Renewed commitment to 2005 framework:** A fair, reasonable, and mutually acceptable solution will be sought, based on earlier political guidelines.
- Refined border management:** Emphasis on improving confidence-building measures (CBMs) to **prevent incidents** and misunderstandings.
- Revival of people-to-people links:** Agreement to **resume Indian pilgrimages to Tibet**, including the Mansarovar Yatra in 2025.
- Trade and transit restoration:** Revival of **Nathula border trade** and dialogue on trans-boundary rivers and **hydrological data sharing**.
- Institutional strengthening:** Reinforcement of working-level mechanisms like the **WMCC (Working Mechanism for Consultation and Coordination)** to implement these decisions.

Regional and Global Implications

- The renewed talks are seen as a **signal to the world** that both powers are willing to manage differences and prevent further deterioration.
- Stability in India-China relations is crucial for:
 - Asian security architecture**
 - Global supply chains**
 - Multilateral groupings** like BRICS, SCO, and G20.

Opportunity for Cultural Diplomacy

- Both countries recognized the role of **people-to-people exchanges**, academic and media dialogues in building trust.
- Planned initiatives include:
 - Direct flights between key cities.
 - Revival of **cultural and academic cooperation**.
 - Enhanced engagement between think tanks and journalists.

Path Forward: Coexistence Over Conflict

- The article suggests that instead of rivalry, India and China must strive for a **"principled coexistence"** that recognizes both common interests and differences.
- People-to-people ties**—including academic exchanges, tourism, and cultural programs—could build **grassroots understanding** and help soften political tensions.
- Diplomatic engagement should aim for **confidence-building measures**, open communication, and mechanisms for **crisis de-escalation**.

PEPPER IT WITH:

Indian China Relation, SCO, G20, BRICS.

Conclusion: Navigating a Complex Relationship

- The China-India relationship is marked by a **blend of historical camaraderie and modern rivalry**.
- While challenges like **border disputes**, **strategic mistrust**, and **economic asymmetries** persist, there is also vast potential for **cooperation in global governance**.
- The future of this critical bilateral relationship depends on whether both sides can **manage their differences** while pursuing **mutual goals**.

6th BIMSTEC Summit

The sixth BIMSTEC Summit in Bangkok marked a significant turning point for the **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)**, offering renewed momentum for regional integration and cooperation after years of limited progress.

The summit brought together leaders from **Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand** at a time of global uncertainty, demonstrating the grouping's resilience and relevance.

Significance for India and the Region

- BIMSTEC serves as a vital bridge** between South Asia and Southeast Asia, aligning with India's strategic interests in the Indo-Pacific region. The grouping connects **1.67 billion people with a combined GDP of approximately \$4.5 trillion**, offering vast potential for economic growth, trade, and cultural exchange.
- India's geographic position**, especially its North Eastern region, places it at the heart of BIMSTEC, making the

initiative crucial for regional connectivity and development.



- BIMSTEC under India's leadership** is evolving into a results-oriented organization with a structured agenda across seven pillars, each led by different member countries to ensure focused cooperation.

Key Outcomes and Agreements

- BIMSTEC Bangkok Vision 2030:** Leaders adopted this strategic document, which outlines a roadmap for a **"Prosperous, Resilient, and Open BIMSTEC" (PRO BIMSTEC) by 2030**. The vision emphasizes **economic integration, connectivity, and human security**, aiming to transform the region into a dynamic hub of growth and cooperation.
- Maritime Transport Cooperation:** The signing of the Agreement on Maritime Transport Cooperation is expected to **reduce shipping costs**, improve supply chain efficiency, and **enhance connectivity** between South and Southeast Asia, directly benefiting trade and economic opportunities across the region.
- Disaster Management:** Given the region's vulnerability to natural disasters, leaders adopted a joint statement on the **recent earthquake in Myanmar** and Thailand, reaffirming the need for coordinated disaster management and preparedness. India proposed a **BIMSTEC Centre of Excellence for Disaster Management** to further this goal.
- Business and Economic Integration:** The summit advanced proposals for a BIMSTEC Chamber of Commerce, annual business summits, and integration of digital payment systems like **India's UPI**, all aimed at boosting intra-regional trade and investment.
- Rules and Procedures:** The adoption of the **6th BIMSTEC Summit Declaration** and new Rules of Procedure provides a more systematic, rules-based framework for the organization, ensuring greater efficiency and consistency in its operations.

Bilateral Diplomacy on the Sidelines

The summit also served as a rare platform for crucial bilateral meetings:

- India-Bangladesh:** Prime Minister Narendra Modi and Bangladesh's Chief Adviser Muhammad Yunus met for the first time since political changes in Dhaka, addressing

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contentious issues such as minority rights and border incidents. Both sides signaled a willingness to move forward despite recent strains.

- **India-Nepal:** Modi's meeting with Nepalese Prime Minister K.P. Sharma Oli followed months of diplomatic tension, with hopes that dialogue would pave the way for improved ties and future visits.
- **India-Myanmar:** Modi's engagement with Myanmar's General Min Aung Hlaing, amid the country's **ongoing civil conflict and recent earthquakes**, underscored India's commitment to humanitarian assistance and regional stability.

Challenges and the Path Forward

- While the summit produced tangible results, many initiatives echo those once pursued by the now-dormant SAARC, highlighting the importance of **sustained focus on BIMSTEC's cohesion and sustainability**.
- The grouping must avoid the pitfalls that led to SAARC's stagnation, ensuring that new agreements translate into real action and regional benefits.

Conclusion

The 6th BIMSTEC Summit marked a regional revival, shifting the focus from concept to action. By adopting a forward-looking vision, enhancing connectivity, and fostering both multilateral and bilateral engagement, BIMSTEC is positioning itself as a vital bridge between South and Southeast Asia. The challenge ahead lies in **maintaining momentum, implementing agreements**, and ensuring that BIMSTEC remains a dynamic and effective platform for regional cooperation.

Here's a concise **article-style summary** of the **Joint Declaration on the Establishment of India-Thailand Strategic Partnership (April 3, 2025)** with **key points for study**:

PEPPER IT WITH:

ASEAN Cooperation, SAARC,

India-Thailand Elevate Ties to Strategic Partnership at 6th BIMSTEC Summit

Bangkok, April 3–4, 2025 – Marking a historic moment in bilateral relations, Indian Prime Minister **Narendra Modi** and Thai Prime Minister **Paetongtarn Shinawatra** elevated India-Thailand ties to a **Strategic Partnership** during the 6th **BIMSTEC Summit** in Bangkok. The declaration emphasizes deepening cooperation across a broad spectrum of sectors to advance mutual peace, prosperity, and stability.

Key Highlights and Strategic Objectives

Strategic Partnership Declaration

- Elevation of bilateral ties to a **Strategic Partnership**, acknowledging 78 years of diplomatic relations.

- Aims to enhance **regional and global cooperation** amidst changing geopolitical dynamics.



Political and Security Cooperation

- Regular **high-level exchanges**, including on multilateral sidelines.
- **New security dialogue** between Thailand's NSC and India's NSCS.
- Enhanced cooperation on **defence, cybersecurity, counter-terrorism, and transnational crimes**.

Economic, Trade & Investment

- Boost bilateral trade (currently ~\$15B) through:
 - **Trade facilitation** and resolution of market access issues.
 - **Local currency settlement mechanism** exploration.
 - Focus on **renewables, digital tech, EVs, biotech, and startups**.
- Promote linkages via **Make in India** and **Ignite Thailand** initiatives.
- Strengthening investment via SEZs, industrial corridors, and **Joint Business Forums**.

Connectivity

- Accelerate the **India-Myanmar-Thailand Trilateral Highway** and Motor Vehicles Agreement.
- Strengthen **maritime, air, digital, and financial connectivity**.
- Expand **port-to-port cooperation** and coastal shipping.

Cultural, Educational & People-to-People Links

- Boost **education exchanges, joint research, and skill development**.
- Promote **language studies**, especially Hindi and Thai.
- Deepen ties in **culture, tourism, archaeology, sports, and youth exchanges**.
- Emphasis on **women's empowerment and entrepreneurship**.
- Special focus on collaboration with India's **North Eastern Region (NER)**.

Science, Technology, and Health

- Cooperation in **ICT, agriculture, biotech, space technology, and joint R&D**.
- Health collaboration including **traditional medicine and medical products**.

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Regional & Multilateral Engagement

- Reaffirmed commitment to:
 - Free and open Indo-Pacific** and **ASEAN Centrality**.
 - Cooperation in **ASEAN, BIMSTEC, MGC, IORA, ACD**, and others.
- Support for **ASEAN-India Comprehensive Strategic Partnership**.
- Strengthening BIMSTEC with **transport master plan** and **maritime cooperation**.

PEPPER IT WITH:

BIMSTEC, India-Thailand cooperation.

Implementation Mechanism

- Ministries of External/Foreign Affairs to coordinate and **formulate a Joint Plan of Action** for implementation.

Conclusion

The India-Thailand Strategic Partnership signifies a renewed commitment to harnessing shared history and regional aspirations. It lays a comprehensive roadmap for cooperation in strategic, economic, cultural, and regional spheres — setting the stage for a future-oriented, resilient Indo-Thai relationship.

ENVIRONMENT

Why Scientists Were Surprised to Find Life Under Antarctic Ice Shelf

News Excerpt:

Recent discoveries beneath the Antarctic ice shelf have revealed thriving ecosystems, challenging previous assumptions about life in such extreme environments. The findings, part of the **Challenger 150 initiative**, provide valuable insights into how ecosystems function under floating ice sections.

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The **Challenger 150 initiative** is a global cooperative program focused on **deep-sea biological research**, formally endorsed by **IOC-UNESCO** as part of the **UN Decade of Ocean Science for Sustainable Development**. It aims to enhance understanding of deep-sea ecosystems and their role in global sustainability.

Key Objectives

- Deep-Sea Exploration:**
 - Expand biological observations and sampling in **underexplored ocean regions**.
 - Map life in the deep ocean to fill knowledge gaps.
- Capacity Building:**
 - Develop **people, facilities, and technology** for deep-sea research.
 - Support global collaboration among scientists, policymakers, and stakeholders.
- Knowledge Application:**
 - Use deep-ocean knowledge to inform **ecosystem-based management** and sustainable development.

- Develop decision-support tools for managing deep-sea resources.

- Global Coordination:** Operate as an umbrella for individual research projects, aligning them with **common objectives and standards**.

The initiative builds on two decades of deep-sea research efforts, including the **Census of Marine Life** and the **Deep-Ocean Stewardship Initiative (DOSI)**. It seeks to address critical gaps in understanding the deep ocean's biodiversity and its contributions to society.

The Discovery

Breakaway of Iceberg A-84:

- On **January 13, 2025**, the **510-sq-km iceberg** broke away from the George VI Ice Shelf, exposing a previously inaccessible underwater world.
- A remotely-operated submersible, **ROV SuBastian**, explored the seafloor on **January 25**, capturing images and collecting specimens.

Flourishing Ecosystems:

- Scientists found diverse marine life at depths of up to **1,300 metres**, including:
 - Large corals and sponges** supporting animal life.
 - Icefish, giant sea spiders, octopi**, and a **phantom jellyfish** (up to a metre wide).
 - A **vase-shaped sponge**, potentially hundreds of years old.

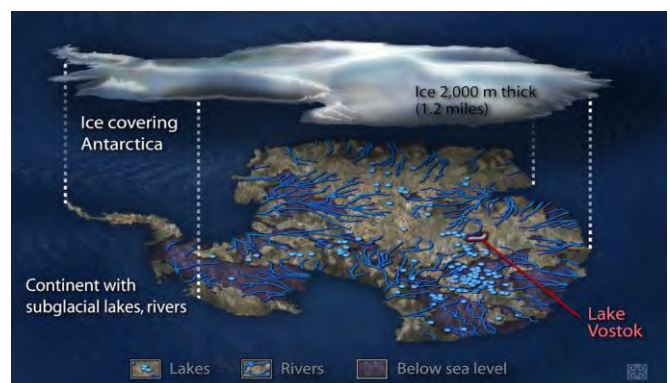
Why It Was Surprising

Nutrient Scarcity:

- Deep-sea ecosystems typically rely on **photosynthesising organisms** for nutrients.
- Antarctic ecosystems beneath **150-metre-thick ice** have been cut off from surface nutrients for centuries.

Unknown Mechanisms:

- Scientists hypothesize that **ocean currents, glacial meltwater**, or other processes may transport essential nutrients to sustain life.



- The precise mechanism remains unclear, requiring further research.

Significance of the Findings

Ecosystem Longevity: Observations suggest these communities have existed for **decades or even centuries**, adapting to extreme conditions.

Expanding Knowledge:

- The discoveries challenge assumptions about life in nutrient-deprived environments.
- They highlight the resilience and adaptability of marine ecosystems.

Future Research

- **Understanding Nutrient Transport:** Investigate how nutrients reach these isolated ecosystems.
- **Mapping Biodiversity:** Explore other ice-covered regions to identify similar thriving ecosystems.
- **Climate Change Implications:** Study how melting ice shelves impact these ecosystems and global marine biodiversity.

PEPPER IT WITH:

Biodiversity Conservation, Wetland conservation acts.

Conclusion

The discovery of life beneath the Antarctic ice shelf underscores the complexity and resilience of marine ecosystems. As scientists continue to unravel the mysteries of nutrient transport and adaptation, these findings pave the way for deeper understanding of life in extreme environments.

India's First-Ever Seed Germination Database: A Milestone for Ecological Restoration

News Excerpt:

India has launched its first-ever comprehensive seed germination database, marking a significant step in supporting ecological restoration efforts across the country.

This initiative, spearheaded by the **Ecological Restoration Alliance-India (ERA-I)**, provides free access to more than 1,000 germination techniques for 465 native plant species, making it an invaluable resource for restoration practitioners, nursery managers, and native plant enthusiasts.

Background and Purpose

For decades, ecological restoration in India faced a major hurdle: the lack of reliable, science-based knowledge about how to successfully propagate native plants from seeds. Most practitioners relied on trial and error, leading to low germination rates and limited success in restoring degraded landscapes.

The new database addresses this gap by consolidating scientifically tested, step-by-step germination protocols, making this knowledge widely accessible for the first time.

Key Features of the Database

- **Scope:** Over 1,000 germination techniques covering 465 native plant species found across diverse Indian ecosystems.

- **Accessibility:** The database is free and open to all, including restoration practitioners, nursery managers, farmers, scientists, community groups, and plant enthusiasts.
- **Collaborative Effort:** Developed by 23 experts from 11 institutions, including Auroville Botanical Gardens, Ashoka Trust for Research in Ecology and the Environment (ATREE), Nature Conservation Foundation (NCF), and Wildlife Trust of India.
- **Practical Guidance:** Each entry details seed collection methods, dormancy-breaking techniques, germination times, and optimal growing conditions, all tested in real-world Indian contexts.

Significance for Restoration and Biodiversity

- **Supports India's Bonn Challenge Commitment:** India has pledged to restore 26 million hectares of degraded land by 2030 as part of the global Bonn Challenge. The database directly supports this goal by enabling more effective and widespread propagation of native plants.
- **Restoring Native Ecosystems:** Native plants are crucial for ecological restoration as they are adapted to local soil and climate, require minimal maintenance once established, and support complex relationships with local fauna and fungi. Their use enhances ecosystem resilience and biodiversity.
- **From Trial-and-Error to Science:** By shifting from informal, anecdotal knowledge to standardized, science-based protocols, the database increases the success rate of restoration nurseries and helps practitioners grow species that were previously considered difficult or impossible to propagate.

Notable Native Species Included

Some of the key native species featured in the database include:

- Aegle marmelos (wood apple)
- Bauhinia racemosa (beedi leaf tree)
- Ficus benghalensis (banyan)
- Withania somnifera (ashwagandha)
- Ziziphus mauritiana (Indian jujube)
- Madhuca longifolia (mahua)
- Vachellia nilotica (babool)
- Knema attenuata (wild nutmeg)
- Lawsonia inermis (henna)
- Hopea indica (Malabar ironwood)
- And many more, representing a wide range of ecological and cultural significance.

Broader Impact

- **Empowering Local Communities:** The database fosters green entrepreneurship by enabling local nurseries, especially in tribal and remote areas, to grow high-demand native plants for restoration and commercial purposes.

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- **Bridging Science and Practice:** The project exemplifies how open access to scientific knowledge can empower grassroots action, making ecological restoration more effective and inclusive.
- **Promoting Biodiversity and Climate Resilience:** By prioritizing native species, the initiative helps restore ecosystem services, improve soil health, support wildlife, and build resilience to climate change.

PEPPER IT WITH:

Seed Conservation,
Biodiversity
Conservation Initiatives.

Conclusion

India's first seed germination database is a landmark achievement in the country's journey toward ecological restoration and climate resilience. By democratizing access to expert knowledge, it transforms the way native plants are grown and landscapes are restored, ensuring that both science and community action drive the greening of India's future

SC Orders Probe into Violations in Tamil Nadu's Agasthyamalai Landscape

News Excerpt:

The Supreme Court has directed an investigation into violations of **forest and wildlife laws** in Tamil Nadu's **Agasthyamalai Landscape**, with a focus on encroachments in the **Singampatti Zamin forests**. These lands, originally cleared for plantation cultivation, have since been designated as **critical tiger habitats and wildlife reserves**, reflecting their ecological significance.

Key Issues Highlighted in the SC Order

- **Encroachments in Protected Forests:**
 - Lands in the **Singampatti Zamin forests** were cleared for plantations like **tea, coffee, and rubber**.
 - These areas were declared part of the **Kalakkad-Mundanthurai Reserved Forest (1978)** and later designated a **Core Critical Tiger Habitat (2007)**, **Wildlife Sanctuary**, and **Tiger Reserve (2012)**.
 - Encroachments and unauthorized land use jeopardize the preservation of these ecologically critical zones.
- **Importance of Forests and Tigers:**
 - The court emphasized that **forests are the "lungs of the ecosystem"**, essential for combating **climate change** and supporting biodiversity.
 - Tigers were acknowledged as vital to maintaining ecosystem balance, referring to the landmark **T.N. Godavarman case**, where the interconnected survival of forests and tigers was underscored.
- **Depletion of Forest Land:**
 - The Ministry of Environment estimated **13,000 sq. km** of forest land in India is under encroachment.

- Such depletion poses severe risks to biodiversity and undermines the **ecocentric approach** of focusing on **ecosystem preservation over human-centered concerns**.

Relevant Forest and Wildlife Protection Laws

- **Forest Classification (Indian Forest Act, 1927):**
 - **Reserved Forests:** Full protection; activities prohibited unless permitted.
 - **Protected Forests:** Limited protection; activities allowed unless restricted.
 - **Unclassed Forests:** Unspecified protection; ownership varies by state.

**FACT FILE**

- Established in 2001
- Area **3,500.36 sq km**
- Area in Kerala **1,828 sq km**
- Area in Tamil Nadu **1672.36 sq km**



Between
8° 8' and
9° 10' North Latitude,
76° 52' and 77° 34'
East Longitude

- Home to 2,254 species of higher plants
- About 400 endemic to the area

Population in tribal settlements **3,000**

- **18** biosphere reserves in India
- **9** included in UNESCO network

- Sanctuaries in the reserve
- Shendurney, Peppara, Neyyar wildlife sanctuaries
- Kalakad Mundanthurai tiger reserve

- **Forest Conservation Act, 1980:** Conversion of forest land for non-forestry purposes requires prior approval from the **Government of India**.
- **Wildlife (Protection) Act, 1972:**
 - Establishes **Core Critical Tiger Habitats**, which ensure preservation without infringing on the rights of forest dwellers.
 - **Buffer Zones** promote coexistence by allowing limited human activity around protected areas.

About the Agasthyamalai Landscape

- **Ecological Significance:**
 - Spanning **Tamil Nadu and Kerala**, the Agasthyamalai Landscape is rich in biodiversity and home to several wildlife reserves and rivers.
 - Includes sanctuaries like **Periyar Tiger Reserve**, **Meghamalai Wildlife Sanctuary**, and **Kalakkad-Mundanthurai Tiger Reserve (KMTR)**.
- **UNESCO Recognition:** The **Agasthyamalai Biosphere Reserve** is part of the **World Network of Biosphere Reserves** under UNESCO's **Man and the Biosphere (MAB) Program**.

Threats:

- Encroachments, plantation cultivation, and unsustainable land use.
- Environmental degradation threatens its ecological value and the survival of keystone species like tigers.

The Supreme Court's Stance

The court recognized the Agasthyamalai Landscape as an area of immense ecological value, requiring urgent protection. Key directives included:

- Investigating violations** of forest and wildlife laws.
- Reinforcing the **ecocentric approach** to safeguard ecosystems.
- Ensuring strict enforcement of laws to prevent further encroachments.

PEPPER IT WITH:

Forest conservation and sustainability, Wetland conservation acts.

Conclusion

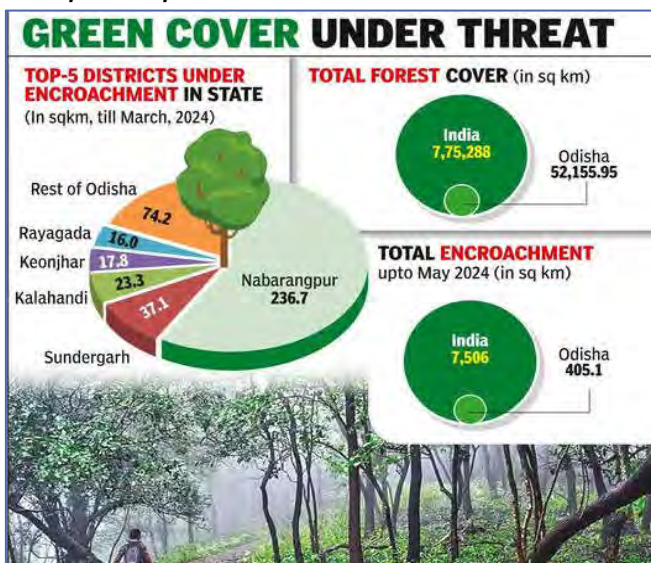
The Supreme Court's directive highlights the critical importance of protecting forests and wildlife to maintain ecological balance and biodiversity. The preservation of landscapes like Agasthyamalai is essential not only for tigers and other species but also for the broader environmental health of the region. Strengthened enforcement, sustainable practices, and ecosystem-focused approaches are necessary to protect India's natural heritage.

Forest Encroachment in India

News Excerpt:

India faces a significant challenge of forest encroachment, with **over 13,000 sq km** of forest land under unauthorized occupation across **25 States and Union Territories (UTs)**, as reported by the **Union Environment Ministry** to the **National Green Tribunal (NGT)**. This encroached area exceeds the combined geographical size of **Delhi, Sikkim, and Goa**.

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Key Findings

Scale of Encroachment:

- As of **March 2024**, a total of **13,056 sq km** of forest area is under encroachment.
- Encroachments primarily involve clearing forest land for activities like **agriculture and plantations** (tea, coffee, rubber).

State-Wise Data:

- Madhya Pradesh:** Highest encroachment, with **5,460.9 sq km** affected.
- Assam:** Second highest, with **3,620.9 sq km** under encroachment.
- Other affected states include:
 - Karnataka:** 863.08 sq km
 - Maharashtra:** 575.54 sq km
 - Arunachal Pradesh:** 534.9 sq km
 - Odisha:** 405.07 sq km
 - Uttar Pradesh:** 264.97 sq km
 - Tamil Nadu:** 157.68 sq km
 - Kerala:** 49.75 sq km
 - Andaman & Nicobar Islands, Tripura, Manipur, and others also reported smaller encroachments.

Recorded Forest Area (RFA):

- Includes all land officially classified as forest, even without tree cover.
- Categorized into:
 - Reserved Forests:** Fully protected; human activities are prohibited.
 - Protected Forests:** Limited activities allowed unless restricted.
 - Unclassed Forests:** Varying protection levels based on state policies.

Efforts to Address Encroachments

NGT Directive:

- In **April 2024**, the NGT instructed the Environment Ministry to compile detailed data on encroachments across states and UTs.
- Letters and reminders were sent to states throughout 2024-25, requesting data submission in a standardized format.

Encroachment Removal:

- As of March 2024, **409.77 sq km of encroachments** had been removed.
- Details on whether this figure has been excluded from the total affected area remain unclear.

Challenges:

- Some states, including **Bihar, Haryana, Himachal Pradesh**, and others, are yet to submit their encroachment data.
- The absence of consistent reporting hampers comprehensive action.

Implications

• Environmental Impact:

- Forests act as vital ecosystems, supporting **biodiversity and climate regulation**.
- Encroachments contribute to **deforestation and habitat loss**, affecting wildlife and overall ecological balance.

PEPPER IT WITH:

Man and Biosphere, Forest Conservation efforts.

• Legal Framework:

- **Forest Conservation Act, 1980:** Requires approval for non-forestry use of forest land.
- **Indian Forest Act, 1927:** Establishes protection categories for forests.
- **Wildlife Protection Act, 1972:** Protects biodiversity within core forest habitats.

- **State Accountability:** States must strengthen enforcement and monitoring to curb encroachments and prioritize **forest conservation**.

Way Forward

Improved Coordination:

- Streamline data collection and reporting mechanisms to ensure timely submission by all states and UTs.
- Establish regional monitoring systems for forest protection.

Enforcement of Laws:

- Implement strict penalties for encroachment activities under existing forest and wildlife laws.
- Focus on community engagement for protecting forest lands.

Reforestation Initiatives: Launch large-scale programs to rehabilitate encroached areas and promote **sustainable land use**.

Conclusion

The rising encroachment of forest lands in India demands immediate and collaborative action. Strengthening legal frameworks, enforcing accountability, and prioritizing reforestation efforts will be crucial in safeguarding the nation's ecological assets and ensuring long-term environmental stability.

SCIENCE & TECHNOLOGY

How Spaceflight Safety Is Ensured

News Excerpt:

Spaceflight safety is achieved through a comprehensive system of protocols, technologies, and training that address every phase of a mission—from launch to re-entry. Agencies like **ISRO, NASA, and others** implement these measures to minimize risks and protect astronauts' lives,

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drawing on decades of experience and lessons from past incidents.

Pre-Launch and Launch Safety

- **Launchpad Safety:** Special escape systems are installed at the launch site, such as ziplines and fireproof lifts, to enable rapid evacuation in case of emergencies before liftoff.
- **Crew Escape System (CES):** The launch vehicle is equipped with a CES—a tower-like structure with powerful engines that can rapidly pull the crew module away from the rocket if a malfunction occurs. ISRO's Gaganyaan uses a tractor-type system, while others like SpaceX use a pusher-type system.
 - **Abort Tests:** ISRO conducts in-flight abort demonstrations (e.g., **TV-D1**) to validate the CES's ability to separate the crew module safely during emergencies.
 - **Multiple Escape Modes:** CES motors operate in different modes depending on altitude, ensuring safe evacuation at any point during ascent.

In-Orbit Safety

- **Crew Module Design:** The spacecraft consists of a crew module (living quarters) and a service module (carrying fuel, engines, and control systems). The design allows for emergency deorbit and reentry if needed.
- **Life Support Systems:** Advanced Environmental Control and Life Support Systems (ECLSS) maintain a habitable environment—regulating air, temperature, humidity, and removing contaminants. ISRO is developing these systems indigenously to ensure astronaut health and safety in orbit.
- **Emergency Protocols:** Astronauts are trained in international docking and emergency procedures, even if not docking with a space station. The crew module can serve as a lifeboat, similar to protocols used on the ISS.

Reentry and Landing Safety

- **Controlled Reentry:** The crew module uses thrusters to control descent trajectory and speed. The heat shield protects against extreme temperatures during atmospheric reentry.
- **Parachute System:** A sophisticated 10-parachute system is deployed in stages to slow the capsule for a safe splashdown. The sequence ensures stability and controlled descent, with parachutes releasing at specific altitudes.
- **Recovery Operations:** Recovery teams, including the Indian Navy, are trained to retrieve the crew and module quickly after splashdown. ISRO has conducted multiple recovery trials and established international collaborations for backup recovery support.

Training and Simulation

- **Astronaut Training:** Crew members undergo extensive training in physical fitness, microgravity adaptation, simulator exercises, recovery and survival, and emergency protocols.

The 5 Hazards of Human Spaceflight

1

Space Radiation

Invisible to the human eye, radiation increases cancer risk, damages the central nervous system, and can alter cognitive function, reduce motor function, and prompt behavioral changes.

2

Isolation and Confinement

Sleep loss, circadian desynchronization, and work overload may lead to performance reductions, adverse health outcomes, and compromised mission objectives.

3

Distance from Earth

Planning and self-sufficiency are essential keys to a successful mission. Communication delays, the possibility of equipment failures and medical emergencies are some situations the astronauts must be capable of confronting.

4

Gravity (or lack thereof)

Astronauts encounter a variance of gravity during missions. On Mars, astronauts would need to live and work in three-eighths of Earth's gravitational pull for up to two years.

5

Hostile/Closed Environments

The ecosystem inside a vehicle plays a big role in everyday astronaut life. Important habitability factors include temperature, pressure, lighting, noise, and quantity of space. It's essential that astronauts stay healthy and happy in such an environment.

- **Simulation Drills:** Regular mock drills and hardware tests validate procedures for launch, abort, in-orbit emergencies, and recovery.

Intelligent Systems and Risk Management

- **Real-Time Monitoring:** Rockets and spacecraft are equipped with sensors and intelligent systems to detect anomalies and trigger safety protocols automatically.
- **Redundancy:** Critical systems have backups to ensure continued operation in case of component failure.

Continuous Improvement

- **Learning from Past Incidents:** Agencies analyze past accidents (e.g., **Apollo-1**, **Soyuz T-10**) and incorporate lessons learned into new protocols and technologies.
- **International Collaboration:** ISRO collaborates with agencies like **NASA** and the **Australian Space Agency** to refine safety standards and recovery operations.

Conclusion:

Spaceflight safety is ensured through a layered approach—combining robust engineering, real-time monitoring, emergency escape systems, life support, rigorous training, and coordinated recovery. These measures are constantly updated as new technologies and lessons from global missions emerge, keeping astronaut safety at the forefront of human space exploration.

PEPPER IT WITH:

Uncover universe secret, Space Hazards, India's space mission.

De-Extinction of the Dire Wolf

News Excerpt:

Colossal Biosciences, a **US-based genetic engineering company**, has announced the **birth of three genetically modified wolf pups** named **Romulus, Remus, and Khaleesi**. These pups were **born in late 2024 and early 2025** to **domestic dog surrogates**. Colossal claims these pups are "**functional proxies**" or **genetic recreations** of the **extinct dire wolf**—a species that roamed North America thousands of years ago. This is the **first time** in history an animal has been created to replicate an **extinct predator** through gene editing.

Who Were the Dire Wolves?

- The **dire wolf (*Aenocyon dirus*)** went **extinct about 13,000 years ago**.
- They were **larger and more robust** than modern grey wolves, with an estimated **height of up to 3.5 feet** and **weight of 68 kg**.
- They had a **white coat**, powerful jaws, and likely hunted large herbivores like bison and horses.
- Dire wolves were **once widespread** across **North America**, especially in what is now the **US and parts of South America**.



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- Their extinction likely resulted from a combination of **climate change**, **loss of prey**, and **competition with humans and other predators**.

How Did Colossal Recreate the Dire Wolf?

- Colossal scientists extracted **ancient DNA** from dire wolf fossils and compared it with the DNA of **modern grey wolves**.
- Using **CRISPR gene editing**, they **altered specific genes** in grey wolves to match certain **phenotypic traits** of dire wolves—such as **fur color**, **size**, and **metabolism**.
- However, this does **not mean** the animals are **exact genetic replicas** of dire wolves—they are more accurately described as **“genetically edited wolves with dire wolf-like traits.”**

Scientific and Ethical Questions

- Critics argue that calling the animals **“de-extinct dire wolves”** is **misleading**.
- From a biological standpoint, these pups are still **modern wolves** with some **ancient traits**, not **true resurrected dire wolves**.
- The debate touches on how we **define species**, what counts as **“bringing back”** an extinct organism, and the **risks of such genetic experiments**.
- **Ethicists and ecologists** worry about the potential **impact on ecosystems**, **animal welfare**, and the **unintended consequences** of reintroducing altered species into the wild.

Wider Implications and Future Plans

- Colossal frames its mission as part of a **“de-extinction movement”**—with plans to also bring back the **woolly mammoth**, the **Tasmanian tiger**, and now, **“woolly mice.”**
- The goal is to use **synthetic biology** not just for scientific curiosity, but for **ecosystem restoration** and reversing **human-caused extinctions**.
- However, questions remain: Are these **“resurrected” animals viable in the wild?** Can they perform the same ecological roles? And who gets to **decide** which species come back?

PEPPER IT WITH:

Gene Editing
Techniques, DE
extinction Movement

Conclusion

- The birth of these pups is a **scientific milestone**, but also a **media-savvy announcement**.
- Whether it is a **genuine step toward de-extinction** or a **branded biotech experiment**, the project pushes boundaries in **genetics**, **ethics**, and **conservation thinking**.
- It also raises a bigger philosophical question: **Just because we can, should we?**

AI Roadmap: Rethinking Work and Meaning in a Post-Labour World

News Excerpt:

Overview of Gates' Vision

In a thought-provoking conversation, Bill Gates reflected on the transformative potential of **artificial intelligence (AI)** in reshaping human life. He discussed:

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- **Post-Labour Society:** AI could release people from traditional jobs, making the current work-driven economic model obsolete.
- **Economic Support:** Concepts like **universal basic income (UBI)** and **wealth redistribution** could address how people access the wealth created by AI.
- **Reframing Productivity:** Gates highlighted a future where AI provides **deflationary abundance** — lowering the cost of living while increasing access to essential services.

Impact on the Workforce

- **White-Collar Jobs at Risk:**
 - AI is transforming sectors like **education**, **healthcare**, and **legal services**, potentially replacing white-collar jobs through tools like **language models** and **financial assistants**.
 - Unlike robotics, AI in software is frictionless, making it easier to deploy on a massive scale.
- **Survival of Physical Labour:** Jobs involving **physical dexterity** (e.g., manual labour) may persist longer than white-collar roles due to the slower maturity of robotics compared to software AI.
- **Defining a Good Life:** If AI diminishes the need for work, humans must address **existential questions**: What will people live for if work no longer defines their identity, time, and purpose?

Economic Models in a Post-Labour World

- **Universal Basic Income (UBI):** AI-driven enterprises could be taxed to fund basic income for individuals, decoupling income from traditional jobs.
- **Sovereign AI Models:** Governments could develop **public AI infrastructures**, leasing them to businesses to generate revenue for social welfare.
- **Ownership Redistribution:** Radical proposals suggest making citizens **partial owners of AI productivity tools**, earning dividends from AI-driven economies.

India's Role in AI Evolution

- **Localized Adaptation:**
 - India, with its diverse languages and challenges, can **adapt existing AI models** instead of building foundational models from scratch.
 - The availability of **open-source frameworks** and research narrows the technological gap, enabling quick integration of AI solutions tailored to local needs.

- **Strategic Advantage:** Gates viewed India's unique ability to fine-tune global infrastructure as a **competitive edge** in leveraging AI across varied sectors.

- **Collaborative AI Ecosystem:** Open-source platforms like **Hugging Face** and **PyTorch** empower researchers and startups worldwide, fostering accessibility and innovation in AI.

Concerns About AI-Driven Inequality

- **Wealth Concentration:**
 - If only a few companies control AI infrastructure, society could face unprecedented **concentration of power and resources**.
 - This could leave populations dependent on systems they have no stake in.
- **Democratisation of Intelligence:** Gates envisions AI **equalizing access to expertise**, improving the quality of life through near-universal affordability in services like education and healthcare.
- **Balancing Innovation and Regulation:** Realizing AI's potential for good requires **policy innovation, ethical design, and collective societal decisions**.

Looking Ahead

In Gates' view, AI marks a momentous shift akin to the **personal computing revolution**. The challenge lies in creating policies and structures that:

- Redistribute AI-generated wealth equitably.
- Ensure societal well-being through new frameworks of **meaning and purpose**.
- Leverage tools like AI to drive **universal access** while mitigating risks of inequality.

His message? The focus is not on catching up but creatively adapting global systems to local challenges. This approach, particularly for nations like India, turns AI into a **strategic advantage** for equitable growth.

ESA Retires the Gaia Mission

News Excerpt:

The **European Space Agency (ESA)** has officially retired the **Gaia mission** as of **March 27, 2025**, bringing to a close one of the most significant space science missions in history. Over more than a decade, Gaia

has revolutionized our understanding of the **structure, dynamics, and composition of the Milky Way galaxy**.

SKY-SCANNING COMPLETE FOR ESA'S MILKY WAY MAPPER GAIA

From 24 July 2014 to 15 January 2025, Gaia made more than three trillion observations of two billion stars and other objects, which revolutionised the view of our home galaxy and cosmic neighbourhood.



Mission Overview: Gaia's Journey

Launch and Operation Timeline

- **Launched** in **December 2013** aboard a **Soyuz rocket**.
- **Operational Phase** began on **July 24, 2014**.
- Mission **formally ended on January 15, 2025**, followed by official **retirement in March 2025**.

Orbit and Position

- Gaia was placed at **Lagrange Point 2 (L2)**, around **1.5 million km** from Earth—an ideal location for **uninterrupted celestial observation**.
- The L2 orbit enabled **stable thermal conditions** and **minimal interference** from Earth and the Moon.

Scientific Achievements: Charting the Cosmos Unprecedented Data Collection

- Gaia made over **3 trillion observations** of more than **2 billion stars and celestial objects**.
- Produced the **most detailed and accurate 3D map of the Milky Way** to date.

Transformative Discoveries

- Helped detect and track **stellar motions, chemical compositions, ages, and distances** of stars.
- Showed that the **Milky Way's disk is warped and oscillating**, likely due to gravitational interactions with **satellite galaxies**.
- Confirmed the **barred spiral structure** of our galaxy and mapped **stellar nurseries, star clusters, and dark matter distribution**.

Scientific Impact

- Gaia's data has contributed to over **13,000 scientific papers**, reshaping fields like **galactic archaeology, exoplanet detection, and cosmology**.

Instruments and Innovation

High-Precision Instruments

- Equipped with **twin telescopes** feeding a **1-billion-pixel camera**—the largest ever launched into space.

PEPPER IT WITH:

AI and Humans Jobs, Universal Basic Support, Equitable Growth.

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- Included:
 - Astrometer**: for pinpointing star positions.
 - Photometer**: to measure stellar brightness and color.
 - Spectrometer**: to analyze stellar motion and composition.

Technological Firsts

- Introduced **automated onboard object detection**, tracking changes in star positions down to **microarcseconds**.
- Enabled scientists to **calculate the mass and motion of the Milky Way** with unprecedented precision.

Legacy and Future Use

- Although Gaia is now retired, its **collected data will continue to be used for decades**.
- ESA will release its **final data catalogue in late 2025 or early 2026**, which is expected to refine models of **galactic evolution, dark matter distribution**, and even **solar system dynamics**.
- Gaia set a **new gold standard** for **astrometry** (the science of measuring celestial positions and movements).

Final Thoughts

The **Gaia mission was not just a telescope—it was a time machine**, allowing scientists to peer back into the **history of our galaxy**. Its retirement marks the end of an active chapter, but the **beginning of a lasting legacy** in space science and cosmology.

PEPPER IT WITH:

Uncover origin of universe secret, Space Imagine techniques.

Building a Comprehensive TB Care Response: A 360° Approach

News Excerpt:

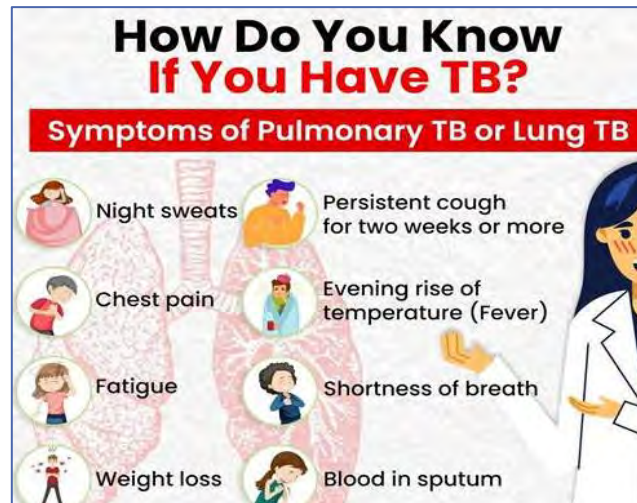
Tuberculosis (TB) is both a **medical and social challenge**, requiring a **multi-sectoral response** beyond just medication. **Stigma, economic instability, and systemic inefficiencies** often hinder timely diagnosis and treatment. A 360° approach to TB care should focus on **early detection, holistic patient support, and robust public health infrastructure**, ensuring that individuals affected by TB receive comprehensive care.

Key Challenges in TB Management

- Late Diagnosis & Limited Testing Access:**
 - Many individuals, **experience prolonged symptoms** before testing.
 - Limited awareness** and stigma discourage people from seeking timely diagnosis.
 - Geographic barriers** prevent access to testing centers.
- Social & Workplace Barriers:**

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- Fear of social ostracization** prevents people from informing their families.
- Workplaces may not offer **supportive policies**, forcing patients into economic instability.
- Loss of income** due to illness leads to financial burden, especially for daily wage workers.



- Adherence & Drug Availability Issues:**
 - Side effects from medications make **adherence difficult**, increasing the risk of **drug-resistant TB**.
 - Inconsistent drug supplies** result in patients **traveling long distances** to procure medicines.
 - Poor nutritional status**, disabilities, and elderly care gaps worsen treatment outcomes.
- Stigma & Psychological Impact:**
 - TB disrupts **social networks** and economic participation.
 - Patients experience **loneliness, self-blame, and mental health struggles**.
 - The **notion of TB as a disease of the poor** contributes to apathy and insularity.

Core Elements of a Comprehensive TB Response

- Strengthening Public Health Systems:**
 - Ensure **continuous availability** of TB drugs and commodities.
 - Train and compensate health workers** to deliver personalized TB care.
 - Shift from **one-size-fits-all** care models to **person-centered care** that addresses clinical and social vulnerabilities.
- Community-Led Awareness & Advocacy:**
 - Empower **TB survivors as community leaders** to combat stigma and misinformation.
 - Develop **feedback loops** to improve quality of care and identify systemic gaps.
 - Strengthen **private healthcare standards**, ensuring ethical, high-quality treatment.
- Integration with Broader Social Systems:**

- Improve **airborne infection control measures** in workplaces and homes.
- Enhance **nutritional interventions** for TB patients.
- Expand **insurance coverage** for TB treatment within public and private schemes.
- **Policy & Corporate Responsibility:**
 - Government representatives must **prioritize TB** in policy discussions.
 - Media should **spotlight TB as a national health concern**.
 - Corporate India must **allocate CSR funds** for TB care, workplace TB screenings, and health security programs.

PEPPER IT WITH:

TB management, Diagnostic Techniques, Public-Private Partnership.

Way Forward

- **Invest in Diagnostic Innovations:**
 - Develop **affordable point-of-care testing tools** for early detection.
 - Ensure **mobile health initiatives** reach underserved areas.
- **Long-Term Survivor Care:**
 - Implement **post-TB rehabilitation programs** to manage lung damage and reintegration into society.
 - Focus on **gender-responsive TB care**, recognizing unique challenges faced by women, especially in corporate settings.
- **Encourage Social Business Models for TB Care:**
 - Move beyond **public-private partnerships** toward sustainable TB intervention models.
 - Mobilize **financial resources for patient support programs**.

Conclusion

Ending TB in India requires a **multi-layered and synergized response**, where **every actor—health workers, policymakers, businesses, media, and communities—play a role**. By integrating **medical treatment, social welfare, policy action, and awareness campaigns**, India can dismantle the systemic barriers preventing effective TB control. Only through **unified and persistent efforts** can TB be eliminated as a public health threat.

INTERNAL SECURITY**Anti-Terror Financing Measures****News excerpt:**

Reserve Bank of India (RBI) Governor **Sanjay Malhotra** has cautioned against **overzealous measures** in combating **terror financing** and **money laundering**, stating that excessive restrictions could **hinder financial inclusion** and **legitimate business activities**.

Speaking at the **Private Sector Collaborative Forum** of the **Financial Action Task Force (FATF)**, Malhotra stressed the need for a **balanced approach**, where regulations effectively **counter illicit activities** without creating **unnecessary roadblocks** for businesses, investors, and financial institutions.

Key Concerns Raised by Governor Malhotra**Risk of Excessive Compliance Burden**

- Malhotra pointed out that **strict anti-money laundering (AML) and counter-terror financing (CTF) measures** can sometimes **lead to excessive compliance requirements** for businesses.
- **Over-regulation** can discourage **foreign investments**, slow down **legitimate transactions**, and **increase costs** for financial institutions.
- He urged regulators to ensure that **preventive measures are proportionate to the risks involved**.

Need for Collaboration Among Stakeholders

- The governor emphasized that **effective financial crime prevention** requires **cooperation between government agencies, financial institutions, civil society, and regulatory bodies**.
- **Public-private partnerships** should be strengthened to **share intelligence** and **develop efficient risk assessment models**.
- The RBI is **working closely with global and domestic financial bodies** to create a **more effective and inclusive regulatory framework**.

Leveraging Technology to Improve Monitoring

- Malhotra highlighted the importance of **emerging technologies** in **enhancing transaction screening** and **reducing false positives and false negatives** in detecting suspicious activities.
- **Artificial Intelligence (AI), Machine Learning (ML), and Big Data Analytics** can significantly **improve detection mechanisms** and **reduce manual errors**.
- **Blockchain technology** can also be utilized to **increase transparency and traceability** in financial transactions.

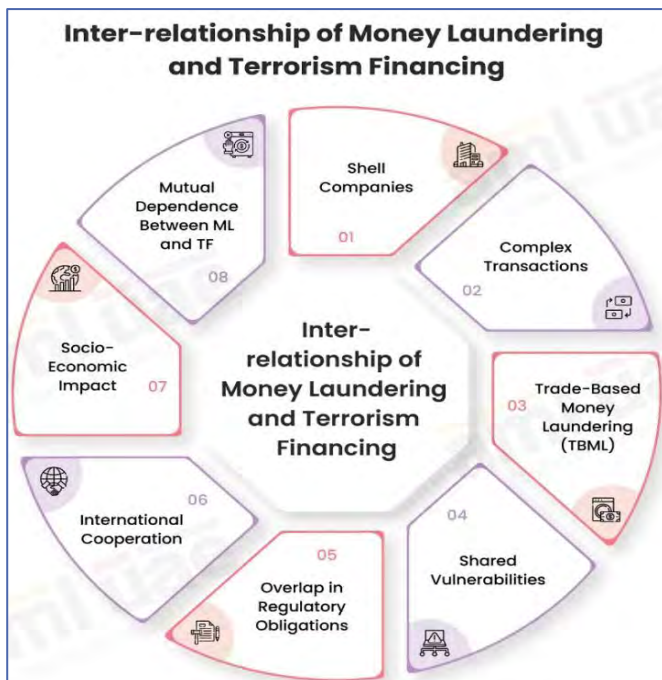
Adapting to New and Evolving Risks

- The financial sector is **constantly evolving**, with new products, services, and digital payment methods being introduced.
- Malhotra warned that criminals are **finding innovative ways** to exploit loopholes in the system.
- The **AML risk assessment framework** needs **regular updates** to keep pace with **emerging threats** in the financial ecosystem.
- He emphasized the importance of **continuous training for financial institutions** to detect and respond to evolving financial crime risks.

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Importance of Financial Inclusion

- While combating **terror financing and money laundering** is crucial, Malhotra stressed that **strict measures should not exclude vulnerable populations** from the formal banking system.
- Overly stringent banking policies** could push people towards **unregulated financial channels**, increasing the risk of **shadow banking and illegal money transfers**.
- The RBI is working to ensure that **financial security measures do not come at the cost of accessibility**.



RBI's Strategy Moving Forward

Striking a Balance Between Security and Accessibility

- Malhotra emphasized that India's financial regulations **must strike a balance** between **preventing illicit activities** and **ensuring ease of doing business**.
- The RBI is exploring ways to **streamline compliance requirements** while maintaining **strict oversight** on high-risk transactions.

Enhancing the Use of AI & Data Analytics

- The RBI is investing in **AI-driven fraud detection systems** to **increase efficiency** in monitoring financial transactions.
- Data-driven risk assessment models** will help financial institutions **identify potential threats proactively** rather than reacting after a crime has occurred.

Strengthening India's Position in Global Financial Regulations

- As India prepares for its **FATF mutual evaluation**, Malhotra assured that the RBI is **aligning its policies** with **global best practices** while keeping **India's unique financial landscape** in mind.
- He reaffirmed India's commitment to **fighting financial crimes** while ensuring that regulations **do not restrict economic growth or investment**.

Conclusion: A Need for Smart Regulation

- Governor **Sanjay Malhotra's** speech highlights a **key challenge**—while **strong financial regulations** are necessary to **combat money laundering and terror financing**, they must not **stifle legitimate economic activity**.
- By **leveraging technology**, **improving regulatory collaboration**, and **maintaining financial inclusion**, the RBI aims to **create a secure yet accessible financial system** that supports India's **growth and global financial standing**.

PEPPER IT WITH:

Drug peddling, Black money movement, Drug trade and India.

Strengthening Naval Aviation Rafale-Marine (Rafale-M)

News excerpt:

India's **Cabinet Committee on Security (CCS)**, chaired by Prime Minister **Narendra Modi**, has approved a significant defense procurement deal for the Indian Navy, involving the acquisition of **26 Rafale-Marine (Rafale-M)** fighter jets from France. The deal is valued at around ₹64,000 crore, and the jets will be deployed on the **INS Vikrant**, India's indigenous aircraft carrier. This step is part of India's broader efforts to modernize its naval assets and enhance its operational capabilities in the face of evolving regional security challenges.

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Key Features of the Deal

Aircraft Specifications

- The deal includes the procurement of **22 single-seat Rafale-M fighters** and **4 twin-seat trainer variants**. These aircraft will be equipped with advanced **multirole capabilities**, making them suitable for both air superiority and strike missions, which is essential for the Indian Navy's operations in the region.

Delivery Timeline

- Deliveries of the Rafale-M fighters are expected to commence approximately five years after the signing of the contract, under an inter-governmental framework agreement between **India** and **France**. The timeline accounts for manufacturing, customization, and integration of systems to meet the specific requirements of the Indian Navy.

PEPPER IT WITH:

4.5th gen Fighter Jet, India's Air force, Aircraft Carrier Operations.

Strategic Importance

- The acquisition of these fighter jets will significantly bolster the **operational capacity** of the Indian Navy, particularly aboard **INS Vikrant**, which is set to become a crucial asset for India's maritime security. The Rafale-M's capabilities in both offensive and defensive operations will enhance the Navy's ability to protect India's strategic interests in the Indian Ocean Region (IOR) and beyond.
- The decision to opt for the **Rafale-M** follows extensive **trials and evaluations**, where the Rafale-M was selected as the preferred choice over other contenders like the **Boeing F/A-18E/F Super Hornet**. The selection process underscored the aircraft's superiority in terms of performance, reliability, and compatibility with INS Vikrant.

Past and Ongoing Acquisitions

- This new deal builds on India's previous procurement of **36 Rafale jets** for the **Indian Air Force (IAF)**, which were purchased in a **fly-away condition**. These aircraft have already been integrated into IAF service and have played a key role in enhancing the Air Force's operational effectiveness.
- There are also ongoing discussions within the IAF regarding the potential purchase of additional **Rafale squadrons** to further strengthen the country's air defense capabilities. These acquisitions indicate India's continued commitment to modernizing its defense infrastructure and enhancing the technological edge of its armed forces.

Geopolitical and Strategic Significance

- The deal not only strengthens India's naval aviation capabilities but also further solidifies the growing **defense ties** between **India and France**. The **Rafale-M** deal is seen as a reaffirmation of **France's strategic partnership** with India, marking another milestone in bilateral defense cooperation.
- As India faces rising security concerns in its surrounding region, including threats from neighboring countries with advanced naval capabilities, this procurement is seen as an essential step towards ensuring the country's readiness to respond to any maritime challenges.

Conclusion

- The decision to procure **26 Rafale-Marine fighter jets** for the **Indian Navy** highlights India's determination to

modernize its defense forces, especially its naval aviation wing.

- By acquiring these advanced fighter jets, India aims to bolster its maritime security and maintain a strategic edge in the Indian Ocean region.
- This move underscores India's broader defense strategy of integrating cutting-edge technology and strengthening international defense partnerships.
- As the **Rafale-M jets** enter service, they will enhance India's ability to safeguard its maritime interests, thus playing a crucial role in the country's defense and security framework for years to come.

Risks and Rewards of Using UAVs

News excerpt:

Unmanned Aerial Vehicles (UAVs), or drones, are transforming modern military strategies. While UAVs are perceived as less of a threat compared to piloted fighter jets, their widespread adoption poses unique challenges and opportunities for nations like India.

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Why Are UAVs Seen as Less of a Threat?

Lower Combat Capabilities:

- Most UAVs serve **surveillance and reconnaissance purposes** rather than engaging directly in warfare.
- Even armed UAVs have **limited weapon payloads**, making them less capable than fighter jets.

Reduced Risk to Human Life:

- UAV missions are unmanned, eliminating the danger of casualties in conflict zones.
- Sending UAVs for reconnaissance is considered a **low-cost alternative** to deploying inhabited aircraft.

Financial Implications:

- UAVs are less expensive compared to piloted aircraft, both in terms of operation and loss recovery.
- In cases of enemy interception, the **financial burden of losing a UAV** is lower.

Recent Examples of UAV Usage

Incidents of UAVs Being Downed:

- 2019:** Iran shot down a U.S. surveillance drone near the Strait of Hormuz, with no major military retaliation from the U.S.
- 2023:** Russia brought down an American MQ-9 Reaper UAV, again met with restrained responses.

Encouraged Risk-Taking:

- Countries use UAVs for missions near foreign airspaces due to the **low-cost nature** and lack of dramatic retaliation risks.
- UAVs are increasingly employed for **border infiltrations, intelligence gathering**, and transporting goods illegally.

Risks and Challenges

Repercussions for India:

- **Cross-Border UAV Incursions:**
 - Smaller UAVs are used by Pakistan to transport **arms and drugs**, with limited accountability from the Pakistani government.
 - India faces high costs when using air-to-air missiles to intercept small UAVs.
- **Surveillance Threats:** Bangladesh deployed Turkish **Bayraktar TB-2 UAVs** near India's borders for surveillance, raising security concerns.

Risk Escalation:

- Larger UAVs like Bayraktar TB-2, akin to piloted military aircraft in size, pose risks of **potential escalation** if intercepted in Indian airspace.
- India must develop **cost-effective strategies** to neutralize UAV threats without over-investing in expensive countermeasures.

Rewards of UAV Integration

Efficiency in Intelligence:




- UAVs are highly effective for **border surveillance**, enabling real-time monitoring without risking human lives.
- They assist in **precision targeting** and gathering actionable intelligence.

Reduced Operational Costs: UAV missions are cheaper than deploying fighter jets for reconnaissance, saving both personnel and equipment expenses.

Enhanced Security Capabilities: Advanced UAVs contribute to national defense by enabling **constant aerial vigilance** and reducing infiltration risks.

Way Forward for India:

- **Develop Cost-Efficient Countermeasures:**
 - Invest in **drone-specific defense systems** to intercept UAVs effectively and affordably.
 - Explore technologies like **laser-based UAV interception** to reduce dependency on costly missiles.

		
Multirotor Geo-MMS Payload Pictured	Fixed-Wing	Helicopter/VTOL Geo-MMS Payload Pictured
Multirotor	Fixed-Wing	Helicopter/VTOL
Wide selection	Ideal for corridor mapping	Spot takeoff/landing
Ease of use and maintenance	Highly stable	High altitude performance
Affordability and reliability	Long range and flight endurance	Highly stable
Greater maneuverability	Greater area coverage	High payload capacity
Unstable in windy conditions	Throw-launch complexity	Advanced piloting skills required
Limited flight endurance (battery)	Limited payload capacity	Maintenance difficulties
Small space for payload	Takeoff/Landing runway required	High cost

Strengthen Border Security:

- Enhance **surveillance networks** to detect smaller UAV incursions early.
- Develop protocols for **non-lethal neutralization techniques**.

PEPPER IT WITH:

Drone Warfare, Drone uses in Security and Disaster Management.

Collaborate

Internationally: Share intelligence and explore regional agreements to tackle **UAV-based illegal activities**.

Upgrade Military Strategy:

- Integrate UAVs into **India's own defense operations**, emphasizing reconnaissance, monitoring, and precision strikes.
- Expand investments in **domestically manufactured UAVs** for better control and cost efficiency.

Conclusion

As UAVs become integral to modern warfare, nations like India must adapt their military strategies to address both their risks and rewards. By focusing on **innovative countermeasures**, strengthening border security, and integrating UAVs into operations, India can effectively safeguard its interests and evolve alongside this technological advancement.

PRE-SHOTS

POLITY

Understanding the In-House Inquiry

News Excerpt:

The **three-member in-house committee**, initiated by Chief Justice of India (CJI) Sanjiv Khanna, will investigate allegations against Justice Yashwant Varma following the discovery of **burnt currency notes** at his official residence in Delhi during a fire on **March 14, 2025**. Judicial work has already been withdrawn from Justice Varma, and he has been transferred to the **Allahabad High Court**.

In-House Inquiry Mechanism

The **in-house procedure**, designed to handle complaints against judges of the higher judiciary, does not involve criminal trials or public impeachment proceedings. It is distinct from the **impeachment process** under **Articles 124(4) and 218 of the Constitution**.

Step-by-Step Process:

- **Initiation of Complaint:**
 - Complaints can be submitted to the **Chief Justice of the High Court, CJI, or the President**.
 - The CJI evaluates whether the complaint is frivolous or warrants investigation.
- **Preliminary Inquiry:**
 - The CJI may request a **preliminary report** from the Chief Justice of the concerned High Court.
 - If the report suggests a deeper probe, the CJI may form an inquiry committee.
- **Formation of Inquiry Committee:**
 - A **three-member committee** is constituted:
 - **Two High Court Chief Justices** and **one High Court judge** for cases involving High Court judges.
 - **Three Supreme Court judges** for complaints against Supreme Court judges.
- **Inquiry Procedure:**
 - The committee develops procedures based on **natural justice principles**.
 - The accused judge is given the opportunity to present their defense.
- **Findings:**
 - The committee submits its report to the CJI, detailing:
 - Whether the allegations are substantiated.
 - Whether the misconduct warrants removal proceedings.
 - If the misconduct is deemed minor, the judge is advised accordingly.
- **Recommendations for Removal:**
 - If serious misconduct is established, the CJI advises the judge to resign or retire voluntarily.

- If the judge refuses, the **President and Prime Minister** are informed, enabling Parliament to begin removal proceedings under Articles 124(4) and 218.

Justice Yashwant Varma Case

Key Developments:

1. **Discovery of Cash:** During a fire at Justice Varma's residence, **burnt currency notes** were discovered, raising suspicions of financial misconduct.
2. **Formation of Committee:**
 - A panel led by: (**Chief Justice, Punjab & Haryana High Court**), (**Chief Justice, Himachal Pradesh High Court**), and (**Karnataka High Court**).
3. **Judicial Work Withdrawal:**
 - Justice Varma's judicial duties were withdrawn by the Delhi High Court.
 - He was transferred to **Allahabad High Court**.

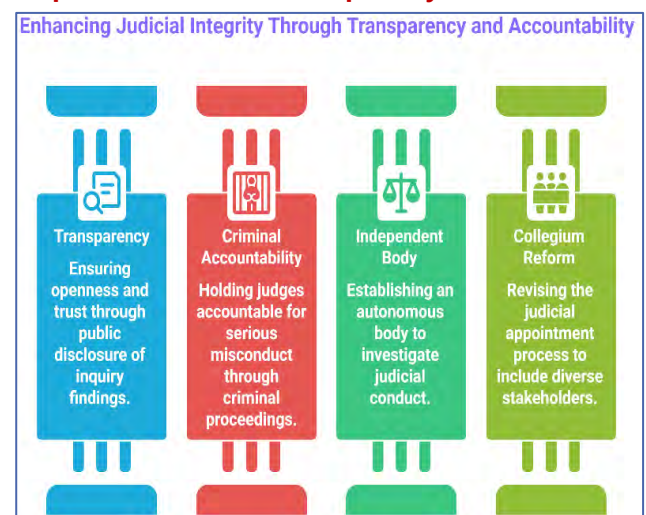
Impeachment Process (Constitutional Provisions)

For removal via **impeachment**:

- Article **124(4)**: Grounds include "**proved misbehavior**" or "**incapacity**."
- Requires:
 - Two-thirds majority of members "**present and voting**" in **both Houses of Parliament**.
 - More than 50% of the **total membership** must vote in favor.

If passed, the **President issues an order** for removal. Failure to complete the process within Parliament's term results in the motion lapsing.

Proposed Reforms for Transparency



Conclusion

The in-house inquiry against Justice Yashwant Varma demonstrates the judiciary's efforts to maintain accountability within its ranks. Adopting **transparency measures** and ensuring criminal accountability for serious misconduct will strengthen institutional credibility and public confidence in the system.

The Struggle for Balance

News Excerpt:

The **complex challenge** faced by India's judiciary in maintaining a **balance** between **judicial independence** and **judicial accountability**. On one hand, the judiciary must remain independent to make fair and impartial decisions; on the other, it needs mechanisms to ensure that judges are held accountable for their actions to preserve public trust in the system.

Judicial Independence: A Pillar of Democracy

- **Independence is a Cornerstone:** Judicial independence is seen as **critical to the functioning of a democracy**. It ensures that the judiciary is not swayed by political pressures, ensuring that decisions are made based on the **rule of law** and not influenced by external forces or the government. This independence allows judges to make decisions free of fear or favor.
- **A Necessary Safeguard:** Judicial independence is vital for ensuring that the judiciary can uphold the rights of individuals, protect the constitution, and act as a check on the other branches of government. However, it must not be used as an excuse for unchecked power or to avoid scrutiny.

Accountability: The Need for Oversight

- **Accountability Mechanism:** While judicial independence is non-negotiable, there must be **accountability mechanisms** in place to ensure that the judiciary does not descend into **arrogance** or **misconduct**. Accountability ensures that judges are answerable for their actions, preventing corruption or bias in the judicial process.
- **Public Trust:** If the judiciary fails to demonstrate accountability, it risks **eroding public trust** in its ability to deliver justice. Judicial accountability needs to be clearly defined and transparent to maintain its integrity and the trust people place in it.

Recent Controversies: Straining Judicial Integrity

- **Allegations Against Judges:** Recent incidents of alleged **misconduct and corruption** among judges have stirred debates on the **lack of transparency** within the judicial system. For example, judges facing allegations of bribery or inappropriate conduct raise questions about the internal accountability systems within the judiciary.
- **Public Perception:** When such controversies arise, the **public perception** of the judiciary may suffer. This undermines the faith that the people have in the system, especially when there are no clear and transparent ways to address grievances against the judiciary.

Proposed Reforms: Ensuring Transparency and Accountability

- **Judicial Oversight:** There is a growing call for the **creation of a robust oversight mechanism**. This would involve creating transparent procedures to handle

complaints and allegations against judges. Establishing an independent body to address grievances could enhance the credibility of the judiciary and demonstrate a commitment to both **fairness** and **transparency**.

- **Public Engagement and Education:** To improve the relationship between the judiciary and the public, there is a need for **increased public engagement**. Educating citizens about the role of the judiciary, how it functions, and the checks and balances in place could promote a better understanding of its importance. Engaging the public through open discussions could also lead to stronger support for reforms aimed at enhancing accountability.

Conclusion: Finding the Right Balance

The **delicate balance** the judiciary must strike between being **free from interference** and being **accountable** to the people it serves. This balance is critical for maintaining the **credibility, integrity, and effectiveness** of the judicial system in India.

- **Accountability Framework:** Without undermining judicial independence, a well-defined **accountability framework** can help protect the system from potential **misuse** or **misconduct**, ensuring the judiciary remains a fair and trusted institution in the eyes of the public.

West Bengal SSC Scam Explained: How Nearly 26,000 Teachers Lost Jobs

News Excerpt:

The **West Bengal School Service Commission (WBSSC) scam** is one of the most significant public recruitment scandals in the state's history. It revolves around the **2016 recruitment process** for teachers and non-teaching staff in state-run and aided schools.

What was initially seen as a routine recruitment drive for **24,640 posts** turned into a massive controversy after it was revealed that **25,753 appointment letters** had been issued—well beyond the sanctioned number.

Key Facts:

- In 2016, the WBSSC conducted exams for **24,640 school positions**, with **23 lakh applicants**.
- However, **25,753 appointments** were made, raising serious concerns.
- Investigations revealed **tampering of OMR sheets, fake merit lists, and blank answer scripts** later filled in.
- Bribes were allegedly paid by several candidates to secure jobs, bypassing merit and transparency.

Court Verdict and Legal Actions:

After years of legal proceedings, the **Calcutta High Court** cancelled all 25,753 appointments, citing fraud and manipulation. The **Supreme Court**, on **April 11, 2025**, upheld this verdict and refused to reinstate the appointees, calling the recruitment process a **"systemic failure."** While

it allowed the affected teachers to retain salaries already paid, the court ordered a **fresh recruitment process within three months**.

Key Principles Laid Down by the Supreme Court:

In its ruling, the Supreme Court laid down **four important legal principles** to guide similar cases in the future:

1. **Total Cancellation if Systemic Fraud Proven:** If a thorough investigation finds manipulation, the **entire recruitment process must be cancelled**. This is supported by past rulings such as **Sachin Kumar v. DSSSB (2021)**.
2. **Distinguishing the Guilty from the Innocent:** Where possible, authorities should try to **separate tainted candidates from untainted ones**. However, this should follow the constitutional principles of **equality and fairness under Articles 14 and 16(1)**.
3. **Cancellation Must Be Based on Substantial Material:** Any such cancellation should be grounded in **material evidence gathered through fair investigation**. This evidence need not prove guilt beyond reasonable doubt but must indicate probable systemic manipulation.
4. **Integrity Over Inconvenience:** If the process is deeply tainted, **upholding the integrity of the system** takes priority over the inconvenience or hardship caused to innocent candidates.

These principles were further reinforced by precedents like *State of Tamil Nadu v. A. Kalaimani (2021)* and *Bihar School Examination Board v. Subhas Chandra Sinha*.

Accountability and Ongoing Investigation:

Top leaders including **former Education Minister Partha Chatterjee**, and TMC MLAs **Manik Bhattacharya and Jiban Krishna Saha** have been implicated. The **CBI** continues to investigate the roles of government officials and intermediaries involved in the scam.

Political Fallout:

- CM **Mamata Banerjee** criticized the SC judgment as harsh from a **"humanitarian perspective"** and accused the opposition of politicizing the issue.
- She announced a **task force** to examine ways to support deserving candidates.
- Opposition parties like **BJP and CPI-M** launched protests, blaming the TMC government for shielding corrupt appointments.
- Even grassroots **TMC members staged protests**, demanding clarity and justice.

Fate of the Teachers:

The fate of those appointed during the 2016 drive remains uncertain. Many claim they acted in good faith and are victims of systemic failure. However, since the court did not distinguish between guilty and innocent candidates, **all 25,753 appointments were nullified**. Mamata Banerjee urged affected teachers to **volunteer at schools** until their legal status is resolved.

Conclusion:

The WBSSC scam is a cautionary tale about what happens when **transparency and integrity are compromised in public recruitment**. With the Supreme Court calling for a **fresh selection process within three months**, all eyes are now on the WBSSC and the West Bengal government to ensure a **clean, merit-based recruitment**. Meanwhile, the legal, political, and social repercussions of the scam will likely echo for years to come.

'Cash at Judge's Door' case

News Excerpt:

A packet containing **₹15 lakh in cash** was mistakenly delivered to the residence of **Justice Nirmaljit Kaur**, a judge of the Punjab and Haryana High Court. The cash was allegedly intended for **Justice Nirmal Yadav**, another judge at the same court, but was delivered to the wrong address due to the similarity in their names. Justice Kaur promptly informed the Chief Justice and lodged a complaint with the police.

Initial Investigation

- A **FIR** was registered by Chandigarh Police on **August 16, 2008**.
- The case was transferred to the **Central Bureau of Investigation (CBI)**, which registered a fresh FIR on **August 28, 2008**.

Legal Proceedings and Charges

CBI Chargesheet

- In **2011**, the CBI filed a chargesheet against **Justice Nirmal Yadav** and four others, including a businessman and advocates.
- **Charges Filed:**
 - **Section 11** of the Prevention of Corruption Act (Public servant obtaining valuable thing without consideration).
 - **Section 120-B** of the Indian Penal Code (Criminal conspiracy).

Trial Developments

- The case underwent multiple hearings, legal challenges, and changes in the judicial bench overseeing the case.
- In **2014**, Justice Yadav was granted **permanent exemption** from personal appearance in court on health grounds.

Acquittal and Verdict

Verdict Date: March 29, 2025

- After a prolonged legal battle spanning over **14 years**, a special CBI court in Chandigarh **acquitted** Justice Nirmal Yadav and the other accused.
- **Reason:** The court ruled that the prosecution failed to prove the charges beyond reasonable doubt. The evidence was deemed insufficient and circumstantial.

Significance and Takeaways

- The case was one of the rare instances where a sitting High Court judge came under scrutiny for corruption allegations.
- It raised important questions about **judicial integrity, transparency**, and how allegations against judges are handled.
- The acquittal after over 14 years also highlights the **slow pace of high-profile trials** in India and the toll they take on reputations and careers.

India's Marginalised Parliament in Budgetary Affairs: Challenges and Reforms

News Excerpt:

The **Budget**, as more than a financial statement, reflects a nation's priorities, economic vision, and governance philosophy. Across democracies, **parliaments exercise the "power of the purse"**, playing a critical role in shaping budgets and ensuring fiscal accountability. However, in India, parliamentary influence over budgetary processes remains limited, leaving elected representatives sidelined in shaping national fiscal policies.

Challenges in India's Budgetary Process

- **Executive Monopoly:**
 - The **Finance Ministry exclusively crafts the Budget**, keeping even Cabinet Ministers uninformed until its presentation in **Lok Sabha**.
 - Unlike legislative Bills, Budget proposals **lack thorough cabinet discussions** before being introduced in Parliament.
- **Weak Bicameral Participation:**
 - The **Rajya Sabha** plays no substantive role in Budget discussions despite its democratic credentials.
 - While a **Finance Minister can be a Rajya Sabha member**, they cannot vote on their own Budget in Lok Sabha.
- **Poor Legislative Scrutiny:**
 - Budget debates are often **fragmented, brief, and lack depth**.
 - Subject committees lack the power to amend or significantly influence Budget proposals, reducing Parliament's role to passive approval.
- **Transparency Deficit:** The executive-driven process limits **public involvement** and undermines representative democracy.

Proposed Reforms

Institutionalising Pre-Budget Discussions

- Introduce **pre-Budget debates** during the monsoon session to foster legislative input into the Budget process.
- A **dedicated five to seven-day discussion period** would enable:

- Assessment of **fiscal health**.
- Articulation of **Budget priorities**.
- Coordination among subject committees for informed input.

Benefits:

- Democratizes the Budget process by allowing representatives to address public concerns.
- Promotes **equitable resource allocation** and enhances fiscal transparency.

Establishing a Parliamentary Budget Office (PBO)

- Create a **non-partisan, independent institution** modeled on the **U.S. Congressional Budget Office**.
- Key Functions:
 - Provide **data-driven insights** on government spending and revenue forecasts.
 - Conduct **independent economic analyses**.
 - Assess **fiscal impacts of proposed policies**.
 - Evaluate **medium and long-term budgetary trends**.
- Offer **policy briefs** to parliamentarians, fostering evidence-based policy discussions.

Benefits:

- Enhances Parliament's capacity for **informed decision-making** and accountability.
- Balances executive discretion with legislative oversight without encroaching on the executive's role.

Overcoming Resistance to Reforms

- **Fiscal Discipline Concerns:**
 - Some argue empowering legislatures could lead to **populist spending**.
 - However, unchecked executive control risks fiscal imprudence, making oversight essential.
- **Balanced Approach:** The executive should retain discretion while remaining **answerable to Parliament**, ensuring collective deliberation.

Conclusion

The current budgetary process in India marginalises Parliament, diminishing democratic accountability. By integrating **pre-Budget discussions** and establishing a **Parliamentary Budget Office**, India can transition to a more robust fiscal framework where elected representatives actively shape economic policies. These procedural reforms are fundamental for strengthening representative democracy, ensuring **equitable economic outcomes**, and fostering **public trust in financial governance**.

Telangana Implements SC Sub-Categorisation: A Landmark Decision

News Excerpt:

On **April 14, 2025**, coinciding with **Ambedkar Jayanti**, Telangana became the **first Indian state** to implement **Scheduled Castes (SC) sub-categorisation**. This historic

move, under the **Telangana Scheduled Castes (Rationalisation of Reservations) Act 2025**, aims to address **historical inequities** within SC communities by dividing them into three groups for **15% reservation in government jobs and education**.

Key Features of SC Sub-Categorisation

Three Groups of SC Communities:

Group I:

- Includes **15 sub-castes** classified as the **most backward**.
- Allocated **1% reservation**, despite constituting only **0.5% of the population**, to ensure access to education and employment.

Group II:

- Comprises **18 sub-castes** that have received **marginal benefits**.
- Allocated **9% reservation**.

Group III:

- Includes **26 sub-castes** relatively better placed in terms of opportunities.
- Allocated **5% reservation**.

Implementation:

- Recruitment to **government jobs** and **educational institutions** will now follow this categorisation.
- The categorisation does not apply to vacancies already notified.

Commission Recommendations: A commission led by **Justice Shameem Akther** recommended the division of **59 SC communities** into these groups based on **social, economic, and educational status**.

Constitutional Backing

Supreme Court Verdict (2024):

- A **seven-judge Constitution bench** upheld the **constitutionality of SC sub-classification**.
- The court ruled that SCs are not a **homogeneous class** and sub-classification is permissible to ensure equitable distribution of reservation benefits.

Historical Context:

- The judgment overturned a 2004 verdict, allowing states like Telangana to address **underrepresentation** within SC communities.

Significance of the Decision

Addressing Inequities:

- Ensures that **marginalised sub-castes** within SCs are not overshadowed by **dominant groups**.
- Promotes **social justice** by redistributing reservation benefits more equitably.

Empowering Marginalised Groups:

- Provides **educational and employment opportunities** to the most backward sub-castes.
- Encourages **upliftment of underrepresented communities**.

Political Implications:

- The move is seen as an effort by the **Congress government** to consolidate **SC and OBC voter blocs**, which constitute **70% of Telangana's electorate**.
- Telangana also raised the **OBC quota to 42%**, challenging the **50% reservation cap** established by the **Indra Sawhney verdict (1992)**.

Criticism and Challenges

Quota Cap: The **42% OBC quota** and SC sub-categorisation may face legal challenges for exceeding the **50% reservation limit**.

Political Motives: Critics argue that the move is politically driven, aimed at **gaining electoral advantage** ahead of local body elections.

National Implications

Model for Other States:

- Telangana's decision could serve as a **template for other states** seeking to implement SC sub-categorisation.
- Highlights the need for **empirical data** to address **intra-caste disparities**.

Push for Caste Census:

- The Congress party has called for a **nationwide caste census** to ensure **data-driven social justice policies**.
- The move contrasts with the BJP's reluctance to release caste census data.

Conclusion

Telangana's implementation of SC sub-categorisation marks a **pivotal moment in India's affirmative action discourse**. By addressing **historical inequities** within SC communities, the state has set a precedent for **inclusive social justice policies**. However, balancing **legal challenges** and **political motives** will be crucial for its long-term success.

Supreme Court's Stand on Bulldozer Action: Challenges and Implications

News Excerpt:

The Supreme Court has intervened in the issue of **arbitrary demolitions** across states, which have been carried out under the guise of acting against **illegal encroachments**. These actions disproportionately target **minorities and economically vulnerable groups**, often bypassing **due process** and violating constitutional principles.

Supreme Court's Guidelines

In **November 2024**, the Supreme Court issued **pan-India guidelines** to regulate bulldozer actions:

Due Process:

- Identification of unauthorized structures must follow a **streamlined procedure**.
- Notice and fair hearing** must be provided to affected individuals before any demolition.

Protection of Rights:

- Demolitions must not breach **natural justice** or violate the **right to shelter**.
- Collective punishment of families for alleged crimes of individuals is unconstitutional.

Separation of Powers: Arbitrary demolitions undermine the **constitutional ethos** and principles of governance.

Recent Cases**Maharashtra:**

- The **Brihanmumbai Municipal Corporation (BMC)** demolished an unauthorized shed at a studio linked to comedian **Kunal Kamra**, following political controversy.
- The **Malvan Municipal Council** demolished the home of a family accused of chanting "anti-India" slogans during a cricket match.

Nagpur: The Bombay High Court stayed demolitions related to recent violence, but the order came too late to prevent the razing of the key accused's home.

Gujarat: Demolitions are part of a **whole-of-government approach**, including public parading of accused individuals and bail cancellations.

Punjab: The **AAP government** has reportedly adopted similar tactics, mirroring the approach seen in **Uttar Pradesh** under CM Yogi Adityanath.

Challenges in Implementation

- State Defiance:**
 - Despite clear guidelines, many state governments continue to flout the Supreme Court's directives.
 - Arbitrary demolitions persist, raising concerns about the **erosion of judicial authority**.
- Lack of Enforcement Mechanisms:** The Supreme Court's guidelines lack **follow-up mechanisms** to ensure compliance by state governments and lower courts.
- Selective Targeting:** Demolitions disproportionately affect **minorities and the poor**, exacerbating social and economic inequalities.

Way Forward

- Strengthening Judicial Oversight:**
 - The Supreme Court must establish **monitoring mechanisms** to ensure adherence to its guidelines.
 - Non-compliance should be treated as **contempt of court**, with penalties for defiant state actions.
- Promoting Accountability:**
 - State governments must be held accountable for violating constitutional principles.
 - Independent bodies could be set up to oversee demolition actions and ensure fairness.
- Public Awareness:** Educating citizens about their **rights and legal recourse** can empower affected individuals to challenge arbitrary actions.

- Legislative Action:** Parliament could enact laws to codify the Supreme Court's guidelines, providing a stronger legal framework for protecting citizens' rights.

Conclusion

The Supreme Court's intervention on bulldozer actions is a step toward safeguarding **constitutional rights** and ensuring **justice for marginalized communities**. However, the challenge lies in enforcing these guidelines effectively and preventing their violation by state governments. A robust follow-up mechanism and collective accountability are essential to uphold the rule of law.

SOCIAL ISSUES**APAAR ID****News Excerpt:**

The **Automated Permanent Academic Account Registry (APAAR) ID** is a **12-digit unique identifier** introduced under India's **National Education Policy (NEP) 2020**.

It aims to create a **centralized digital repository** of students' academic records, facilitating seamless transitions across educational institutions and levels. While the initiative promises **streamlined academic tracking**, it has sparked debates over data privacy, consent, and implementation challenges.

Objectives and Benefits

- Centralized Record Keeping:** Every student's academic performance, achievements, and extracurriculars will be digitally recorded in one place.
- Seamless Mobility:** Students can transfer schools or universities without needing to carry physical certificates or reapply for document verification.
- Integration with Digital India platforms:** The APAAR ID will be linked to DigiLocker and Academic Bank of Credits to enable authenticated access to records.

The infographic titled "Benefits of APAAR ID" features a green background with white and yellow text. At the top, it states "The Apaar ID links to DigiLocker for securely storing academic records" and shows a DigiLocker logo. Below this, the title "Benefits of APAAR ID" is prominently displayed. The infographic lists six key benefits, each with an icon and a brief description:

- Unified Academic Identity:** Streamlining Student Records and Achievements (Icon: Book and folder)
- Digital Repository:** Safeguarding Academic Data and Beyond (Icon: Cloud with lock)
- Seamless Academic Mobility:** Simplifying School Transfers (Icon: Globe)
- Dropout Recovery Initiative:** Identifying and Re-engaging Learners (Icon: Graduation cap)
- Admission & Employment:** Applying to Universities, or Job Hunting (Icon: Laptop and resume)
- Consent Based Easy Verification:** Consent based documents sharing (Icon: Document with checkmark)

Implementation Challenges

- **Technical Issues:** Mismatches in Aadhaar data, outdated mobile numbers, and server issues are affecting the smooth registration process in many states.
- **Teacher Workload:** Teachers report being overburdened with non-teaching tasks like data entry, detracting from their primary academic duties.
- **Logistical Gaps:** Infrastructural limitations in rural areas (like internet connectivity) make digital implementation difficult.

Data Privacy and Consent Concerns

- **Aadhaar Linkage Worries:** Since APAAR IDs are linked with Aadhaar, privacy advocates are raising alarms over data misuse and surveillance, especially for children.
- **Voluntary in Theory, Forced in Practice:** While the government says the ID is voluntary, many schools reportedly insist on it, even demanding written explanations if parents refuse to consent.
- **Inadequate Legal Safeguards:** Although the **Digital Personal Data Protection Act, 2023** has been passed, it hasn't been fully implemented, leaving student data exposed in a legal vacuum.

Expert Reactions and Recommendations

- **Clear Policy Guidelines Needed:** Experts are demanding transparency on how data will be stored, who will access it, and for what purpose.
- **Informed Consent Essential:** Consent should be based on full disclosure. Parents—especially in less digitally literate areas—must be educated about the risks and benefits.
- **Stronger Data Protection Mechanisms:** Without robust legal and technical safeguards, children's data remains vulnerable to potential exploitation or breaches.

Conclusion

While APAAR ID holds the potential to revolutionize academic administration in India by making it more efficient and inclusive, it also raises valid concerns regarding:

- **Data privacy**
- **Children's digital rights**
- **Informed consent**
- **Implementation equity**

A Shift in Examination Structure

News Excerpt:

The **Central Board of Secondary Education (CBSE)** recently introduced a two-exam system for **Class 10 and Class 12** students, dividing the academic year into two terms. The idea behind this system is to **reduce the pressure** associated with a single high-stakes examination at the end of the academic year, by spreading out the assessments over two periods.

The Structure of the Two-Exam Scheme

- The system is designed to **divide the school year into two terms**, with each term culminating in an examination.
- The exams will be based on the **content covered** in each term, with the **first term** focusing on roughly half the curriculum and the **second term** covering the rest.
- The intention behind this approach is to **easier manage assessments**, reduce student burnout, and allow for more consistent evaluation of students' progress.

Concerns and Criticisms

1. Increased Complexity for Students and Teachers

- **Double the Assessment Load:**
 - Under the two-exam system, students are now required to prepare for **two major exams** each year. This adds to the workload and **extends the period of academic pressure** for students.
 - Instead of focusing on one set of preparations, students now need to balance their time and energy between two rounds of exams, potentially leading to more stress.
- **Fragmented Curriculum:**
 - The curriculum has been **divided into two halves**, with content assessed separately in each term. This division **might lead to gaps in understanding**, especially if students struggle with certain topics in one term but have already moved on to the next.
 - The **fragmentation** of subject matter may hinder students from **developing a comprehensive understanding** of the subject, which could affect their long-term retention and application of knowledge.

2. Implementation Challenges for Schools

- **Resource Allocation Issues:**
 - Schools may face **logistical difficulties** in managing the two exams. Organizing two separate sets of exams, along with the associated grading, could be a strain on the **school's** resources.
 - This could especially affect **smaller schools** or those in remote areas, which might not have the **infrastructure** or manpower to handle multiple rounds of examinations in a single academic year.
- **Teacher Workload:**
 - Teachers will now be required to **prepare and evaluate two different sets of exams**. This additional workload could take a toll on the quality of teaching, as educators will need to divide their time between preparing students and managing the grading process for two exams per subject.
 - The system could lead to **teacher fatigue**, which in turn might **affect the overall quality of education**.

3. Increased Stress and Pressure on Students

- **Ongoing Pressure:**
 - Instead of the traditional single exam at the end of the year, students now face **continuous assessments**. While this is meant to alleviate the burden of one large exam, it could unintentionally result in **prolonged periods of stress**.
 - **Students** may feel a constant pressure to **perform well in both terms**, leading to **anxiety** over multiple rounds of exams throughout the year.
- **Burnout from Continuous Preparation:**
 - The two-exam system requires **year-round preparation**. The stress of preparing for the first term exam doesn't completely subside before the preparations for the second term begin.
 - This continuous cycle of study, exam, and preparation can result in **academic burnout**, where students experience physical and mental exhaustion, potentially affecting their performance in both terms.

Possible Solutions and Considerations

- While the CBSE's intention with the two-exam system is to **spread out academic pressure** and **create more manageable assessment schedules**, its implementation has created unforeseen challenges.
- **Alternative solutions** could involve designing a system where there is **better integration of the two terms**, allowing students to build on what they've learned in the first term without overwhelming them with assessments.
- Additionally, **better support systems** for both students and teachers, such as reduced administrative burdens and more focused teaching resources, might ease some of the strain that the new system imposes.

Conclusion

- While the **two-exam system** may appear beneficial on paper by spreading out the examination load, its **implementation** has the potential to **overcomplicate** the educational process.
- The system's complexities, coupled with the additional burden on both students and teachers, could result in **more stress** and **logistical challenges** than originally anticipated.
- A **more balanced approach** that considers the practical implications for schools, students, and teachers alike could lead to more effective and less stressful ways of assessing academic progress.

Understanding Eating Disorders

What Are Eating Disorders?

Eating disorders are **mental health conditions** involving **persistent disturbances** in eating behavior. They are not lifestyle choices but stem from a **complex interplay** between **psychological and emotional factors**.

Common Types of Eating Disorders:

TYPES OF EATING DISORDERS

1 Anorexia nervosa
Having an unrealistic idea about body image and an intense fear of gaining weight.

1

Bulimia Nervosa
It is binge eating followed by purging.

2

3 Binge eating disorders (BED)
Even if they aren't hungry, people with BED may consume a large amount of food in a short period of time.

3

Rumination Disorder
Individual regurgitates food they previously consumed and then re-chews and re-swallows it or spits it out.

4

5 Pica Disorder
It is consuming things that are not considered food.

5

Avoidant/Restrictive Food Intake Disorder (ARFID)
A person avoids particular meals or categories of foods, or has a restricted intake in terms of overall amount eaten, or both.

6

7 Other Eating Disorders
Compulsive overeating, Diabulimia, Drunkorexia

7

• Anorexia Nervosa:

- Features: Restrictive eating, fear of weight gain, distorted body image.
- Subtypes: Restricting type and binge eating/purging type.

- **Bulimia Nervosa:** Features: Cycles of **binge eating** and **purging behaviors** like vomiting, laxative use, or excessive exercise.

- **Binge Eating Disorder (BED):** Features: Episodes of consuming **large amounts of food**, accompanied by distress and guilt.

• Other Types:

- **Pica:** Eating non-food items.
- **Rumination Disorder:** Regurgitation of food, re-chewing, and swallowing.
- **Avoidant/Restrictive Food Intake Disorder (ARFID):** Restrictive eating due to lack of interest or distaste for certain foods.

Other disorders include **orthorexia** (obsession with healthy eating), purging disorder, and night eating syndrome.

How Do Eating Disorders Occur?

Sociocultural Factors:

- Western societies equate **thinness with beauty**, perpetuating **body dissatisfaction** through media and peer pressure.
- Non-Western cultures may emphasize **plumpness** as a sign of fertility and caring.

Psychological and Genetic Influences:

- Low self-esteem, perfectionism, and trauma are contributing psychological factors.

- o Family history of eating disorders or mental health issues increases susceptibility.

Signs and Symptoms

- **Anorexia Nervosa:** Extreme weight loss, restricted eating, distorted body image, fatigue.
- **Bulimia Nervosa:** Secretive binge eating, purging, frequent bathroom visits, damaged teeth.
- **Binge Eating Disorder (BED):** Overeating even when full, feelings of guilt or shame.

Physical Symptoms: Digestive issues, weight fluctuations, menstrual irregularities. **Emotional Symptoms:** Anxiety, depression, social withdrawal.

Who Is at Risk?

Vulnerable Groups:

- o Adolescents and young adults, particularly **females**.
- o Individuals with unhealthy eating habits or **chronic dieters**.

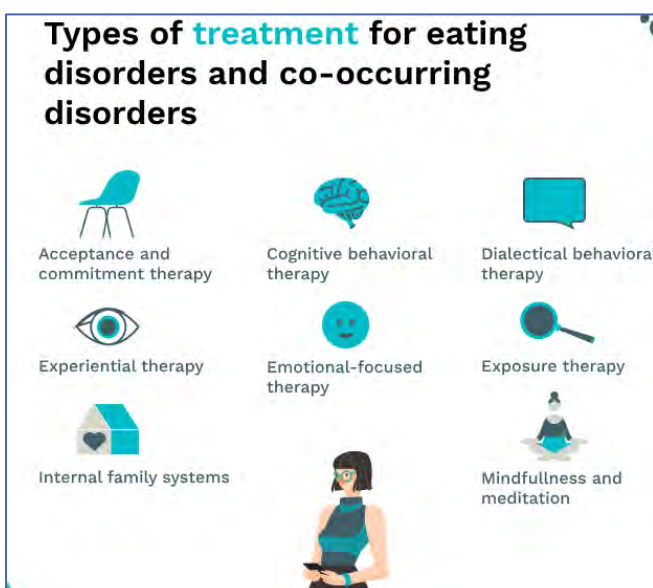
Risk Factors:

- o Societal pressures, **low self-esteem**, and **perfectionism**.
- o History of **bullying**, **trauma**, or family mental health issues.

Treatment Options

- **Psychotherapy: Cognitive Behavioral Therapy (CBT):** Helps individuals identify and change negative thought patterns.
- **Nutritional Counseling:** Educates on balanced diets and healthy eating habits.
- **Medical Monitoring:**
 - o Manages complications like **malnutrition** and **electrolyte imbalances**.
 - o Medications for underlying conditions (e.g., **depression**, **anxiety**) when necessary.

Early diagnosis and intervention significantly improve recovery outcomes. Eating disorders require **timely support and professional care**.



Conclusion

Eating disorders are serious conditions that impact both physical and mental health. They reflect the complex relationships between **food, emotions, and societal norms**. Addressing these disorders requires **awareness, timely medical intervention, and psychosocial support**. If symptoms arise, consulting a healthcare provider is crucial for recovery.

WHO Countries Agree on Landmark Pandemic Accord

News Excerpt:

After over three years of negotiations, WHO member states reached a **historic agreement** on tackling future pandemics. The accord aims to address the **shortcomings of the COVID-19 response** and ensure better **preparedness, prevention, and equity** in handling global health crises.

Key Highlights of the Agreement

- **Pathogen Access and Benefit-Sharing System (PABS):**
 - o Facilitates **swift sharing of pathogen data** with pharmaceutical companies.
 - o Enables rapid development of **pandemic-fighting products** like vaccines and treatments.
- **Technology Transfer:**
 - o Article 11 focuses on transferring **pandemic health product technology** to developing nations.
 - o Compromise reached: Transfers must be "**mutually agreed**", addressing concerns of countries with large pharmaceutical industries.
- **Equity in Pandemic Response:**
 - o The agreement emphasizes **fair access** to vaccines, tests, and treatments, addressing disparities seen during COVID-19.
 - o WHO chief Tedros Adhanom Ghebreyesus highlighted the need for **global cooperation** to ensure "more equity."
- **Global Commitment:** The 32-page agreement was unanimously approved and will be presented for **formal adoption** at the WHO's annual assembly next month.

Challenges and Context

- **Lessons from COVID-19:**
 - o The pandemic exposed **vaccine hoarding** by wealthier nations and limited access for poorer countries.
 - o The agreement seeks to prevent such inequities in future crises.
- **US Absence:**
 - o The United States, under President Donald Trump, withdrew from the WHO and pandemic talks, creating uncertainty during negotiations.

- Threats of **tariffs on pharmaceuticals** and cuts to **foreign aid spending** added pressure to the discussions.
- **Pharmaceutical Industry Concerns:** Industry representatives stressed the importance of **intellectual property rights** and **legal certainty** to encourage investment in high-risk research.

Significance

- **Global Cooperation:**
 - The accord is seen as a victory for **multilateralism**, with countries uniting to tackle shared health threats.
 - Former New Zealand PM Helen Clark emphasized that defeating pandemics requires **collective action**.
- **Cost of Inaction:** WHO chief Tedros warned that failing to prepare for pandemics could have consequences **worse than war**.
- **Implementation:** While the agreement is a starting point, the **real work begins now** with implementation and ensuring compliance.

Conclusion

The landmark pandemic accord represents a **turning point in global health governance**, addressing the inequities and inefficiencies of past responses. By fostering **data sharing, equitable access, and international collaboration**, the agreement lays the groundwork for a safer, more prepared world.

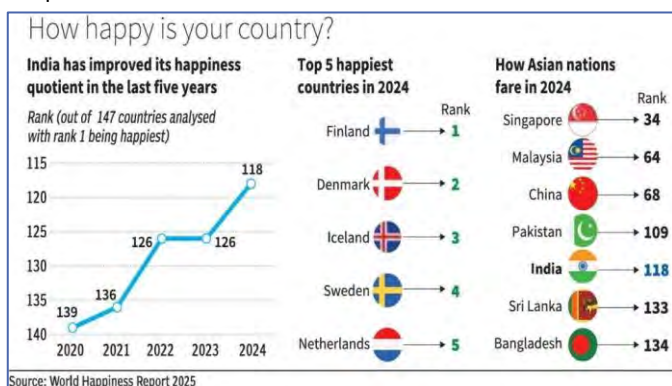
World Happiness Report (WHR) 2025

News Excerpt:

The World Happiness Report 2025, published on **March 20 (World Happiness Day)**, provides a comprehensive analysis of global happiness levels. It is a collaborative effort by the **Wellbeing Research Centre at the University of Oxford, Gallup, and the UN Sustainable Development Solutions Network (UNSDSN)**. Below are its major findings and insights:

Global Rankings: Happiest and Least Happy Countries

- **Happiest Countries:** **Finland retained its position** as the happiest country for the eighth consecutive year, followed by Denmark, Iceland, and Sweden. These Nordic nations consistently perform well due to strong social support, low corruption levels, and high trust in public institutions.



- **Least Happy Countries:** Afghanistan ranked last for the fourth consecutive year (147th), followed by Sierra Leone (146th), Lebanon (145th), Malawi (144th), and Zimbabwe (143rd). These countries face challenges like conflict, economic instability, and weak governance.
- **India's Position:** India improved its ranking to **118th in 2025, up from 126th in 2024**.
- **South Asia:** Nepal ranked highest among South Asian nations at **92nd**, followed by Pakistan (109th), Myanmar (126th), Sri Lanka (133rd), and Bangladesh (134th).

Determinants of Happiness

The WHR evaluates happiness based on **six key factors**:

1. **GDP per capita:** Economic prosperity contributes to resources for health, education, and security.
2. **Social Support:** Having reliable social networks significantly boosts well-being.
3. **Healthy Life Expectancy:** Living longer and healthier lives enhances life satisfaction.
4. **Freedom to Make Life Choices:** Autonomy in decision-making correlates with happiness.
5. **Generosity:** Acts of kindness and donations improve both individual and societal happiness.
6. **Perceptions of Corruption:** Trust in government and institutions fosters a sense of security.

The rankings are calculated using a three-year average of survey data where respondents rate their life satisfaction on a scale from 0 to 10.

Key Insights on Happiness

- **Social Connections Matter More Than Wealth:** Trust, shared meals, and communal kindness were found to have a greater impact on happiness than material wealth.
- **Acts of Kindness Are "Twice-Blessed":** Helping others benefits both the giver and the receiver. For example, volunteering or supporting neighbors improves collective well-being.
- **Cultural Variations in Happiness:** While Nordic countries excel due to their "culture of trust," regions like Latin America exceed expectations due to strong family ties despite economic challenges.

World Happiness Day

- **History:** Bhutan initiated the concept of prioritizing Gross National Happiness (GNH) over GDP in the 1970s. The UN adopted this idea in July 2012, declaring March 20 as International Day of Happiness.
- **Theme for 2025: "Caring and Sharing,"** emphasizing the importance of kindness, generosity, and human connection in fostering global happiness.

Conclusion:

The WHR 2025 underscores that happiness is not solely tied to wealth but is deeply influenced by trust, social bonds, and acts of kindness. As nations strive for progress, fostering environments that prioritize well-being over economic metrics remains critical.

Education and Nutrition: Learn to Eat Well – UNESCO

News Excerpt:

The 2025 UNESCO global report **"Education and Nutrition: Learn to Eat Well"** reinforces the intrinsic link between good nutrition and quality education.

At a time when educational inequality and malnutrition continue to challenge global development, this report presents a compelling case for integrating school feeding programs with nutrition education to achieve long-term socio-economic and health outcomes.

Key Data & Global Statistics

- **418 million children** benefit from school meals across **161 countries**.
- **Over 50%** of school feeding programs lack sufficient **fruit and vegetables**.
- **One-third** offer **sugary drinks**, contributing to poor dietary habits.
- Childhood **obesity rates have doubled** in over **100 countries** in the last 20 years.
- Only **17 countries** effectively integrate **nutrition education** into school curricula.

India in Focus

India's **PM-POSHAN** scheme is among the world's largest, feeding **118 million children daily**. However, despite high coverage, **micronutrient deficiencies** remain prevalent, reflecting the urgent need for dietary diversity and stronger nutrition literacy in schools.

The Education-Nutrition Nexus

UNESCO's report identifies several pathways through which education and nutrition reinforce each other:

- **Enhanced Cognitive Outcomes:** Nutritious meals improve attention span, memory, and academic performance.
- **Increased Enrollment & Retention:** Free meals serve as a strong incentive for school attendance, especially among **girls and low-income groups**.

- **Long-Term Human Capital:** Early childhood nutrition influences lifelong physical health and learning potential.
- **Support to Local Economies:** Linking school meals to local farmers fosters **farm-to-table economies**, supporting sustainability.
- **Social Equity:** Acts as a **social safety net**, particularly in vulnerable and rural populations.

Challenges Identified

Despite the widespread reach of school feeding programs, the report outlines several systemic issues:

- **Food Quality:** Many meals include **ultra-processed**, low-nutrient food items.
- **Nutritional Literacy:** Nutrition education is often absent or poorly integrated into curricula.
- **Lack of Variety:** Programs rely heavily on **staples** like rice and wheat, with insufficient fruits, vegetables, and proteins.
- **Urban-Rural Disparities:** Infrastructure gaps lead to inconsistent food quality and access.
- **Monitoring Deficiencies:** Only **8%** of countries track school meal quality against **WHO nutrition standards**.

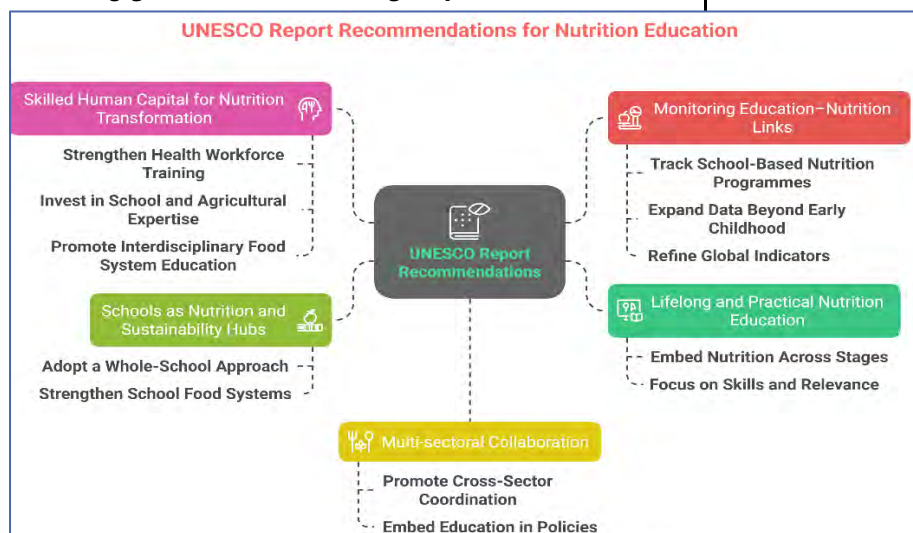
Way Forward

UNESCO recommends a multi-pronged approach to tackle existing shortcomings:

1. **Curriculum Integration:** Nutrition education should be embedded in school syllabi across age groups and subjects.
2. **National Guidelines:** Countries must adopt **science-backed food standards** aligned with **WHO dietary guidelines**.
3. **Sustainable Sourcing:** Meals should be procured locally and seasonally to ensure diversity and support **local agriculture**.
4. **Capacity Building:** Teachers and school staff should be trained to deliver effective food and nutrition education.
5. **Robust Monitoring:** Countries must set **accountability mechanisms**, indicators, and benchmarks to assess both health and educational outcomes.

Conclusion

UNESCO's Learn to Eat Well report sends a strong message: **A nourished mind is a learning mind**. Investments in balanced school meals are not charity — they are **smart policy choices** with long-lasting benefits for **education, public health, equity, and economic development**. Nations that prioritize this interconnection — such as **Brazil and Finland** — demonstrate how nutrition-driven educational policy can lead to holistic national growth.



ECONOMY

The Dominance of Digital Giants

News Excerpt:

Companies like **Google**, **Facebook**, **Amazon**, and **Apple** (collectively known as **GAFA**) have amassed significant market power, influencing various sectors, including advertising, retail, and communication. These corporations operate across borders, serving billions of users worldwide, which complicates regulatory efforts due to varying national laws and regulations.

Challenges in Regulation

Jurisdictional Issues

- **Cross-Border Operations:** Digital giants often have data centers and operations in multiple countries, making it difficult for any single nation to assert regulatory authority.
- **Legal Frameworks:** Diverse legal standards across countries create challenges in enforcing consistent regulations.

Rapid Technological Advancements

- **Innovation Pace:** The fast-evolving nature of technology outpaces the development of corresponding regulatory measures, leading to potential gaps in oversight.
- **Emerging Technologies:** Regulating new technologies like artificial intelligence and blockchain adds layers of complexity to existing frameworks.

Market Dominance and Competition

- **Monopolistic Practices:** Dominant firms may engage in anti-competitive behaviors, such as preferential treatment of their products or services, stifling competition.
- **Barriers to Entry:** Startups may find it challenging to compete due to the extensive resources and data controlled by established digital giants.

Approaches to Regulation

Strengthening Antitrust Laws

- **Breaking Up Monopolies:** Governments can intervene to dismantle monopolistic structures, promoting competition.
- **Preventing Anti-Competitive Practices:** Enforcing laws that prevent unfair business practices ensures a level playing field.

Enhancing Data Protection

- **Privacy Regulations:** Implementing strict data protection laws safeguards user privacy and holds companies accountable for data breaches.
- **User Consent:** Ensuring users have control over their data and understand how it's used is crucial for transparency.

International Cooperation

- **Unified Standards:** Collaborating internationally helps harmonize regulations, making enforcement more effective.

- **Shared Resources:** Pooling resources and expertise enables better monitoring and regulation of digital giants.

Conclusion

- **Fostering Innovation:** Regulations should not stifle technological advancement but ensure that growth benefits society.
- **Protecting Consumers:** Striking a balance between corporate interests and consumer protection is essential for sustainable digital ecosystems.
- **Adaptive Frameworks:** Regulatory bodies must remain agile, adapting to technological changes while upholding ethical standards and promoting fair competition.

A New Vision for Simplified and Efficient Taxation

News Excerpt:

The **Public Accounts Committee (PAC)** has recommended the introduction of **GST 2.0**, emphasizing the need for a **streamlined structure**, **ease of compliance**, and a **tiered approach**. The goal is to address **complexities**, reduce **compliance burdens**, and make the system more **business-friendly** and **effective in revenue collection**.

Key Highlights of the PAC's Recommendations:

- **Simplification of Tax Structure:**
 - Advocates for reducing the number of **tax slabs** to make the system more straightforward.
 - Aims to minimize **classification disputes** and enhance clarity for businesses.
- **Enhanced Compliance Mechanism:**
 - Proposes a **tiered compliance system** where businesses are categorized based on turnover and risk assessment.
 - Suggests simplified return filing processes for **small and medium enterprises (SMEs)** to reduce their compliance burden.
- **Technological Integration:**
 - Emphasizes leveraging **technology** to automate processes, ensuring **seamless data sharing** between central and state tax authorities.
 - Recommends robust **IT infrastructure** to handle the scale and complexity of GST operations.
- **Capacity Building and Training:** Highlights the need for regular **training programs** for tax officials and stakeholders to keep them updated on GST provisions and technological tools.
- **Dispute Resolution Mechanism:** Calls for establishing a **fast-track dispute resolution system** to address grievances promptly and reduce litigation.

Context and Rationale:

- Since its implementation in 2017, the GST system has faced challenges related to **complexity, compliance costs, and technical glitches**.
- The PAC's recommendations aim to address these issues by introducing a more **structured and simplified framework**.
- The proposed **tiered approach** seeks to balance **ease of compliance** for businesses with **effective tax administration**, ensuring that the GST system is both **business-friendly** and **robust** in revenue collection.
- By implementing these recommendations, the PAC envisions a GST regime that fosters **voluntary compliance**, reduces **evasion**, and enhances the overall **efficiency** of India's indirect tax system.

Easing FPI Threshold

India is considering **relaxing the investment thresholds** for **Foreign Portfolio Investors (FPIs)**, a move experts believe could significantly **boost capital inflow**, strengthen the **financial markets**, and support the **rupee**.

What Are FPI Thresholds?

- **FPI thresholds** refer to the **maximum percentage of ownership** a foreign investor can hold in Indian stocks or bonds.
- These limits are in place to **regulate foreign influence**, **maintain market integrity**, and **manage risks** associated with global capital flows.

Why Easing the Thresholds Matters?

Encouraging Greater Participation

- Relaxing the caps can encourage **more foreign investors** to enter or expand their stake in Indian markets.
- This can lead to a **broader investor base** and **greater liquidity**.

Supporting the Indian Economy

- Increased **foreign capital inflows** can:
 - Support **infrastructure financing**.
 - Reduce reliance on domestic borrowings.
 - Help bridge the **current account deficit (CAD)**.

What Experts Say

- **Market analysts and economists** believe that easing FPI limits can:
 - **Attract long-term investors**, especially in sectors like **manufacturing, energy, and technology**.
 - Strengthen the **rupee** by bolstering **forex reserves**.
 - Improve **market confidence** and **sentiment**.

Risks and Safeguards

- While capital inflow is beneficial, experts caution:
 - Excessive dependence on foreign capital can increase **market volatility**.
 - Sudden **capital outflows** due to global shocks may destabilize markets.

- Thus, any easing must be accompanied by **risk management frameworks** and **strong regulatory oversight**.

Conclusion

- **Easing FPI thresholds**, if done prudently, could be a strategic move to **mobilize global capital**, deepen India's financial markets, and support **macroeconomic stability**.
- However, policymakers must ensure a **balanced approach** to prevent **speculative risks** and maintain **long-term stability**.

Revised MSME Classification from April 1

News Excerpt:

The Indian government has officially **notified revised norms** for classifying **Micro, Small, and Medium Enterprises (MSMEs)** based on updated **investment and turnover criteria**. These new definitions will come into force starting **April 1**, aiming to make the classification **more inclusive, accurate**, and aligned with current economic conditions.

New Criteria for MSME Classification

The revised definitions are as follows:

- **Micro Enterprises:**
 - **Investment:** Up to ₹1 crore
 - **Turnover:** Up to ₹5 crore
- **Small Enterprises:**
 - **Investment:** Up to ₹10 crore
 - **Turnover:** Up to ₹50 crore
- **Medium Enterprises:**
 - **Investment:** Up to ₹50 crore
 - **Turnover:** Up to ₹250 crore

This revision keeps the **dual criteria** (investment and turnover) in place to determine the status of an enterprise.

Objective Behind the Revision

- To ensure **accurate classification** of businesses, particularly those on the edge of earlier thresholds.
- To allow MSMEs to **grow in size** without losing access to **government schemes, subsidies, or credit support**.
- To bring **more businesses under the formal MSME umbrella**, promoting transparency and ease of doing business.

Impact on the Sector

- **Easier access to credit** and **priority sector lending** for a broader base of enterprises.
- Enterprises that were previously excluded due to slightly higher investments or turnover can now **register as MSMEs** and avail **benefits**.
- Encourages **scaling up of operations** without the fear of losing MSME benefits.

Implementation Timeline

- The new classification norms will be effective from **April 1, 2025**.

- Enterprises are advised to **reassess their eligibility** based on the new limits and **update their Udyam registration** accordingly.

Conclusion

- The revised investment and turnover limits reflect the government's push to **modernize the MSME ecosystem**, ensure **broadier coverage**, and support **economic growth** through one of India's most employment-generating sectors.
- These updates are expected to boost **competitiveness**, enhance **credit accessibility**, and promote **ease of doing business** in the MSME segment.

Mar-a-Lago Accord

News Excerpt:

The "Mar-a-Lago Accord" is a **proposed policy framework** (not an official agreement) associated with **Donald Trump's economic strategy**, centered around **reducing the value of the U.S. dollar** to address the country's massive **trade deficit**, which crossed **\$1 trillion in 2024**. The name is a symbolic reference to Trump's Florida estate, echoing his style of branding economic initiatives.

Inspired by the 1985 Plaza Accord

This idea draws parallels with the **Plaza Accord of 1985**, where five major global economies (U.S., Japan, West Germany, France, and the UK) coordinated to **depreciate the dollar**. The goal then—and now—is similar: **boost U.S. exports by making them cheaper** globally and make imports more expensive to reduce trade imbalances.

Key Objectives of the Mar-a-Lago Accord Concept

- Boost American Exports:** A weaker dollar makes U.S. goods more affordable to foreign buyers.
- Reduce Imports:** Higher import prices due to dollar devaluation could **curb the demand for foreign goods**.
- Revive Domestic Manufacturing:** U.S. industries could see increased demand as imported alternatives become costlier.
- Correct Trade Deficit:** Trump views the persistent U.S. trade deficit as a threat to American economic power.

Global & Domestic Economic Impacts

Positive for U.S. Exports, but:

- Inflation Risk:** A weaker dollar makes imports (like fuel, electronics, etc.) more expensive, fueling **domestic inflation**.
- Currency Wars:** Other countries might retaliate by **devaluing their currencies**, triggering a **cycle of competitive devaluations**.
- Global Trade Tensions:** It could strain relations with trading partners and even **destabilize global markets**.

What It Means for India

- Export Impact:** A weaker dollar could make **Indian exports more expensive in the U.S.**, especially in price-sensitive sectors like textiles and auto components.

- Import Prices:** If the rupee strengthens against a falling dollar, **imports (like crude oil)** could become cheaper for India.
- Volatility in Financial Markets:** Currency and interest rate fluctuations may impact **capital flows, stock markets**, and **foreign investments** in India.
- Policy Caution:** India would need to manage **exchange rate stability**, control **import costs**, and possibly **diversify export markets** to mitigate risks.

Conclusion

- While the **Mar-a-Lago Accord** is still just a conceptual approach, it signals a possible **shift in U.S. economic policy** toward **protectionism** and **currency manipulation**.
- If implemented, the world—including India—must brace for **greater uncertainty in trade and exchange rates**, potentially prompting policy shifts globally.

Argentina Secures \$42 Billion in Financial Support Amid Economic Reforms

News Excerpt:

Argentina has received a significant financial boost of **\$42 billion** from three major international financial institutions—the **IMF, World Bank, and Inter-American Development Bank (IDB)**. This support comes as the country grapples with economic instability and aims to stabilize its currency, reduce inflation, and foster growth under the leadership of President **Javier Milei**.

Background: Argentina's Economic Deterioration

Background:

Argentina has faced recurring economic crises over the decades, stemming from a combination of political instability, poor fiscal management, and external shocks. Key factors include:

- Debt Defaults:** Argentina has defaulted on its sovereign debt nine times, undermining investor confidence and access to international markets.
- Inflation and Currency Issues:** Persistent inflation, often in triple digits, has eroded purchasing power and destabilized the economy.
- Populist Policies:** The dominance of Peronism, a populist movement, led to nationalization of industries and expansion of welfare programs, which strained public finances.
- Global Commodity Price Drops:** Argentina's reliance on agricultural exports made it vulnerable to fluctuations in global commodity prices.

Recent Economic Decline

The situation worsened in the late 2010s and early 2020s due to:

- Currency Controls:** Tight restrictions on foreign exchange created a parallel shadow market, further devaluing the peso.

- **High Tax Rates:** Excessive taxation discouraged investment and growth.
- **Depleted Reserves:** The Central Bank's foreign currency reserves were nearly exhausted, limiting its ability to stabilize the economy.
- **Political Instability:** Frequent changes in leadership and inconsistent policies exacerbated economic uncertainty.

Breakdown of Financial Support

- **IMF:** A four-year **\$20 billion bailout**, with an immediate disbursement of **\$12 billion**.
- **World Bank:** A commitment of **\$12 billion**, with **\$1.5 billion** available immediately.
- **IDB:** Plans for a **\$10 billion** package to support public and private sectors.

Economic Reforms and Policy Changes

- **Currency Controls Lifted:** The government has announced the removal of exchange controls, allowing the peso to float within a band of **1,000 to 1,400 pesos per dollar**. This move aims to stabilize the currency and attract foreign investment.
- **Export and Trade Adjustments:** Differential exchange rates for exporters have been eliminated, and foreign shareholders can now distribute profits starting from 2025.
- **Inflation Control:** The financial aid will support the **recapitalization of the Central Bank** and the continuation of the disinflation process.

Challenges and Criticism

- **Inflation:** While annual inflation has dropped from **211% in 2023** to **55.9% in March 2025**, it remains one of the highest globally.
- **Public Spending Cuts:** President Milei has implemented austerity measures, including:
 - Firing tens of thousands of public sector workers.
 - Halving the number of government ministries.
 - Vetoing inflation-aligned pension increases.
- These measures have led to reduced purchasing power, job losses, and decreased consumer spending.

Political and Economic Implications

- **Support for Reforms:** The IMF has praised Milei's efforts, describing the program as a "vote of confidence" in Argentina's determination to advance reforms and improve living standards.
- **Peso Under Pressure:** The peso has faced volatility, trading at **1,097 to the dollar** officially and **1,375** on the unofficial "blue" market.
- **Debt Management:** Argentina already owes the IMF **\$44 billion** from a 2018 loan, making this the 23rd bailout since 1956.

Conclusion

The \$42 billion financial package represents a critical lifeline for Argentina as it navigates economic challenges. With bold

reforms and international support, the country aims to stabilize its economy, reduce inflation, and lay the groundwork for sustainable growth. However, the success of these measures will depend on effective implementation and the ability to balance austerity with public welfare.

RBI's Proposal on Securitisation of Stressed Assets

News Excerpt:

The **Reserve Bank of India (RBI)** has proposed a **market-based securitisation mechanism** for **stressed assets**, aiming to mitigate the burden of **Non-Performing Assets (NPAs)** on banks. This proposal builds on existing provisions under the **Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002**.

Key Features of the Proposal

- **Securitisation of Stressed Assets:**
 - Lenders can **bundle stressed assets** into **tradeable securities**, thereby **sharing risk** with investors.
 - This method serves as an **alternative to Asset Reconstruction Companies (ARCs)**.
- **Role of Special Purpose Entity (SPE) & Resolution Manager (RM):**
 - A **Resolution Manager (RM)** will oversee the securitisation process.
 - The **SPE** will handle the assets and ensure compliance with regulatory measures.
- **Valuation & Capital Requirements:**
 - The RBI has outlined methods for **asset valuation**, **investor capital requirements**, and **necessary disclosures**.
- **Cash-Based Transactions:**
 - Securitised assets **must be sold to an SPE strictly for cash**, ensuring transparency.
- **Exclusions from Securitisation:**
 - Certain asset categories **will not be eligible**, including:
 - **Resecuritisation & synthetic securitisation.**
 - **Farm credit & education loans.**
 - **Fraudulent accounts & wilful defaults.**

Implications of the Proposal

- **Reduces risk burden** on banks struggling with NPAs.
- **Provides an alternative investment avenue** for financial institutions.
- **Enhances liquidity in the stressed asset market**, potentially improving recoveries.

Conclusion

RBI's move towards **securitisation of stressed assets** is a **critical regulatory reform**, aiming to **strengthen risk management and financial stability** in India's banking sector. As discussions progress, further refinements may emerge to optimize implementation.

PAC Recommends GST 2.0: Key Insights

News Excerpt:

The **Public Accounts Committee (PAC)** has proposed a comprehensive overhaul of the **Goods and Services Tax (GST)** framework to simplify compliance, address taxpayer concerns, and enhance efficiency. The recommendations, presented in the PAC's **19th report**, aim to establish a **streamlined and rationalised indirect tax system**.

Key Recommendations

Simplified Compliance Framework:

- **Streamline Return Filing:** Consolidate forms and reduce filing frequency.
- **Tiered Approach:** Smaller businesses to face **fewer compliance requirements** compared to larger entities.
- **User-Friendly GST Portal:** Improve guidance and support for taxpayers at every step.

Revamped GST 2.0:

- Conduct **stakeholder consultations** with trade associations and taxpayer groups.
- Address challenges like **criminal penalties for unintentional errors**.

Transparent Refund System:

- Implement clear timelines for **refund processing**.
- Establish a **dedicated grievance redressal mechanism** for refund-related issues.

AI and Data Analytics:

- Use **artificial intelligence tools** for:
 - Accurate **revenue projections**.
 - Identifying **non-compliant taxpayers**.
- Introduce a **case management system** for real-time tracking of pending cases.

Faceless GST Collection: Expedite the implementation of a **fully digital GST system** to eliminate physical interactions between taxpayers and authorities.

Support for MSMEs and Exporters:

- Simplify compliance for **MSMEs** by automating return filing and refund processing.
- Provide exporters with **clear guidelines and checklists** for documentation.

Challenges Highlighted

- **Criminal Penalties:** Honest taxpayers face **punishment for compliance failures**, even in cases of unintentional errors.
- **Biometric-Based Aadhar Authentication:** Issues in the registration process hinder the vision of '**One Nation, One Tax**'.
- **Decline in Indirect Tax Revenue:** Share of indirect taxes in total revenue receipts fell from **38.76% (2017-18)** to **36.92% (2019-20)**.

Conclusion

The PAC's recommendations for **GST 2.0** aim to create a **simplified, equitable, and technology-driven tax system**. By addressing compliance challenges and leveraging AI tools, the proposed reforms could enhance **taxpayer experience** and **revenue efficiency**.

AGRICULTURE

Integrated Approach to Agriculture

News Excerpt:

An **integrated approach to agriculture** combines various farming practices and policies to create a **sustainable** and **profitable** agricultural ecosystem. This method addresses challenges like **climate change**, **market volatility**, and **resource limitations**, aiming to improve **productivity**, **resilience**, and **income** for farmers.

Key Initiatives and Policies

- **Operation Greens (2018-2019)**
 - **Objective:** Stabilize the supply and prices of **Tomato, Onion, and Potato (TOP)** crops.
 - **Budget:** Allocated **₹500 crore**. **Strategies:**
 - Promote **Farmer Producer Organizations (FPOs)**.
 - Enhance **agri-logistics** and establish **processing facilities**.
 - Implement **price stabilization measures** to reduce volatility.
- **Impact:** Aims to ensure **year-round availability** of TOP crops and prevent **post-harvest losses**.
- **National Agroforestry Policy (2014)**



- **Significance:** India became the **first country** to adopt such a policy.
- **Objective:** Integrate **trees, crops, and livestock** on the same land to enhance **productivity** and **sustainability**.

- **Benefits:**
 - Improves **soil fertility** and **water retention**.
 - Provides **additional income** through timber and fruit.
 - Mitigates **climate change** impacts.
- **Implementation:** Encourages **research**, **capacity building**, and **simplification** of regulations related to agroforestry.
- **Doubling Farmers' Income (DFI) Initiative (2016)**
 - **Target:** Double farmers' income by **2022**.
 - **Strategies:**
 - **Increase productivity** through better practices and technology.
 - **Reduce production costs** via efficient resource use.
 - **Ensure remunerative prices** through market reforms.
 - **Diversify income sources** by promoting allied activities like **livestock** and **fisheries**.
- **Committee:** The **DFI Committee**, led by **Ashok Dalwai**, provided comprehensive recommendations and oversees implementation.
- **National Innovations in Climate Resilient Agriculture (NICRA) (2011)**
 - **Launched by:** **Indian Council of Agricultural Research (ICAR)**. **Objective:** Enhance the **resilience** of Indian agriculture to **climate variability** and **change**.
 - **Components:**
 - **Strategic research** on adaptation and mitigation.
 - **Technology demonstrations** in vulnerable districts.
 - **Capacity building** for scientists and stakeholders.
- **Focus Areas:** Develop **climate-resilient technologies** for **crops**, **livestock**, and **fisheries**; promote **natural resource management**.
- **Integrated Farming Systems (IFS)**
 - **Concept:** A holistic agricultural management system combining **crops**, **livestock**, **aquaculture**, and **agroforestry**.
 - **Advantages:**
 - **Diversified income** sources reduce risk.
 - **Efficient resource utilization** enhances productivity.
 - **Sustainable practices** improve environmental health.
 - **Implementation:** Tailored to specific **regional** and **farm** conditions, integrating **modern technologies** with **traditional knowledge**.

Benefits of an Integrated Approach

- **Enhanced Productivity:** Combining various agricultural components leads to better **resource use efficiency**.

- **Income Diversification:** Farmers gain multiple income streams, reducing dependence on a single crop.
- **Climate Resilience:** Integrated systems are better equipped to withstand **climatic stresses**.
- **Sustainability:** Promotes **environmental conservation** and **long-term farm viability**.

The Growing Use of Plastics in Agriculture

News Excerpt:

Plastics are now **integral to modern farming**, used in everything from **mulch films** to **irrigation pipes** and **fertilizer coatings**. While they help **increase crop yields**, **conserve water**, and **reduce labor costs**, they are also leading to a **silent buildup of plastic pollution** in agricultural soils. The article underscores how **intensive plastic use in farming** is turning **farm fields into plastic reservoirs**.

Sources of Agricultural Plastic Pollution

- **Plastic mulch films:** Widely used to retain moisture and block weeds, but these **thin sheets often break down** under sunlight and tillage, becoming **microplastics** that persist in the soil.
- **Controlled-release fertilizers:** These use **polymer coatings** that release nutrients gradually, but leave behind **non-biodegradable residues**.
- **Greenhouse coverings, drip tapes, nursery trays:** These degrade over time and add to the **plastic load in soil systems**.

Environmental and Soil Health Impacts

- **Soil degradation:** Microplastics can **change soil texture**, reduce water retention, and **hinder root growth**.
- **Harm to soil organisms:** Earthworms and microbes—key to healthy soil—are negatively affected. For instance, **earthworms lose weight** and **burrow less** in plastic-contaminated soil.
- **Toxic uptake in plants:** Microplastics can **bind with heavy metals** like **cadmium**, which are then absorbed by plants, posing risks to **food safety and human health**.

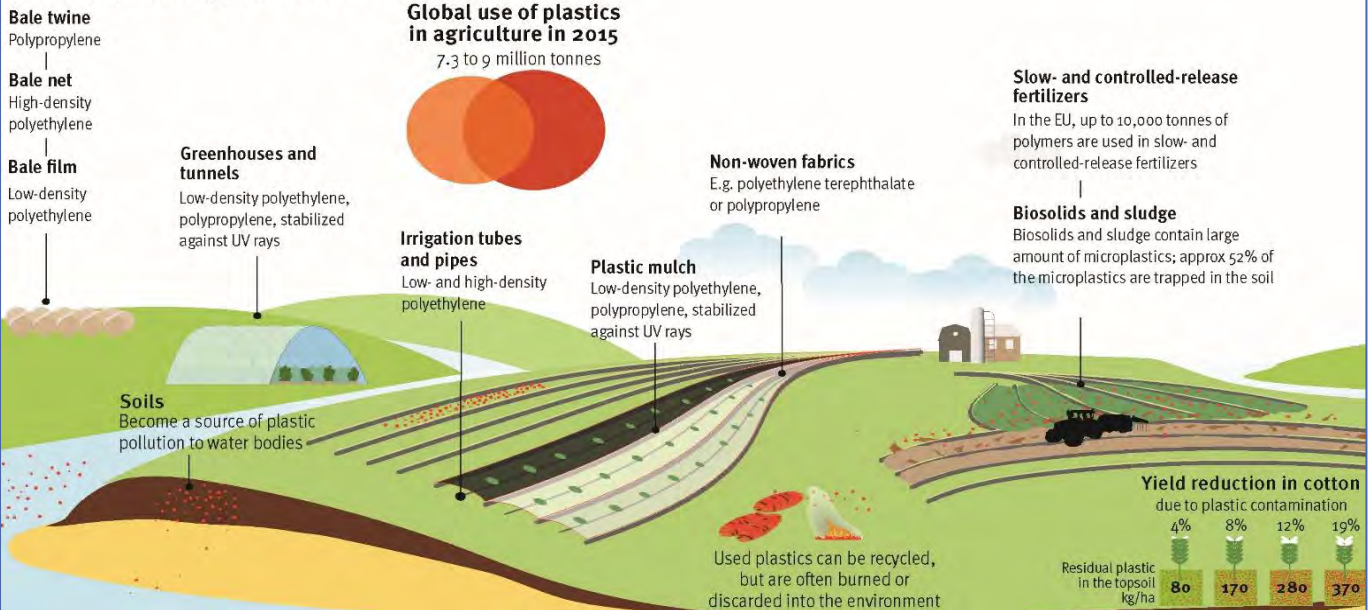
Runoff and Water Contamination

- Microplastics from fields can be washed away during rainfall or irrigation, ending up in **rivers, lakes, and oceans**, contributing to **global plastic pollution**.
- The scale is alarming—according to studies, **millions of tonnes of microplastics** from agriculture may already be present in **topsoil layers globally**.

Solutions and Alternatives

- **Biodegradable plastic mulches:** Made from starch or plant polymers, these **break down naturally** and are increasingly being tested as substitutes.

Plastics in agriculture



- **Recycling and collection systems:** More robust efforts are needed to **retrieve and recycle** used farm plastics before they disintegrate.
- **Policy intervention:** Regulations that **limit non-degradable agricultural plastics** and **incentivize eco-friendly alternatives** are crucial.
- **Farmer education:** Training farmers on **plastic management** and the use of **sustainable tools** is essential for long-term change.

Conclusion

- The article emphasizes the need to **rethink plastic use in agriculture**. While plastics offer immediate benefits, the **long-term environmental cost** could undermine **soil fertility, ecosystem balance, and food safety**.
- Combating this challenge will require **innovation, regulation, and collaboration** across sectors.

GEAC Approves Import of GM Alfalfa Hay from the US

News Excerpt:

The **Genetic Engineering Appraisal Committee (GEAC)** has granted approval for the **import of genetically modified (GM) Alfalfa Hay from the United States**. This decision marks a significant development in **India's approach to GM crops and animal feed**, impacting the **dairy and livestock industries**.

Understanding GM Alfalfa Hay

What is GM Alfalfa?

- Genetically modified **Alfalfa Hay** is engineered for **herbicide resistance**, particularly against **glyphosate-based weed control**.
- It ensures **higher yield, disease resistance, and better nutritional content** for livestock feed.

Global Context

- The US has widely adopted GM Alfalfa for **better quality fodder**, supporting dairy and meat industries.
- India's approval aligns with **global trade practices** in livestock feed enhancement.

Reasons for Approval

Demand for High-Quality Fodder:

- India's **dairy sector** requires large quantities of **nutrient-rich fodder** to maintain **milk production efficiency**.
- GM Alfalfa provides **higher protein content**, improving **cattle health**.

Import Substitution & Yield Enhancement:

- Domestic Alfalfa production often falls short in **quantity and quality**.
- Importing GM Alfalfa **reduces dependency** on lower-quality alternatives.

Economic Benefits:

- Supports **livestock productivity**, leading to **higher milk and meat yields**.
- Potential **cost reduction** in cattle feed procurement.

Concerns & Regulatory Challenges

Environmental & Health Risks:

- **Impact on native biodiversity** if GM strains crossbreed with local species.
- Possible **health implications** for cattle consuming GM fodder.






Regulatory Oversight:

- Strict monitoring required to ensure **safe consumption**.
- **Labeling requirements** for tracking GM feed usage in livestock products.

Trade & Consumer Sentiment:

- Some stakeholders argue **against GM imports** due to long-term **food chain effects**.

- Concerns about **India's self-sufficiency in non-GM feed production.**

GMO	Description	Picture
Golden Rice	Rice modified with daffodil genes to have more beta-carotene, which the body converts to Vitamin A	
Flavr Savr Tomatoes	Tomatoes modified by the removal of genes responsible for the softening of fruit, meaning the tomatoes spoil more slowly	
Bt Corn	Corn modified with a bacterial insecticide gene so that it produces insect toxins within its cells, protecting it from pest species	
Aqua Advantage Salmon	Salmon modified with growth hormone regulating genes in order to grow to market sizes in significantly less time	
Glow in the Dark Animals	Animals modified with genes for fluorescent proteins will glow in the dark – this novel feature serves no practical purpose	

Implications for India

- Dairy Industry Boost:** Enhanced milk production efficiency through better-quality fodder.
- Policy Precedent:** May pave the way for further GM feed imports or domestic cultivation.
- Consumer & Market Impact:** Need for transparency in GM labeling and public awareness.

Conclusion

The **GEAC's approval of GM Alfalfa Hay** represents a **strategic step** for improving **livestock nutrition and productivity**. However, **environmental concerns, regulatory monitoring, and public acceptance** will shape the long-term impact of this decision.

INTERNATIONAL RELATIONS

Russia-Ukraine Black Sea Ceasefire Agreement

Russia and Ukraine have agreed to halt **military actions** against ships in the **Black Sea** after negotiations mediated in **Saudi Arabia**. The agreement, backed by the **United States**, aims to ensure the **safety of maritime activities** and prevent further **escalation** in the region.

Key Aspects of the Agreement:

Safe Navigation in the Black Sea

- Both **Russia** and **Ukraine** have committed to avoiding **attacks on commercial and civilian ships**.
- The move is intended to prevent **disruptions to international trade and supply chains**.

Non-Militarization of Commercial Vessels

- The agreement ensures that **neither country will use commercial ships for military purposes**.
- This step is crucial to maintaining **neutrality in maritime trade**.

Protection of Energy Infrastructure

- Both sides have agreed to **stop attacks on critical energy infrastructure**, such as **oil refineries, gas facilities, and power plants**.
- This aims to stabilize **energy supplies** and prevent further **economic damage**.

Prisoner and Detainee Exchanges

- The **U.S.** has reaffirmed its commitment to facilitating the **exchange of prisoners of war** and the release of **detained civilians**.
- This is seen as a **confidence-building measure** to reduce hostilities.

Agricultural and Fertilizer Export Support

- The **United States** has pledged to help **Russia** restore **access to global markets for agricultural and fertilizer exports**.
- This aspect is likely part of **broader diplomatic efforts** to ease tensions and prevent **food crises**.

Role of the United States

- The **U.S.** played a key role in **mediating the negotiations** and ensuring the **commitments were upheld**.
- It has promised **continued diplomatic engagement** to enforce the terms of the agreement.

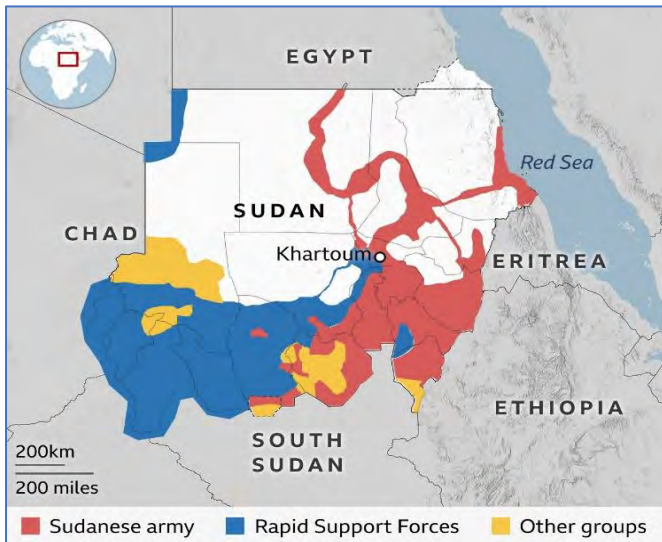
This **ceasefire** is seen as a significant step toward **reducing hostilities** in the **Black Sea**, though its **long-term success** remains uncertain.

South Sudan on the Brink of Civil War

South Sudan, the world's **youngest nation**, is facing **escalating violence** that could plunge it back into a **full-scale civil war**, warns the **United Nations (UN)**. The crisis stems from deep political rivalries, ongoing militia clashes, and a fragile peace process that has struggled to hold.

Escalation of Violence and Political Arrests

- Clashes between government forces and armed militias** have intensified, particularly in the **northern regions** of South Sudan.
- The **White Army**, a militia group believed to be aligned with **First Vice President Riek Machar**, seized a **military base in Nasir on March 4, 2025**.
- In response, **government forces**, loyal to **President Salva Kiir**, launched a crackdown in the capital **Juba**, leading to the **arrest of several of Machar's key allies**.
- This **direct confrontation** between South Sudan's two most powerful leaders is reminiscent of the **civil wars in 2013 and 2016**, which killed approximately **400,000 people** and displaced millions.



UN's Concerns and Calls for International Action

- UN Secretary-General António Guterres has expressed deep concern, warning that **South Sudan is on the verge of another humanitarian catastrophe**.
- Guterres has urged **regional and international leaders** to take immediate action to **prevent the country from spiraling into renewed war**.
- The UN fears that further violence could **destabilize the region**, impacting neighboring countries like **Sudan, Uganda, and Ethiopia**.

Regional Mediation Efforts

- In an effort to **diffuse tensions**, Kenya has dispatched former Prime Minister Raila Odinga to South Sudan as a special mediator.
- Odinga's mission is to **broker peace between President Kiir and Vice President Machar**, who have shared a history of political disputes.
- The **African Union (AU)** and the **Intergovernmental Authority on Development (IGAD)** have also called for **urgent peace talks** to prevent a return to war.

Historical Context and Challenges to Peace

- **South Sudan gained independence from Sudan in 2011** but has remained politically unstable.
- A **power struggle between President Kiir and Vice President Machar** ignited a **civil war in 2013**, which led to mass violence and displacement.
- A **peace agreement was signed in 2018**, establishing a **unity government**, but tensions between factions have remained high.
- **Elections, originally scheduled for 2024, were postponed to 2026**, further fueling **political unrest and public frustration**.

Global Concerns and Humanitarian Crisis

- **Over 2 million South Sudanese refugees** are currently displaced, with **many relying on humanitarian aid**.
- The **World Food Programme (WFP)** has warned that ongoing violence could **exacerbate food shortages and famine risks**.

- **International human rights organizations** have condemned the recent **crackdown on opposition figures**, warning of increasing **political repression**.

Conclusion

- The situation in South Sudan remains **highly volatile**, with the risk of another **devastating civil war** growing each day.
- The **UN and international community** are pushing for **urgent diplomatic interventions**, but without meaningful negotiations and a commitment to **peace-building**, the country could face yet another prolonged **humanitarian and security crisis**.

The Jailed Mayor Challenging Erdoğan

Ekrem İmamoğlu, the **54-year-old mayor of Istanbul**, has emerged as a significant opposition figure in **Turkey's political landscape**, directly challenging **President Recep Tayyip Erdoğan**. His rise to power, legal struggles, and widespread public support have positioned him as a key player in Turkey's future elections.

Rise to Prominence

2019 Mayoral Victory

- İmamoğlu, representing the **secular Republican People's Party (CHP)**, gained national prominence by winning **Istanbul's mayoral election in 2019**.
- His victory was a major blow to **Erdoğan's ruling Justice and Development Party (AKP)**, as Istanbul had been under conservative control for **25 years**.

Election Annulment and Re-run

- After his **initial win was annulled** due to alleged irregularities, İmamoğlu ran again in the **rerun election** and secured an even **larger margin of victory**.
- This second triumph solidified his status as **one of Erdoğan's strongest political adversaries**.

Leadership Style and Public Appeal

Modern and Inclusive Leadership

- İmamoğlu is known for his **progressive policies, inclusive rhetoric, and emphasis on democratic values**.
- He has positioned himself as a **unifying leader** in Turkey's deeply **polarized political environment**.

Broad Support Across Social Groups

- His leadership appeals to **young voters, secular groups, and even moderate conservatives** who are frustrated with Erdoğan's policies.
- His **charismatic approach** and ability to **connect with diverse communities** have significantly boosted his popularity.

Arrest and Legal Challenges

Detention on Corruption Charges

- On **March 19, 2025**, İmamoğlu was **arrested on corruption charges**, along with **terrorism-related offenses** (which were later dropped).

- He has **denied all allegations**, calling them "unimaginable accusations and slanders", and his supporters believe the charges are **politically motivated**.

Government Crackdown on Opposition

- Critics argue that his **arrest is part of a broader crackdown** on opposition figures by Erdoğan's government.
- The move is seen as an attempt to **weaken potential challengers** ahead of future elections.

Public Response and Political Implications Mass Protests Against İmamoğlu's Arrest

- His **detention sparked mass protests** across major Turkish cities, with thousands of people taking to the streets.
- The **government's response has been harsh**, leading to the arrest of over 1,100 people, including journalists and activists.

Presidential Endorsement by CHP

- In response to his detention, the **CHP organized a symbolic presidential primary**, where nearly 15 million people expressed support for İmamoğlu as their preferred 2028 presidential candidate.
- This highlights his **enduring political influence** and the growing public desire for political change in Turkey.

Conclusion

- İmamoğlu's **ongoing legal battles**, widespread **public support**, and **opposition to Erdoğan's rule** have turned him into a **symbol of resistance** in Turkish politics.
- His **arrest and the subsequent backlash** could significantly impact Turkey's **political future**, making him a **key figure to watch** in the coming years.

Tahawwur Rana Extradited to India

Introduction

Tahawwur Hussain Rana, a **Pakistani-origin Canadian-American**, has been **extradited to India** from the **United States** to face trial for his alleged role in the **26/11 Mumbai terror attacks**. His extradition marks a **significant diplomatic and legal victory** for India, as it seeks justice for the **166 victims** of the attacks.

Extradition Process and Legal Challenges

- **Final Appeal Rejected:** Rana's last attempt to evade extradition failed when the **U.S. Supreme Court** rejected his review petition on **April 7, 2025**.
- **Diplomatic Efforts:** India had been pursuing Rana's extradition since **2019**, and he was **re-arrested in 2020** when he applied for a new U.S. passport.
- **Legal Proceedings in the U.S.:** The **District Court for the Central District of California** ordered his extradition in **2023**, but Rana filed multiple appeals, citing concerns about alleged mistreatment in Indian custody.

Arrival in India and Next Steps

- **Escorted by NIA Team:** A **multi-agency team** from the **National Investigation Agency (NIA)** traveled to the U.S. to bring Rana back to India.

- **Landing in New Delhi:** His **Indian government-chartered flight** landed in **New Delhi** on **April 10, 2025**.
- **Immediate Custody:** Upon arrival, Rana was **taken to the NIA headquarters** for interrogation.
- **Court Appearance:** He was **produced before a special NIA judge** at **Patiala House Court**, where legal proceedings began.

CHARGED WITH WAGING WAR, MURDER	
<ul style="list-style-type: none"> > A Canadian national of Pakistani origin, Tahawwur Rana is wanted by NIA for his role in 2008 Mumbai terror attacks that killed 166 people > Accused of providing blueprint that helped LeT carry out strike, also knew key conspirator Pak-American terrorist David Headley > Charges against him include criminal conspiracy, waging war, murder, forgery, committing terrorist act under IPC 	 <ul style="list-style-type: none"> > Held in 2009 by FBI while plotting attack against a Danish newspaper > Convicted by a US court in 2011, sentenced to 14 years in 2013 > In 2019, India first approached US for extradition, followed up several times in next six years > US court said treaty allows extradition; he filed for review > US Supreme Court has now denied Rana's review request

Rana's Role in the 26/11 Attacks

- **Association with David Headley:** Rana was a **close associate** of **David Coleman Headley**, the **Lashkar-e-Taiba (LeT) operative** who conducted reconnaissance for the attacks.
- **Providing Cover for Headley:** Rana's **immigration office in Mumbai** was allegedly used to **facilitate Headley's movements** and **help him procure a visa**.
- **Additional Charges:** Apart from the **Mumbai attacks**, Rana is also accused of **plotting attacks on the National Defence College and Chabad House**, a Jewish outreach center in Mumbai.

Security Measures and Detention

- **High-Security Custody:** Rana is expected to be **lodged in Tihar Jail**, where special arrangements have been made for his detention.
- **Heightened Security:** **Delhi Police SWAT teams** have been deployed to ensure his safe transfer and court proceedings.

Impact on David Headley and Other Conspirators

- **Headley's Status:** Headley, who **pleaded guilty**, is serving **35 years in a U.S. prison**. India has **pushed for his extradition**, but U.S. authorities have refused due to his plea agreement.
- **Pakistan's Role:** India has repeatedly sought **Pakistan's cooperation** in prosecuting **Hafiz Saeed, Zaki-ur-Rehman Lakhvi**, and other **LeT operatives** who orchestrated the attacks. However, Pakistan has **denied assistance**.

Conclusion

Rana's extradition is a **major milestone** in India's pursuit of justice for the **26/11 Mumbai attacks**. His trial will be closely watched, as India seeks to **hold accountable those responsible** for one of the **deadliest terror attacks** in its history. The case also underscores the **ongoing challenges** in bringing **Pakistan-based masterminds** to justice.

Mauritius Becomes First African Nation to Sign ISA's Country Partnership Framework

Introduction

In **April 2025**, **Mauritius** made history as the first African country to sign the **Country Partnership Framework (CPF)** developed by the **International Solar Alliance (ISA)**. This pivotal move highlights Mauritius' commitment to accelerating the global clean energy transition and aligns with its sustainable development goals.

What is the Country Partnership Framework (CPF)?

Definition: CPF is a **strategic initiative** by ISA that establishes **medium- and long-term partnerships** with member countries.

Purpose:

- Speeds up **joint solar projects** tailored to national energy priorities.
- Promotes **climate-resilient development** by scaling up solar energy capacity.

Significance:

- Aligns **national objectives** with **ISA's global clean energy mission**.
- Encourages collaboration for investment, capacity building, and technology transfer.

About the International Solar Alliance (ISA)

Background:

- Established in **2015** by **India** and **France** during the **COP21 Summit in Paris**.
- Headquarters: **Gurugram, Haryana, India**.

Membership:

- As of **March 2025**, **104 countries** have ratified the ISA Framework Agreement.
- All **UN member states** became eligible to join ISA after a **2020 amendment**.

Vision:

- Guided by its **"Towards 1000" Strategy**, with these targets by 2030:
 - **\$1,000 billion** investment in solar projects.
 - Providing **clean energy access** to **1,000 million people**.
 - Installation of **1,000 GW of global solar capacity**.
 - Mitigating **1,000 million tonnes of CO₂ emissions** annually.

Key Initiatives of ISA

- **SolarX Startup Challenge:** Supports **innovative startups** with funding and business acceleration to scale solar solutions.
- **STAR-C Initiative:** Focuses on **building technical and institutional capacity** for solar project implementation.
- **Global Solar Facility:** A **payment guarantee fund** aimed at reducing investment risks and attracting private capital.

- **Green Hydrogen Innovation Centre:** Develops synergies between **solar energy** and **green hydrogen** for sustainable energy storage and usage.

India's Role in ISA

- **Leadership:** India co-founded ISA and has taken a leading role in driving its mission forward.

Key Contributions:

- Initiated the **One Sun, One World, One Grid (OSOWOG)** project to interconnect solar energy grids across nations.
- Provides **₹100 crore annually** for clean energy transitions, particularly in **Africa and Asia**.
- Promotes **funding, training, and technology transfer** to support solar deployment in developing countries.

Conclusion

The signing of the **Country Partnership Framework (CPF)** by Mauritius signifies a milestone in **ISA's mission to promote global solar adoption**. With India's leadership, initiatives like CPF are reshaping the energy landscape, providing sustainable solutions to address **climate change** and **energy inequality**.

India Secures Position in ISAR for 2025–2027 Term

Introduction

India has achieved an **uncontested position** in the **United Nations Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR)** for the **2025–2027 term**. This achievement reinforces India's commitment to enhancing **global financial transparency and accountability**.

About ISAR



UN Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR)

- + Only intergovernmental working group devoted to corporate accounting and auditing
- + **Objective**
 - + To promote the transparency, reliability, and comparability of corporate accounting and reporting
 - + To improve disclosures on corporate governance by enterprises in developing countries and countries with economies in transition
- + Discusses and publishes worldwide best practices
- + **Recent initiatives**
 - + Corporate governance
 - + Accounting by small and medium-sized businesses
 - + Technical assistance in emerging economies

Function:

- ISAR focuses on improving the **quality and international comparability of financial reporting**.
- It also addresses **non-financial disclosures**, including:
 - **Environmental issues.**
 - **Corporate governance.**
 - **Corporate social responsibility (CSR).**

Annual Sessions: Conducted in **Geneva**, ISAR sessions delve into emerging trends and global challenges in **accounting and reporting standards**.

Membership:

- ISAR comprises **34 formal members** with **three-year terms**.
- Member composition:
 - **Nine African countries.**
 - **Seven Asian countries.**
 - **Six Latin American countries.**
 - **Three Eastern European countries.**
 - **Nine Western European and Other States.**

Significance of India's Membership

Global Leadership:

- Strengthens India's role in shaping **international accounting and reporting standards**.
- Promotes Indian expertise in integrating **sustainable and transparent business practices** globally.

Focus Areas:

- Enhancing **financial and non-financial reporting mechanisms**.
- Contributing to discussions on issues such as:
 - **Sustainability.**
 - **Climate impact disclosures.**
 - **Corporate governance reforms.**

Strategic Importance: Aligns with India's goal to **strengthen multilateral engagements** and promote **responsible business practices** internationally.

Conclusion

India's position in ISAR underlines its growing influence in **global financial frameworks** and its commitment to **high standards of reporting and governance**. This step will enable India to contribute meaningfully to **international discussions on financial transparency and sustainability**.

ENVIRONMENT

Ocean Sediments Unlock Secrets of the Indian Monsoon

News Excerpt:

A new study analyzing **deep-sea sediments** from the **Bay of Bengal** has revealed critical clues about the **evolution of the Indian monsoon** and its link with **long-term climate changes**. The findings help scientists better understand how the monsoon system has shifted over **millions of years**, influenced by **tectonic activity** and **global climate patterns**.

What the Sediments Tell Us

Monsoon Variability Through Sediment Layers

- Ocean sediments act like a **natural climate archive**.
- During **strong monsoon phases**, heavy rainfall increases **erosion in the Himalayas**, transporting more sediments to the Bay of Bengal.
- In contrast, **weaker monsoons** lead to lower sediment deposition.
- The **composition, thickness, and layering** of these sediments provide a **timeline of monsoon intensity** and fluctuations.

Geological Forces Behind the Monsoon

Role of the Himalayas and Tectonics

- The **uplift of the Himalayas** and the **Tibetan Plateau** significantly influenced monsoon development.
- As these landforms rose due to **tectonic plate movements**, they altered **wind patterns** and atmospheric circulation.
- This contributed to the **intensification of the monsoon system**, especially over the past **10–20 million years**.

Past and Present Climate Connections

Reconstructing Climate History

- The sediment analysis allows researchers to **reconstruct ancient climate conditions**, offering insight into how the monsoon responded to **global warming and cooling cycles**.
- This historical data is crucial for understanding **climate-monsoon interactions** during periods of **natural change**—knowledge that can now inform our understanding of **anthropogenic climate change**.

What This Means for the Future

Implications for Climate Forecasting

- A better grasp of **monsoon history** enhances the **predictive capabilities** of modern climate models.
- With ongoing global warming, understanding how past monsoons behaved can help **anticipate future changes** in rainfall patterns.
- These insights are vital for **agriculture, water management, and disaster preparedness** across South Asia.

Conclusion

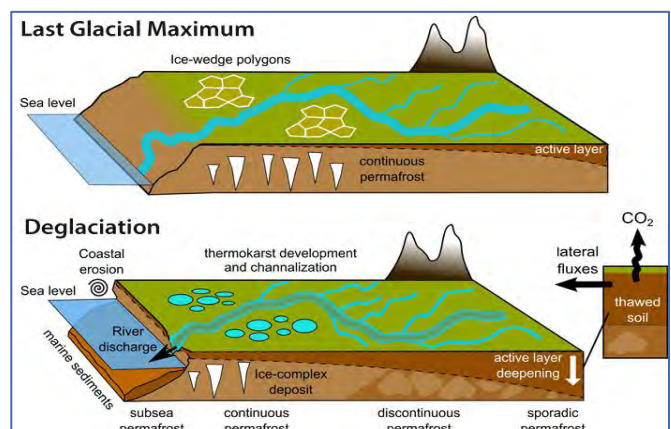
- This research underlines the **importance of geological records** in climate science. By studying **Bay of Bengal sediments**, scientists are not only uncovering the **evolutionary story of the Indian monsoon**, but also building tools to **forecast its future behavior** in the face of climate change.

Permafrost Melting in Kashmir

News Excerpt:

A recent study using **satellite data** has highlighted alarming levels of **permafrost degradation** in the **Kashmir Himalayas**, raising concerns about its **environmental impact, infrastructure vulnerability, and climate implications**.

Shrinking Permafrost Zones



- **Permafrost** is a layer of **frozen soil** that remains below 0°C for at least two consecutive years.
- Data indicates that **permafrost coverage in Kashmir is decreasing**, largely due to **rising temperatures** driven by **global climate change**.
- These changes have become more pronounced in **high-altitude regions** of Kashmir.

Consequences of Thawing Permafrost Release of Greenhouse Gases

- **Thawing permafrost releases trapped methane and carbon dioxide**, powerful greenhouse gases that **amplify global warming**.

Disruption of Hydrological Cycles

- Permafrost serves as a **natural water reservoir** in mountain ecosystems.
- Its degradation can **alter snowmelt patterns**, disrupt **stream flows**, and affect **irrigation and drinking water supplies**.

Infrastructure at Risk

- As **ground stability weakens**, critical infrastructure like **roads, bridges, and buildings** face heightened risks of **damage and collapse**.
- This is especially concerning for **remote areas** where road access is vital for supplies and emergency response.

Environmental Hazards on the Rise

- The loss of permafrost contributes to **increased landslide and erosion risks** in mountainous terrain.
- This adds to the **disaster vulnerability** of local communities, especially during heavy rainfall or seismic activity.

What Needs to Be Done?

Enhanced Monitoring

- **Satellite surveillance** and **field-based research** should be expanded to track permafrost changes more accurately.

Adaptive Planning

- Future infrastructure projects in the region must consider **permafrost stability** and incorporate **climate-resilient designs**.

Climate Mitigation

- Reducing **carbon emissions**, promoting **reforestation**, and ensuring **sustainable tourism and development** in mountain zones can help mitigate further damage.

Conclusion

- The **degradation of permafrost in Kashmir** is a pressing signal of **climate vulnerability**. If unaddressed, it can lead to **severe ecological and socio-economic consequences**.
- There is an urgent need for **scientific attention**, **policy action**, and **community awareness** to address these emerging risks.

Global Commitment to Clean Air

News Excerpt:

During the **2nd WHO Global Conference on Air Pollution and Health** held in **Cartagena, Colombia**, over **50**

countries, cities, and organizations pledged to **reduce the health impacts of air pollution by 50% by 2040**. This marks a **landmark global agreement**, emphasizing the urgent need to tackle one of the **leading environmental threats to public health**.

Key objectives of the conference include:

- Share the latest evidence on health risks of air pollution and energy poverty, assessment tools and resources for decision-making.
- Take stock of global progress since 2015 after the WHA resolution was passed and the start of the Sustainable Development Goals.
- Showcase health, climate, gender and equity co-benefits of air pollution and energy action.
- Mobilize, value and empower health professionals to 'prescribe' clean air for health.
- Iterate strategies to mitigate the health sector's environmental footprint.
- Harness climate and development finance to tackle air pollution and ensure a just energy transition.
- Leverage health arguments to drive country cooperation and financial commitments.
- Countries, regions and cities join BreatheLife and commit to air pollution reductions by 2030 and beyond.

India's Pledge



- India announced its commitment through the **Ministry of Health and Family Welfare**, aligning the target with the existing **National Clean Air Programme (NCAP)**.
- Key efforts include:
 - **Promoting cleaner cooking energy**, especially for **vulnerable communities**.
 - Strengthening **air pollution surveillance** and **non-communicable disease tracking** to better understand the health burden.

Commitments by Other Nations

- **Spain** pledged to make its **healthcare system carbon-neutral by 2050**, with a focus on **emission reduction** and **intersectoral collaboration**.
- The **UK and Northern Ireland**:

- Chair the **Forum for International Cooperation on Air Pollution (FICAP)**.
- Set new **PM2.5 targets**.
- Rolled out a national **Air Quality Strategy** to improve awareness and tackle inequality.
- **Brazil** plans to establish a **National Air Quality Policy** and update its **air standards** in line with **WHO guidelines**.
- **China** emphasized:
 - Improving **air quality standards**.
 - Enhancing **health protection frameworks**.
 - Integrating clean air goals with its **climate targets** for 2030–2060.

Role of Cities and Organizations

- **C40 Cities**, representing nearly 100 global cities, reaffirmed their support for the WHO goal and called for:
 - **Greater investments** in clean air solutions.
 - Recognition of **cities as key partners** in implementing air quality initiatives.
- The **Clean Air Fund (CAF)** pledged an additional **\$90 million** over two years to support air quality and **health-related projects** worldwide.

WHO's Perspective

- WHO Director-General **Dr. Tedros Adhanom Ghebreyesus** highlighted the importance of:
 - Enforcing **WHO air quality guidelines**.
 - Investing in **clean energy, sustainable transport, and better infrastructure**.
 - Focusing on the **most vulnerable populations**, including children and the elderly.

Health & Environmental Impact

- **Air pollution** contributes to around **7 million premature deaths annually**, mostly from **heart disease, stroke, lung cancer, and respiratory infections**.
- Reducing air pollution is essential for cutting the global burden of **non-communicable diseases (NCDs)** and improving overall **public health outcomes**.

Water Scarcity: A Growing Global Concern

News Excerpt:

Every year, **World Water Day** is observed on **March 22** to raise awareness about the **importance of freshwater** and to advocate for the **sustainable management of water resources**. As water becomes increasingly scarce, the **consequences are being felt across the globe**, particularly by vulnerable communities.

Staggering Global Water Crisis

Lack of Access

- According to the **United Nations**, over **2.2 billion people** do not have access to **safely managed drinking water**.

- Around **115 million people** still depend on **surface water sources** such as rivers and ponds, which are often **polluted and unsafe**.

Projected Shortages

- The **World Wildlife Fund (WWF)** warns that by **2025, two-thirds of the world's population** may face **water shortages**.
- These shortages threaten **daily living, sanitation, food security, and economic development**.

Children and Water Insecurity

- **Children are among the most affected** by water scarcity.
- Lack of access to clean water leads to **health issues, reduced school attendance, and poor development**.
- **Water-borne diseases** are a leading cause of death among children under five, especially in low-income countries.

Broader Impact on Society

Food and Energy

- Water is critical for **agriculture**, which consumes the largest share of global freshwater.
- It also affects **electricity generation**, especially in countries that rely on **hydropower**.

Livelihoods

- Scarcity can cause **job losses in farming, conflict over resources, and mass migration** in extreme cases.

Need for Action

Sustainable Solutions

- Promoting **water conservation, recycling, and efficient irrigation methods**.
- Investing in **infrastructure** such as rainwater harvesting and wastewater treatment.

Global Cooperation

- Solving this crisis requires **international collaboration, community-level participation, and policy-level reforms** to ensure **equitable water distribution**.

Conclusion

- World Water Day is not just a commemoration—it is a **call for collective responsibility**. Governments, organizations, and individuals must work together to protect this **precious resource**, ensuring that **future generations** do not inherit a **thirsty planet**.

India's Green Credit Programme (GCP)

News Excerpt:

The **Green Credit Programme**, launched by the **Ministry of Environment, Forest and Climate Change (MoEFCC)** in **October 2023**, is designed to **incentivize environmentally beneficial actions**. Under this scheme, individuals and organizations can earn **tradable green credits** by performing actions like **tree plantation, water conservation, waste management, and sustainable agriculture**.

These credits can then be **traded or used to offset environmental obligations**, making it an innovative blend of **market mechanisms** and **environmental responsibility**.

Major Criticisms of the Green Credit Programme

While the intent is progressive, several **environmentalists and experts** have raised red flags:

Risk of Forest Diversion

- **Green credits can be earned through afforestation**, which companies might use to **compensate for cutting down natural forests** elsewhere.
- Critics fear this could **legitimize the destruction of existing forests**—which are irreplaceable ecosystems—by creating a **false equivalence** with new plantations.

Monoculture Plantations Over Biodiversity

The eight avenues under the GREEN CREDIT PROGRAMME

- Tree plantation**—to promote activities for increasing the green cover across the country
- Water management**—to promote water conservation, water harvesting and water use efficiency or water savings, including treatment and reuse of wastewater
- Sustainable agriculture**—to promote natural and regenerative agricultural practices and land restoration to improve productivity, soil health and nutritional value of food produced
- Waste management**—to promote circularity, sustainable and improved practices for waste management, including collection, segregation, and environmentally sound management
- Air pollution reduction**—to promote measures for reducing air pollution and other pollution abatement activities
- Mangrove conservation and restoration**—to promote measures for conservation and restoration of mangroves
- Ecomark label development**—to encourage manufacturers to obtain ecomark label for their goods and services
- Sustainable building and infrastructure**—to encourage the construction of sustainable buildings and other infrastructure using environment friendly technologies and materials

CARBONCOPY

- The emphasis on **planting trees in degraded lands** might result in **monoculture plantations** (planting a single species of trees).
- This approach threatens **biodiversity**, and such plantations **do not replicate the ecological complexity** or resilience of natural forests.

Lack of Clear Methodology

- The final notification of the GCP **omits critical methodological details** such as:
 - **Minimum survival rate** of planted trees,
 - **Maintenance responsibilities** over time.
- Without these, there's a risk that the **environmental benefits may not be realized in practice**.

Legal Ambiguities

- The **Ministry of Law and Justice** had previously raised **concerns about the legal soundness** of the program's business model.
- There are questions about whether the GCP aligns with existing environmental laws and **how it will interact with India's Compensatory Afforestation framework**.

Possibility of Greenwashing

- Experts fear companies may **use green credits to showcase environmental responsibility** while continuing harmful practices elsewhere.
- Without **stringent verification**, the GCP may **become a tool for superficial compliance** rather than genuine environmental action.

Neglect of Indigenous and Local Communities

- The program doesn't clearly outline the **role or rights of local communities**, especially **tribal groups** who traditionally manage forests.
- There's a fear that **top-down afforestation projects** may disrupt local ecosystems and livelihoods without proper consultation or participation.

Conclusion

While the **Green Credit Programme** is a novel initiative with potential to **mobilize public and private efforts** toward sustainability, it faces significant criticism over its **implementation, legal clarity, and ecological effectiveness**.

To make it work, India will need:

- Transparent and **rigorous methodology**,
- **Community participation** and rights-based approaches,
- Strong **monitoring and regulatory oversight**, and
- A **balance between economic incentives and ecological integrity**.

Global Warming & Mountain Ranges

News Excerpt:

Mountains, often called the **"water towers" of the world**, are among the **most vulnerable ecosystems** to global warming. A recent UNESCO report reveals that climate change is **accelerating the pace of transformation in mountainous regions**—with **glaciers melting, permafrost thawing**, and **water security being threatened** for billions of people.

Faster Warming at Higher Altitudes

- Mountain regions are warming **faster than the global average**—a trend known as **"elevation-dependent warming"**.
- This results in **more rapid melting of glaciers and snow**, especially in ranges like the **Himalayas, Alps, Rockies, and Andes**.

Rapid Glacier Loss

- Glaciers around the world have lost over **9,000 billion tonnes of ice** since 1975 (excluding Greenland and Antarctica).
- In **2024 alone**, they lost **450 gigatons**—one of the **highest annual losses on record**.
- This is leading to rising sea levels and disrupting local hydrological cycles.

Permafrost Thawing

- Permafrost**, or permanently frozen ground, is **melting due to rising temperatures**.
- This leads to **ground instability** (affecting infrastructure and settlements) and the **release of methane and CO₂**, which are potent greenhouse gases—further worsening climate change.

Snow Cover & Weather Pattern Disruptions

- Snowfall has become **less reliable and more erratic**.
- Reduced snow cover** affects **seasonal water availability**, wildlife habitats, and traditional livelihoods like mountain agriculture and tourism.

Impacts on Global Water Resources

- Over **2 billion people** depend on mountain-sourced water.
- Initial rise in river levels** due to melting may lead to **short-term flooding**, followed by **long-term shortages** as glaciers disappear.
- Hydropower production**, agriculture, and drinking water supply could all be impacted.

Wildfires & Dust: Hidden Accelerants

- Wildfires** and **dust storms** deposit **black carbon** and dust on snow and glaciers, **darkening their surfaces**.
- This reduces their **albedo** (reflectivity), causing them to **absorb more heat** and **melt faster**.

Himalayan Concerns: A Regional Alarm Bell

- The **Hindu Kush Himalaya (HKH)** is warming at an alarming rate.
- Even with the **1.5°C global warming limit**, the region is expected to lose **up to one-third of its glaciers** by 2100.
- Major rivers like the **Ganges, Indus, and Brahmaputra**—which originate from this region—will see **altered flows**, impacting agriculture and livelihoods across South Asia.

Ecological & Human Consequences

- Biodiversity Threats**: Alpine species are losing their habitat; some may go extinct.
- Landslides & Flooding**: Glacier lake outburst floods (GLOFs) and landslides are becoming more frequent.

- Displacement Risks**: Mountain communities face greater vulnerability and may need to migrate.

The Urgency of Climate Action

The report urges **global collaboration** to:

- Mitigate emissions,
- Protect mountain ecosystems,
- Develop **adaptation strategies** for vulnerable populations.

Mountains are **climate sentinels**—early indicators of broader planetary change. How we respond now will determine the future of **water security, biodiversity, and sustainable development**.

Impact of Surface Ozone Pollution on Agriculture in India

News Excerpt:

A recent study conducted by **IIT Kharagpur** has revealed the **adverse effects of surface ozone pollution** on major food crops in **India's Indo-Gangetic Plain and central regions**. Led by **Prof. Jayanarayanan Kuttipurath** and his team at the **Centre for Oceans, River, Atmosphere and Land Sciences (CORAL)**, the research predicts a **drastic decline in agricultural yields**, posing significant challenges for India's **food security** and its ability to achieve the **United Nations Sustainable Development Goals (SDGs)**.



Findings of the Study

Threat to Staple Crops:

- The study identifies **wheat, rice, and maize** as particularly vulnerable to surface ozone exposure.
- Surface ozone**, a strong oxidant, causes **visible foliar injuries** and damages plant tissues, reducing crop productivity.

Predicted Yield Losses: Under high-emission scenarios, yield losses could rise significantly:

- Wheat yields** may decline by an additional **20%**.
- Rice and maize yields** could experience reductions of approximately **7%**.

Vulnerable Regions:

- **Indo-Gangetic Plain** and **Central India** are identified as the worst-affected areas.
- Ozone exposure levels in these regions may exceed safe limits by **six times**.

Implications**Food Security:**

- Yield reductions threaten **domestic food security**, especially for India's large population.
- Potential risks to **global food supplies**, as India is a major exporter of food grains to **Asia and Africa**.

United Nations SDGs: Rising pollution challenges India's efforts to meet **SDG 1 (No Poverty)** and **SDG 2 (Zero Hunger)** by 2030.

Recommendations**Policy Interventions:**

- Targeted measures to **monitor and curb surface ozone pollution** in agricultural regions.
- Expand the focus of the **National Clean Air Programme** beyond urban areas to include farmlands.

Emission Reduction Strategies:

- Implement effective techniques to **reduce atmospheric pollutants** impacting crop health.
- Promote **sustainable agricultural practices** to mitigate climate change effects.

Key Concept: Surface Ozone

Concept	Explanation
Surface Ozone	A pollutant formed when sunlight reacts with volatile organic compounds (VOCs) and nitrogen oxides (NOx). Commonly found in urban and industrial areas.
Impact on Crops	It is a strong oxidant , damaging plant tissues and leading to yield reductions, particularly in staple crops.

Conclusion

The **IIT Kharagpur study** emphasizes the urgent need to **curb ozone pollution** in agricultural zones to safeguard **India's food security** and accelerate progress toward achieving the **SDGs**. Focused policies and mitigation strategies are critical to ensuring sustainable agricultural yields in the face of climate challenges.

CPCB's 'Blue Washing' and Waste-to-Energy Incineration**News Excerpt:**

Recently, the **Central Pollution Control Board (CPCB)** introduced a new **"blue category"** classification for industries engaged in **Essential Environmental Services (EES)**. While this move recognizes **composting, biogas, material recovery facilities, and sewage treatment plants**, it controversially includes **waste-to-energy (WTE) incineration**, previously categorized as **"red"** (highly polluting).

What is Waste-to-Energy (WTE) Incineration?

- **Process:** Burning **unsegregated municipal solid waste (MSW)** to **generate electricity** using heat from combustion to **power steam turbines**.
- **Environmental Concerns:**
 - **Releases pollutants** such as **SOx, NOx, HCL, PM, Dioxins, and Furans**.
 - **Generates toxic effluents** and **hazardous fly ash** requiring **secure disposal**.
 - Emits **more CO₂ per unit of electricity** than coal-based thermal plants.

CPCB's Pollution Index (PI) and Category Shift

- **Pollution Index (PI):**
 - **White category** (Least polluting): **0–20**.
 - **Green category** (Moderately polluting): **21–40**.
 - **Orange category** (Significant pollution): **41–59**.
 - **Red category** (Highly polluting): **60–100**.
- **WTE Incineration Previously Classified as 'Red':**
 - Assigned a **PI score of 97.6** due to **high emissions and hazardous waste output**.
- **Reclassification to "Blue Category":**
 - Allows **two additional years of consent to operate ("consent to pollute")**.
 - This shift raises concerns over **legitimizing polluting industries** under the guise of environmental services.

Issues with Blue Category Classification**Environmental and Health Risks:**

- CPCB's **own inspection** found **Delhi WTE plants releasing carcinogens above permissible limits**.
- Contributed to **Delhi's poor air quality (AQI)** by burning **7,35,840 tons of plastic annually**.

Violation of Circular Economy Principles:

- CPCB's **reclassification contradicts its own policy**, which states that **only non-hazardous waste-producing projects** can be in the "blue category".
- **CSIR-NEERI** (National Environmental Engineering Research Institute) states that **WTE incineration defeats circular economy objectives and violates Solid Waste Management (SWM) Rules, 2016**.

Socio-Economic Impact:

- Leads to **job losses** among **waste pickers**.
- Imposes **financial burdens** on **urban local bodies**.

Key Concept: Blue Washing

Term	Definition
Blue Washing	Misleading representation of polluting industries as environmentally beneficial, similar to greenwashing but in the context of industrial categorization.
Circular Economy	A sustainable economic system aimed at reducing waste, reusing materials, and minimizing environmental impact .

Conclusion

The CPCB's **reclassification of WTE incineration** under the **blue category** raises **serious environmental, health, and governance concerns**. The move **contradicts established sustainability principles** and may weaken India's **pollution control framework**. Stronger **policy enforcement and adherence to SWM guidelines** are essential to ensure **genuine environmental progress**.

India Becomes 3rd Largest Generator of Wind & Solar Power

News Excerpt:

India has overtaken Germany to become the world's third-largest producer of wind and solar power combined, according to a report by global energy think tank **Ember**. The achievement marks a major step in India's transition to clean energy and its commitment to reducing carbon emissions.

Global Ranking Milestone

- India is now ranked **third globally** in wind and solar power generation.
- It surpassed **Germany**, which previously held this position.
- India's position has improved due to consistent investments and policy focus on renewables.

Contribution to Electricity Mix

- In **2023**, wind and solar contributed a **combined 11.5%** to India's total electricity generation.
 - Solar** alone accounted for **5.8%**, up from just **0.5% in 2015**.
- India's total clean energy share is growing rapidly in line with its climate goals.

Global Trends in Solar Power

- Solar power** remained the **fastest-growing** source of electricity globally for the **19th straight year**.
- Worldwide, solar generated **5.5%** of electricity in 2023 — a record high.
- India ranked **fourth** in terms of the largest increase in solar generation:
 - +18 TWh (Terawatt-hours)** added in 2023.
 - Behind only China, USA, and Brazil.

India's Clean Energy Vision

- India aims to achieve **50% of its installed power capacity** from **non-fossil sources** by 2030.
- The country is aligned with the **COP28** global goal of **tripling renewable capacity** by 2030.
- Accelerating clean energy is vital as **electricity generation accounts for 50% of India's carbon emissions**.

Expert Views & Implications

- According to **Aditya Lolla** (Asia Programme Director, Ember):
 - Clean electricity is key not just for emissions reduction, but also for meeting **India's growing energy demand**.

- Emphasized the need to **decouple economic growth from emissions**, a critical goal for climate action.

- India's progress in renewables also enhances **energy security**, reduces dependence on fossil fuel imports, and creates **green jobs**.

Conclusion

- India's rise to the third position in global wind and solar generation highlights its growing leadership in the global renewable energy space.
- As the world races to meet climate goals, India's progress sets a significant example for other developing nations.

FAO's Guidelines for Sustainable Aquaculture (GSA)

News Excerpt:

Released by the **Food and Agriculture Organization (FAO)** in **February 2025**, the **Guidelines for Sustainable Aquaculture (GSA)** focus on **preventive approaches** to address the challenges of rapidly expanding global aquaculture. These measures aim to achieve sustainable growth while meeting the rising demand for **aquatic foods** globally.

India plays a significant role in this sector, ranking **third worldwide** in aquaculture production and **second in global aquaculture exports**.

Framework of GSA

Scope and Focus:

- Recommendations on **governance, resource use, ecosystem and farm management, social responsibility, market access, and trade**.
- Emphasizes **sustainable aquaculture practices** tailored to national priorities.

Preventive Measures:

Adoption of:

- Good farming practices**.
- Biosecurity protocols** to minimize pathogen exposure.
- Vaccination** and use of **disease-resistant seeds**.
- Early detection and control strategies for disease outbreaks.

Objective: Reduce reliance on **antibiotics** while increasing cost-effectiveness.

Key Components of GSA

Reducing Reliance on Antimicrobials:

- Promotes alternatives like:
 - Vaccines, immunostimulants, and phage therapy**.
 - Use of **medicinal plants**.
- Minimizing antibiotics reduces risks of **antimicrobial resistance (AMR)**, a global health concern.

Sustainable Practices:

- Adoption of **non-fed aquaculture, recirculating systems, and integrated aquaculture**:
 - Reduces **land and water usage**.

- Minimizes waste and enhances productivity.
- Ensures safe aquatic feed, free from contaminants like **pathogens, heavy metals, and chemicals**.
- Encourages development of **alternative, high-nutrition feed ingredients**.

Building National Capacities:

- Strengthens **aquatic health management** through:
 - **Risk analyses** and **integrated pest/disease management**.
 - Rapid response systems for abnormal **mortality events**.
- Fosters international **cooperation to monitor transboundary diseases**.

Research and Training:

- Focus on training aquaculture workers and authorities in **health and welfare management practices**.
- Supports **research and innovation** for sustainable solutions.
- Ensures **affordable access to aquatic health services** for small-scale producers.

Benefits of Preventive Approaches

- **Healthier Aquaculture Systems:** Reduces disease occurrence and ensures **resilient aquaculture production**.
- **Economic Efficiency:** Yields **higher returns on investment** through cost-effective preventive measures.
- **Environmental Sustainability:** Promotes reduced water use, lower waste levels, and improved resource efficiency.

Conclusion

The FAO's GSA underscores the importance of **prevention-focused aquaculture practices** to meet global food demands while ensuring **environmental sustainability** and **economic viability**. By reducing dependence on antimicrobials and promoting sustainable practices, the guidelines contribute to a healthier and more resilient aquaculture future.

UN Report Warns of Economic Losses from Climate Shocks in Asia-Pacific

News Excerpt:

A recent **United Nations report**, published by the **Economic and Social Commission for Asia and the Pacific (ESCAP)** on **April 8, 2025**, has highlighted the **acute vulnerability of Asia-Pacific countries** to climate change. The report underscores the **macroeconomic implications of climate shocks**, with developing economies struggling to manage their impacts.

Key Findings

Economic Losses from Climate Hazards:

- Climate shocks could cause **annual economic losses** of at least **6% of GDP** in **one-third** of Asia-Pacific countries.
- Among 30 countries analyzed, **11 countries** are particularly exposed:

- **Afghanistan, Cambodia, Iran, Kazakhstan, Laos, Mongolia, Myanmar, Nepal, Tajikistan, Uzbekistan, and Viet Nam.**

Average Annual Loss (AAL):

The estimated **AAL due to climate-related disasters** for the region stands at **4.8% of GDP**.

Specific countries face higher losses:

- **Cambodia:** AAL reaches nearly **11%** due to extreme floods and droughts disrupting agriculture.
- **Fiji, Myanmar, and Pakistan:** AAL stands at a minimum of **7%**.

Key Drivers of Economic Loss:

- **Intensifying climate hazards:** Frequency and severity of **floods, droughts, heatwaves, and tropical cyclones**.
- **Sectoral exposure:** Agriculture, energy, manufacturing sectors are particularly vulnerable.
- **Rapid urbanization and land-use changes** heighten disaster risks.

Impacts on Vulnerable Countries

- **Cambodia:** High losses from **extreme floods and droughts**, particularly in agriculture.
- **Myanmar, Fiji, and Pakistan:** Weak infrastructure exacerbates the impacts of climate shocks.
- **Viet Nam:** Urbanization and land-use changes intensify exposure to **coastal flooding and storms**.

Recommendations

- **Proactive Government Intervention:**
 - Support transitions into **productive and high-income sectors**.
 - Strengthen infrastructure and disaster resilience.
- **Promotion of Green Industries:** Leverage competitive advantages in **green industries and value chains** as drivers of economic growth.
- **Regional Cooperation:**
 - Encourage **inclusive economic cooperation** between developed and developing nations.
 - Foster sharing of climate risk data and collaborative response mechanisms.

Conclusion

The UN report paints a **grim picture of climate vulnerability** in Asia-Pacific, calling for urgent measures to mitigate the economic impacts of disasters. **Sustainable development** and proactive policies are crucial for securing long-term prosperity and reducing the region's climate risks.

Greening of the Thar Desert

News Excerpt:

The **Thar Desert** in India is experiencing rapid greening, with a **38% annual rise in vegetation** over the last two decades. This transformation is driven by **increased monsoon rainfall, agricultural expansion, and excessive**

groundwater pumping, according to a study conducted by **IIT Gandhinagar** in collaboration with the **Bay Area Environmental Research Institute (NASA Research Park)**. The findings shed light on how both **climate change** and **human interventions** are reshaping one of the world's most densely populated desert regions.

Key Findings

Population, Precipitation, and Vegetation Growth:

- **Thar Desert** is the only desert globally to exhibit concurrent growth in **population, rainfall, and vegetation**.
- Between **2001–2023**, precipitation increased by **64%**, rising at a rate of **4.4 mm/year**.

Groundwater vs. Precipitation Contributions:

- Groundwater accounted for **55%** of greening annually, while precipitation contributed **45%**.
- During the monsoon season, precipitation played a greater role (**66%**), while groundwater dominated during non-monsoon months (**67%**).

Comparison with Other Deserts:

- Among 14 major deserts analyzed globally, only four (**Thar, Arabian, Negev, and Eastern Gobi**) showed significant increases in rainfall and vegetation.
- Deserts like the **Namib** experienced substantial declines in rainfall.

Causes of Thar's Greening

- **Climate Change Effects:** Increased monsoon rainfall contributed significantly to vegetation growth during the **summer monsoon (June–September)**.
- **Human Interventions:**
 - **Irrigation infrastructure and power supply improvements** sustained agricultural expansion in water-limiting environments.
 - **Groundwater pumping** supported crop growth during non-monsoon periods.
- **Agricultural Expansion:**
 - Crop area expanded by **74%**, and irrigated land increased by **24%** between **1980–2015**.
 - Overlaps with the **Kharif season** where monsoon rainfall fulfills water requirements.

Consequences of Greening

- **Groundwater Depletion:** Increased reliance on groundwater has caused **declining water levels**, especially in the **north-central region**, reflecting an imbalance between **extraction and recharge rates**.
- **Rapid Urbanization:** Urban areas within the Thar expanded by **50% to 800%** between **1985–2020**, further straining natural resources.

Environmental Impact:

- Vegetation growth leads to **increased water use**, affecting long-term resource sustainability.
- **Climate change** intensifies variability in water availability.

Conclusion

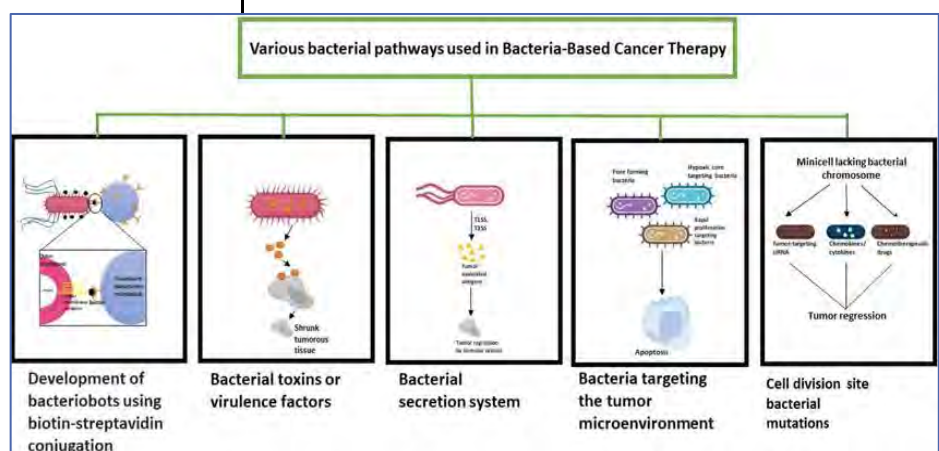
The greening of the **Thar Desert** highlights the **complex interplay between climate change and human interventions**. While enhanced vegetation contributes to agricultural productivity, it poses **long-term risks** such as **groundwater depletion** and **urban resource strain**. The findings underscore the need for **sustainable water management**, proactive policies, and comprehensive planning to balance ecological and economic priorities.

SCIENCE & TECHNOLOGY

Bug Drugs: Bacteria-Based Therapies

News Excerpt:

Once considered experimental and risky, **bacteria-based cancer therapies** are now making headway in medical research. These “**bug drugs**” use genetically engineered or naturally occurring bacteria to **target and destroy cancer cells**, and they are showing promising results in **clinical and pre-clinical trials**.



How It Works: Using Bacteria as Cancer Fighters

- Tumor Homing Capability
- Some bacteria—like *Clostridium* and *Salmonella*—naturally thrive in **hypoxic (low-oxygen) environments**, such as the **core of solid tumors**.
- These bacteria can selectively **colonize tumors** without affecting healthy tissue, making them ideal carriers for **cancer-targeted treatment**.
- Direct Tumor Killing
- Certain strains can produce **toxins** or enzymes that **kill cancer cells**, cause **cell rupture**, or trigger **immune-mediated destruction**.

- Some bacteria have been **engineered to release drugs** directly inside tumors, minimizing side effects on healthy cells.

Immune System Activation

- Bacteria inside tumors can act as a **natural adjuvant**, prompting the immune system to recognize the tumor as a threat.
- This can enhance the effectiveness of **immunotherapy**, making it more precise and durable.

Real-World Use Cases and Trials

Bladder Cancer (BCG Therapy)

- Bacillus Calmette–Guérin (BCG)** is a live attenuated bacterium used for **non-muscle-invasive bladder cancer**.
- It remains one of the most successful examples of **bacteria-based immunotherapy**, used clinically for decades.

Ongoing Research

- Engineered bacteria like *Clostridium novyi-NT* are being tested in **animal models and early human trials**.
- These bacteria are altered to **remove virulence** while retaining the ability to **penetrate and destroy tumor tissue**.

Challenges and Safety Concerns

Infection Risk

- The use of live bacteria raises concerns about **unintended infections**, especially in immunocompromised patients.
- Genetic engineering is used to make bacteria **non-pathogenic** while preserving their therapeutic function.

Regulation and Control

- Fine-tuning bacterial behavior—like **when and how much toxin they produce**—is essential to avoid overreaction or damage to healthy tissues.
- Scientists are working on **"kill switches"** to safely deactivate bacteria post-treatment.

Regulatory Approval

- The **novelty** of this therapy means it must pass through rigorous **clinical trials and regulatory scrutiny**, delaying widespread use.

The Road Ahead

- The field of **microbial oncology** is entering a new era. While still in its early stages, bacteria-based therapies offer a **unique dual advantage**: direct tumor-killing and immune system activation.
- If current **clinical trials** continue to show positive results, we may soon see **mainstream adoption** of these **"bug drugs"** alongside **chemotherapy, radiation, and immunotherapy**.

Type 5 Diabetes

News Excerpt:

Type 5 Diabetes, a form of diabetes primarily affecting **lean and malnourished young adults in low- and middle-income countries**, has now been officially recognized by the **International Diabetes Federation (IDF)**. Despite its presence for decades, it was frequently misdiagnosed and overlooked in research. The recent acknowledgment marks a pivotal moment in understanding diabetes beyond **Type 1 and Type 2 classifications**.

What is Type 5 Diabetes?

- A **malnutrition-related diabetes** where **pancreatic beta cells** function abnormally, leading to **insufficient insulin production**.
- Distinct from **Type 2 diabetes**, where the body does not properly respond to insulin despite continuous production.

Historical Background

- First reported in **Jamaica (1955)** as **J-type diabetes**.
- Recognized by the **World Health Organization (WHO)** in **1985** as **"malnutrition-related diabetes mellitus."**
- Declassified in **1999** due to insufficient evidence linking malnutrition directly to diabetes.
- Official recognition in **April 2025** at the **75th World Congress for Diabetes in Bangkok**.

Causes of Type 5 Diabetes

Root Cause: Malnutrition

- Begins **in the womb** due to inadequate maternal nutrition.
- Malnutrition impacts **pancreatic development**, reducing insulin function.
- Long-term undernourishment** during childhood and adulthood increases disease risk.

Key Markers and Symptoms

- Low Body Mass Index (BMI)**: Affected individuals have **BMI lower than 18.5 kg/m²**.
- Insulin Deficiency**: **Lower secretion** than in Type 2 diabetes, slightly above Type 1 levels.
- Body Composition**: **Significantly lower body fat percentage** than Type 2 diabetics.
- Nutritional Deficiencies**: **Low protein, fiber, and essential micronutrient intake**.

Current Prevalence

- Reported in **India, Sri Lanka, Bangladesh, Uganda, Ethiopia, Rwanda, and Korea**.
- Estimated to affect **25 million people globally**.

Treatment Approaches

Since **diagnostic criteria and therapeutic guidelines** are still being developed, the current recommended approach includes:

- **High-Protein Diet:** Supports insulin production and recovery.
- **Adequate Carbohydrates and Fats:** Helps maintain healthy weight and energy levels.
- **Nutritional Interventions:** Ensures **early maternal nutrition** for prevention.

Significance of Recognition

- Improves **accurate diagnosis**, preventing misclassification with **Type 1 or Type 2 diabetes**.
- Enables **focused research and treatment development** for malnourished populations.
- Supports **global healthcare policies** targeting malnutrition-induced diseases.

Conclusion

The recognition of **Type 5 Diabetes** as a distinct disease marks a **critical step in diabetes research**, focusing on **low-income populations where malnutrition persists**. The next phase involves **finalizing diagnostic protocols and treatment guidelines** to ensure effective care for affected individuals.

FireSat: Google-Backed Satellite to Detect Wildfires

News Excerpt:

The **FireSat project**, backed by **Google** and launched via **SpaceX's Transporter-13 mission** on **March 14, 2025**, aims to **track and mitigate wildfires using AI-powered satellites**. This initiative promises to provide **real-time wildfire detection** to help disaster management authorities contain fires before they grow out of control.



Key Features of FireSat

- **Satellite Constellation:**
 - Plans to deploy **50 satellites** in **Low Earth Orbit (LEO)**.
 - First **three satellites** will become operational by **next year**.
- **Advanced Fire Detection Technology:**
 - Equipped with **six-band multispectral infrared cameras**.
 - Can detect **wildfires as small as 5×5 meters (size of a classroom)**.

- Provides **high-resolution images every 20 minutes**.
- **AI Integration:**
 - Uses **Artificial Intelligence (AI)** to track fire **scope, intensity, and spread patterns**.
 - Improves **disaster response efficiency**.

Why Is FireSat Significant?

- **Climate Change Impact:**
 - Rising temperatures are **worsening droughts** and causing **more frequent, intense wildfires**.
 - Example: In **California (2025)**, wildfires killed **29 people** and caused **\$250 billion in economic losses**.
- **Limitations of Existing Methods:**
 - Current **satellite imaging** lacks **resolution and real-time updates**.
 - **Aerial photography** is costly and cannot provide **frequent observations**.
- **Real-Time Monitoring:**
 - FireSat aims to **fill this gap** with **higher-resolution images and frequent updates**.

Who Is Behind FireSat?

- Developed by **Muon Space**, a **California-based aerospace startup**.
- Funded by **Google.org** (\$13 million) and **Moore Foundation**.
- Collaboration with **Google Research**, **Earth Fire Alliance**, and **wildfire experts**.

Future Impact

- **Better Emergency Response:** Firefighters can **detect wildfires early** and prevent **large-scale destruction**.
- **Potential Expansion:** Could lead to **global adoption** of AI-assisted wildfire monitoring.

Conclusion

FireSat is a **game-changer for wildfire mitigation**, combining **AI, satellite imaging, and real-time data** to address growing **climate-related fire risks**.

Transgenic Research

News Excerpt:

Transgenic research involves modifying the **genetic makeup of an organism** by inserting foreign DNA—typically from another species—into its genome. These organisms are known as **transgenic organisms** or **Genetically Modified Organisms (GMOs)**. This technology is used to understand **gene function**, create **disease models**, and develop **improved agricultural or medical products**.

Techniques Used in Transgenic Research

Microinjection

- A common technique where **foreign DNA is directly injected** into the nucleus of a fertilized egg.

- Widely used in creating **transgenic mice** for biomedical research.

Viral Vectors

- Modified viruses are used as **carriers to deliver genetic material** into host cells.
- Particularly effective in gene therapy and creating genetically modified animals.

Electroporation

- Cells are briefly exposed to **electric pulses**, making their membranes more permeable.
- This allows DNA to **enter the cells more easily**, commonly used in lab-based genetic studies.

Applications of Transgenic Technology

In Medicine:

- Disease Models:** Transgenic animals (especially mice) are used to **study human diseases** like cancer, Alzheimer's, and diabetes.
- Gene Therapy:** Offers hope for treating **genetic disorders** by inserting functional genes into patients' cells.

In Agriculture:

- Used to create **insect-resistant, drought-tolerant, or nutrient-enriched crops**.
- Examples include **Bt cotton**, which is resistant to pests, and **Golden Rice**, enriched with Vitamin A.

In Pharma: Genetically modified animals and plants are being used to produce pharmaceutical proteins, vaccines, and antibodies.

Ethical and Safety Concerns

Environmental Impact:

- Fear of **gene transfer** from transgenic crops to wild species.
- Risk of creating **superweeds** or unbalancing ecosystems.

Animal Welfare:

- Modifying animals for research raises concerns about **pain, suffering, and long-term effects**.

Regulation and Oversight:

- Transgenic research is subject to **strict regulatory frameworks** to ensure safety, transparency, and ethical practices.
- In India, the **Genetic Engineering Appraisal Committee (GEAC)** is the key regulatory body.

Conclusion

- Transgenic research holds vast potential across **biomedicine, agriculture, and industrial biotechnology**.
- However, it must be pursued with **ethical responsibility, scientific rigor, and public transparency** to balance innovation with safety and societal acceptance.

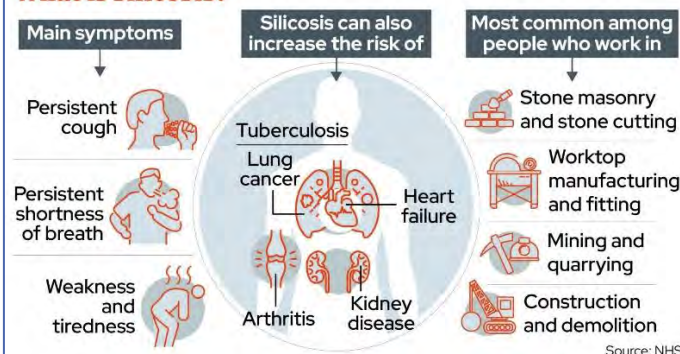
AI-powered test can detect silicosis

News Excerpt:

Researchers have developed an **AI-powered test** capable of detecting **silicosis**, a severe lung disease affecting **mine workers**, within minutes. This innovative diagnostic tool aims to facilitate **early detection** and **treatment**, potentially improving health outcomes for affected individuals.

Key Highlights:

What is silicosis?



- Silicosis Overview:** A **progressive lung disease** caused by inhaling **silica dust**, commonly affecting workers in mining, construction, and industries involving stone cutting.
- AI-Powered Detection:** The newly developed test utilizes **artificial intelligence algorithms** to analyze **chest X-rays**, swiftly identifying signs of silicosis with **high accuracy**.
- Rapid Results:** Unlike traditional diagnostic methods that may take days, this AI-driven test delivers results in **minutes**, enabling prompt medical intervention.
- Accessibility:** Designed to be **cost-effective** and **user-friendly**, the test can be deployed in **remote areas**, benefiting workers with limited access to advanced healthcare facilities.
- Impact on Occupational Health:** Early detection through this test can lead to **better management** of the disease, potentially reducing **mortality rates** and improving the **quality of life** for affected workers.

This advancement underscores the transformative potential of **artificial intelligence** in enhancing **occupational health** and **safety standards** in high-risk industries.

Breakthrough in Radioactive Detection

News Excerpt:

Scientists have developed a **laser-based technology** capable of detecting **radioactive materials** from a distance of up to **10 meters**. The technique uses a **short-pulse carbon dioxide (CO₂) laser**, marking a significant leap in the field of **remote sensing** for **nuclear safety** and **defense applications**.

How It Works

- The system emits **ultrashort laser pulses** — specifically **70-picosecond pulses** at a wavelength of **9.2 microns**.
- These pulses generate **microplasmas** (tiny, high-energy regions of ionized gas) at the laser's focal point.
- When **radioactive particles** (especially **alpha particles**) are present, they enhance the **seed electron density**, making it easier for the laser to initiate and detect microplasmas.

Enhanced Detection and Sensitivity

- The **backscattered signals** from the microplasmas are **amplified** as they travel back through the laser system.
- This results in a **100-fold increase in sensitivity**, allowing even **low-level radioactive sources** (like a 3.6 mCi alpha emitter) to be detected **accurately and quickly**.

Scalability and Future Potential

- The current system uses an **f/200 focal geometry**, but it can be scaled to detect radiation from **over 100 meters away**.
- This opens the door to applications in **border security**, **nuclear disaster response**, **environmental monitoring**, and **non-intrusive inspections**.

Broader Impact

- Unlike conventional methods that require **close proximity** or **physical contact**, this approach is:
 - **Non-invasive**
 - **Safe for personnel**
 - **Rapid and reliable**
- It enhances the ability to **identify hidden or shielded radioactive materials** from a **safe distance**, crucial during **emergencies** or **military operations**.

DNA Polymorphisms

News Excerpt:

DNA polymorphisms are **variations in the DNA sequence** that occur among individuals within a population. These variations must be **present in at least 1%** of the population to be considered a polymorphism. They are a key source of **genetic diversity** in humans.

Types of Polymorphisms

- **Single Nucleotide Polymorphisms (SNPs):**
 - Most common type.
 - A change in a **single DNA base pair** (e.g., A replaced by G).
- **Insertions/Deletions (Indels):** **Addition or removal** of small segments of DNA.
- **Microsatellites (STRs):**
 - Repeated sequences of 2–6 base pairs.
 - Highly variable among individuals.

How They Differentiate People

- **Individual Identification:**

- Polymorphisms create a **unique genetic profile** for each person.
- Useful in **forensics and paternity testing**.
- **Disease Susceptibility:** Certain polymorphisms are linked to **genetic disorders** or **increased risk** for diseases like cancer or heart conditions.
- **Drug Metabolism:** Some variations affect how individuals **respond to medications** (basis for **personalized medicine**).

Applications in Science and Medicine

- **Genetic Mapping:** Helps locate genes associated with traits or diseases.
- **Forensic Science:** STR analysis is crucial for **criminal investigations**.
- **Evolutionary Biology:** Polymorphisms track **ancestry and migration patterns**.
- **Medical Research:** Critical in developing **targeted therapies**.

A Historic Private Polar Space Mission

On **April 1, 2025**, **SpaceX** launched the **Fram2 mission**, a **fully private, crewed orbital mission** that made history by achieving the **first human-crewed polar orbit of Earth**. The spacecraft, **Crew Dragon Resilience**, lifted off from **NASA's Kennedy Space Center** and entered a **retrograde polar orbit** — a rare trajectory that passes over both the **North and South Poles**.

The Fram2 Crew

The mission was led and funded by **private individuals**, representing a major milestone in **commercial spaceflight**:

- **Chun Wang** (Mission Commander) — a **Maltese crypto entrepreneur**, who envisioned and financed the mission.
- **Jannicke Mikkelsen** (Capsule Commander) — a **Norwegian filmmaker**, responsible for in-flight operations.
- **Rabea Rogge** (Pilot) — a **German robotics researcher**, who became the **first German woman in space**.
- **Eric Philips** (Medical Officer) — an **Australian polar explorer**, in charge of crew health and environmental research.

Scientific and Technological Goals

- The mission was not just symbolic — it was packed with **scientific objectives**:
 - Conducted **22 experiments** on **human physiology in microgravity**.



- Performed the **first human X-rays in space**.
- Tested **blood flow restriction technology**, to maintain **muscle and bone health** in zero-gravity.
- The polar orbit also provided **rare imagery of Antarctica and the Arctic**, contributing to **climate science** and **Earth observation research**.

Unique Orbital Achievement

- The **polar orbit** (inclination of 90.01°) is unusual for human missions, which typically follow equatorial or inclined orbits.
- This allowed the Fram2 crew to **observe both polar regions**, which are crucial for understanding **climate dynamics** and **Earth's magnetosphere**.
- It was also the **first retrograde human orbital mission** in decades.

Successful Return

- After completing several orbits and three days in space, the crew safely **splashed down in the Pacific Ocean** near **Oceanside, California**, on **April 4, 2025**.
- This marked the **first Pacific splashdown** for a Crew Dragon mission — all previous returns were in the **Atlantic Ocean** or **Gulf of Mexico**.

Broader Implications

- The Fram2 mission is a major leap forward in **privately-funded space exploration**.
- It shows how **non-government astronauts** can conduct **serious science** and venture into **less-traveled orbits**.
- It also demonstrates the **growing accessibility of space**, with future missions potentially exploring even **more ambitious orbits and experiments**.

ESA's Biomass Satellite Mission

News Excerpt:

The **European Space Agency (ESA)** is set to **launch the Biomass satellite**, aboard a **Vega C rocket**. The satellite will be deployed from **Europe's spaceport in French Guiana** into a **Sun-synchronous orbit (SSO)** at an altitude of **666 km**. The SSO ensures the satellite passes over the same part of Earth at the same local time, helping collect **consistent data under uniform lighting conditions**.

What is the Biomass Mission?

Part of ESA's Earth Explorer Programme

- Biomass is the **seventh mission** under ESA's **Earth Explorer Programme**, focused on innovative Earth observation science.
- Its main goal is to **monitor Earth's forests globally** to measure **biomass**—which refers to the **total mass of living trees above the ground**.
- By doing so, the mission will help **quantify the amount of carbon stored in forests** and track how it changes over time.

Why Forest Biomass Matters

Forests: Nature's Carbon Sink

- Forests **absorb around 16 billion metric tonnes of CO₂ each year** and **store about 861 gigatonnes of carbon** in their trunks, branches, and leaves.
- They play a **critical role in stabilizing the Earth's climate** by acting as natural carbon reservoirs.

Current Gaps in Global Data

- Despite their importance, current **global data on forest biomass and structure is limited**.
- This lack of reliable measurements makes it hard to:
 - Assess the **true scale of forest loss**.
 - Track how much **carbon is being released or absorbed**.
 - Monitor **climate policy effectiveness** and **carbon offset claims**.

Scientific Goals and Applications

Tracking Forest Loss and Climate Change

- In **2023 alone**, the world lost **3.7 million hectares of tropical forest**, contributing an estimated **6% of global CO₂ emissions**.
- Biomass will help **identify where and how forests are changing**—especially in tropical areas where degradation is harder to track.
- Its data can aid in:
 - **Predicting future carbon emissions**.
 - **Assessing national carbon budgets**.
 - **Designing better reforestation policies** and **carbon credit systems**.

The Technology Behind Biomass

P-band Radar Innovation

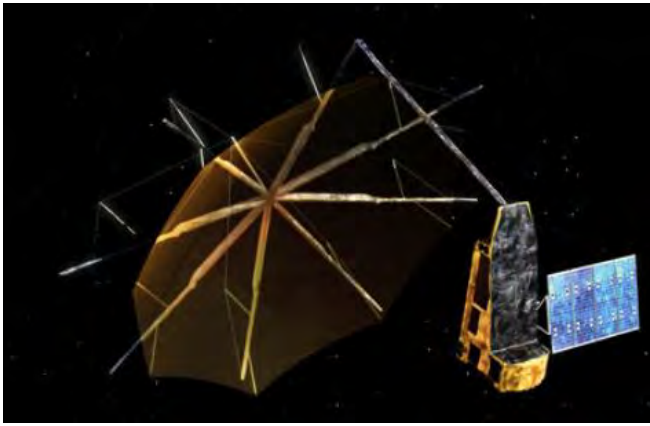
- Biomass is the **first satellite to use P-band Synthetic Aperture Radar (SAR)**—a radar frequency low enough to **penetrate thick forest canopies**.
- This allows the satellite to measure **tree height, structure, and density**, even in the densest rainforests.

12-Metre Deployable Antenna

- The satellite is equipped with a **massive 12-meter radar antenna**, which unfolds in space and enables **high-resolution mapping** across large areas.
- The system will capture data over **forests in Africa, South America, Asia**, and other regions where accurate monitoring is most needed.

Global Impact and Future Outlook

- Biomass will operate for **at least five years**, gathering vital information for:
 - **Climate change modelling**.
 - **International forest agreements**.
 - **Monitoring deforestation and illegal logging**.



- ESA also plans to **combine this data with AI-powered analysis tools**, expanding its use in climate research and policymaking.

Final Thoughts

The **Biomass mission marks a major step forward** in global environmental monitoring. By improving our understanding of how much carbon is stored in forests—and how fast it's changing—ESA is arming scientists and policymakers with the tools they need to combat **deforestation** and **climate change** more effectively.

India's First High-Altitude Climate Research Station in Jammu & Kashmir

News Excerpt:

India has inaugurated its first high-altitude atmospheric and climate research station in **Nathatop, Udhampur district, Jammu & Kashmir**.

This pioneering facility, situated at 2,250 meters above sea level, marks a significant leap in India's ability to study and forecast climate dynamics in the northwestern Himalayas—a region critical for India's weather, water security, and climate resilience.

Purpose and Unique Focus

While scientists understand the general processes of cloud formation and precipitation, a crucial aspect—**how ice crystals form in clouds and impact rainfall**—remains poorly understood. The new station is designed to bridge this knowledge gap by focusing on the study of **ice nucleating particles (INPs)**, which are rare and difficult to detect.

INPs act as the seeds for ice crystals in clouds, influencing whether clouds produce rain, snow, or hail, and how quickly precipitation occurs.

Why Nathatop/Udhampur?

- **High Altitude & Clean Air:** At 2,250 meters, the site offers pristine atmospheric conditions with minimal pollution, ideal for studying natural cloud and aerosol interactions without interference from ground-level contaminants.
- **Strategic Location:** The Himalayas are a global climate hotspot and a key driver of the Indian monsoon. The

region's unique weather patterns and sensitivity to climate change make it a prime location for advanced atmospheric research.

International Collaboration: Project ICE-CRUNCH

The centre's inaugural research project, **ICE-CRUNCH (Ice nucleating particles and Cloud Condensation Nuclei properties in the North-Western Himalayas)**, is a joint effort between **Indian scientists and ETH Zurich, Switzerland**. This project aims to:

- Measure and analyze the composition and concentration of INPs and **cloud condensation nuclei (CCN)**.
- Understand how these microscopic particles affect cloud formation, growth, and precipitation.
- Improve regional weather prediction models and climate forecasts by providing high-resolution, real-time data.

Scientific and Societal Significance

- **Enhanced Weather Forecasting:** By understanding INPs and CCN, scientists can refine cloud models, leading to more accurate predictions of rainfall, snowfall, and extreme weather events.
- **Water Security:** Improved precipitation models support better management of Himalayan-fed river basins, crucial for millions in northern India.
- **Climate Policy and Resilience:** The data will inform national and international climate policy, especially for mountain ecosystems facing rapid change.
- **Capacity Building:** The centre will train young scientists, build climate modeling expertise, and serve as a hub for atmospheric science education in India.

Integration with Global Climate Monitoring

The centre is expected to join the **World Meteorological Organization's Global Atmospheric Watch (GAW) Programme**, contributing standardized, high-quality atmospheric data to the global scientific community. Its remote, undisturbed location fulfills a key requirement for GAW stations, offering pristine measurements of greenhouse gases, aerosols, and other climate variables.

Future Implications

- **Long-Term Monitoring:** The station will enable continuous, real-time observation of weather and environmental parameters, including aerosol-cloud interactions, air pollution, and changes in precipitation and hydrological cycles.
- **Leadership in Climate Science:** The facility positions India as a leader in Himalayan and global climate research, with the potential to significantly advance understanding of cloud microphysics and climate dynamics in high-altitude environments.

Conclusion

The Himalayan High Altitude Atmospheric and Climate Research Centre in Nathatop, Udhampur, is a landmark in India's scientific infrastructure. By unlocking the secrets of cloud formation and precipitation in the Himalayas, it

promises to transform weather prediction, climate resilience, and environmental policy—not just for India, but for the world

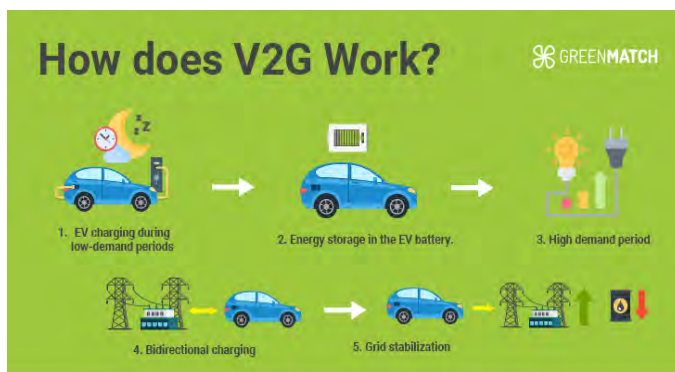
Vehicle-to-Grid (V2G) Technology and Its Potential in India's Power Sector

News Excerpt:

Vehicle-to-Grid (V2G) technology enables **Electric Vehicles (EVs)** to act as **decentralized battery storage**, sending power back to the grid when needed. The **Kerala State Electricity Board (KSEB)** and **IIT Bombay** have initiated a **pilot project** to assess the feasibility of integrating V2G across **Kerala**, marking an important step in India's sustainable energy transition.

Understanding V2G Technology

- **How V2G Works:**
 - **Bi-directional charging** allows EVs to **receive and send electricity** to the grid.
 - **Idle EVs** connected to **V2G-compatible chargers** can provide **grid support** during peak demand hours.
 - Facilitates integration of **Renewable Energy (RE)** sources.
- **Modes of Power Transfer:**
 - **G2V (Grid to Vehicle):** Transfers electricity from the grid to charge an EV.
 - **V2G (Vehicle to Grid):** EV supplies excess power back to the grid.
 - **Other Variants:**
 - **V2H (Vehicle to Home):** EV powers home appliances.
 - **V2V (Vehicle to Vehicle):** Transfers energy between EVs.



Global V2G Adoption

- **Europe & U.S.** have implemented successful **pilot projects**.
- EV owners in **UK & Netherlands** are **compensated** for supplying energy to the grid.
- **California** promotes V2G to **stabilize grids** and support **emergency backup power** during disasters.

Current Status in India

- **Limited V2G Integration:**
 - **Few DISCOMs** exploring **smart charging** and V2G pilots.
 - **Central Electricity Authority (CEA)** drafting guidelines for **reverse charging**.
- **Challenges:**
 - **Electricity market structure** differs from Europe/U.S.
 - **Variable RE generation** causes **supply-demand mismatches**.
 - **Regulatory changes** needed for large-scale implementation.

KSEB-IIT Bombay Pilot Project

- **Objective:** Assess EVs' ability to **support Kerala's power grid** during peak demand.
- **Key Focus Areas:**
 - Reduce impact of EV charging on peak demand.
 - Integrate **rooftop solar** with EV charging.
 - Improve **grid stability**.

Potential Applications & Adoption

- **Grid Stability Improvement:**
 - Smart charging can **reduce peak demand pressure**.
 - EVs can **supply electricity** back during **high demand periods**.
- **Renewable Energy Storage:**
 - Charging EVs **during high solar generation** ensures **clean energy usage**.
 - Excess solar power can be **stored in EV batteries** for night-time supply.
- **Economic Incentives for EV Owners:**
 - Attractive **compensation models** encourage participation.
 - Time-of-Use (ToU) tariffs **adjust electricity costs** dynamically.

Conclusion:

V2G has **immense potential** to **strengthen India's power sector**, **optimize RE integration**, and **reduce grid instability**. However, **policy reforms**, **grid infrastructure upgrades**, and **financial incentives** are necessary for **widespread adoption**.

Why the Genome India Project (GIP) Matters

News Excerpt:

The **Genome India Project (GIP)** is a ground breaking initiative aimed at mapping the **genetic diversity** of India's population. With **10,000 individuals from 83 distinct population groups** already cataloged, this effort has vast implications for **personalized medicine**, **diagnostics**, **disease prevention**, and **evolutionary research**.

Key Objectives of GIP

- **Advancing Human Health:**

- Helps **predict disease susceptibility** based on genetic traits.

- **99.9% of DNA** is the same in all humans; **0.1%** makes each person unique.

GenomeINDIA
'Cataloguing the Genetic Variation in Indians'

Reference Genome for India
A national genome sequencing project to sequence 10,000 Indians

Disease gene identification
Catalogue all the genetic variations in Indians to help identify disease causing genes

Capacity building & networking
Training manpower to handle large genetic data sets and other resources across institutions in India

Resources for larger & cheaper genetic studies
Resources generated, will help build arrays and technologies for large scale cheaper genetic studies in India.

Genetic basis for adverse affects and response to drugs
This study will help pave the way to understand why some people respond to some drugs & why some develop adverse reaction depending upon their genetic background.

An initiative of Department of Biotechnology, Ministry of Science & Technology, Government of India



- Closed population groups show **less variation**, while mixed populations exhibit **greater genetic diversity**.

Population Evolution Insights

- Genetic sequencing helps **trace ancestry** and **migration patterns**.
- DNA from **fossils and isolated tribes** fills historical gaps in **human evolution**.
- Understanding genetic history aids in resolving **questions of identity and adaptation**.

Future Implications

- **Development of Targeted Therapies:**
 - Helps design **customized treatments** for diseases like **cancer and heart conditions**.
 - Supports **preventive healthcare** through early risk assessments.
- **Policy Recommendations:**
 - Informs **public health strategies** based on population-specific genetic risks.
 - Helps shape **better healthcare infrastructure** in India.

Conclusion

The **Genome India Project** is a **crucial step toward precision medicine, genetic research, and historical insights**. By decoding India's **genetic landscape**, GIP will revolutionize **healthcare, diagnostics, and evolutionary science**, benefiting future generations.

INTERNAL SECURITY

Indo-France Naval Exercise 'Varuna'

News excerpt:

India and France conducted the **Varuna 2025** naval exercise off the coast of Goa from **March 19-22**, deploying aircraft carriers **INS Vikrant** and **Charles de Gaulle**. This exercise marked a milestone in **bilateral naval cooperation**, focusing on **Rafale-M operations and Anti-Submarine Warfare (ASW)**.

Key Elements of the Exercise

- **Aircraft Carrier Operations:**
 - **Rafale-M Fighter Jets:** The Indian Navy observed and operated alongside **French Navy's Rafale-M jets**, which India is set to acquire.
 - **MiG Aircraft Integration:** Indian MiG aircraft participated alongside Rafales, enhancing **interoperability**.
 - **Carrier Strike Group Coordination:** Naval formations and fighter jet operations were synchronized between the two fleets.

- Enables **personalized treatments** rather than generalized medications.
- Improves diagnostics for **rare genetic disorders** found in the Indian population.
- **Understanding Genetic Diversity:**
 - Catalogs **germline sequences**—the genetic blueprint inherited from parents.
 - Studies **how populations adapted** to **climatic and environmental changes**.
 - Reveals the **historical migrations** of different ethnic groups.
- **Enhancing Medical Research:**
 - Aids in **developing population-specific drugs**.
 - Provides insight into **genetic predispositions** for common diseases like **diabetes**.
 - Establishes targeted **health policies and interventions**.

How Genomes Are Studied

- **DNA Sequencing Process:**
 - Determines the **arrangement of nucleotides** (A, T, C, G) in the **3-billion-long DNA sequence**.
 - Identifies **genetic variations** contributing to **unique traits and health risks**.
- **Genetic Variation and Diversity:**

- **Anti-Submarine Warfare (ASW) Training:**
 - A **mock aggressor submarine** was used to test **defensive formations**.
 - **Indian and French frigates** worked together to protect **high-value assets**, refining ASW tactics.
- **Surface Warfare & Logistical Cooperation:**



- Maritime patrol aircraft enhanced **situational awareness**.
- **Replenishment-at-sea** exercises improved logistical coordination.

Strategic Importance

- **Strengthening Indo-Pacific Partnerships:**
 - The **French Carrier Strike Group**, part of **Clémenceau 25 mission**, aims to deepen military ties in the **Indo-Pacific**.
 - France sees India as a critical defense ally for maintaining a **free, open, and stable**
- **Regional Security and Maritime Stability:**
 - France maintains a **strategic presence** in the Indian Ocean through bases in the **UAE and Southern Indian Ocean**.
 - Cooperation reinforces **maritime security amid evolving geopolitical challenges**.

Conclusion

Varuna 2025 has deepened **India-France naval ties**, refining tactics and enhancing regional maritime security. The **collaborative exchange of expertise** between the two navies ensures strategic preparedness for future operations in **complex maritime scenarios**.

Indian Navy's New Maritime Initiatives: IOS Sagar & AIKEYME

Introduction

The Indian Navy has launched two **major maritime initiatives**, **Indian Ocean Ship Sagar (IOS Sagar)** and **Africa India Key Maritime Engagement (AIKEYME)**, to enhance **regional security and cooperation**. These programs align with India's **Security and Growth for All in the Region (SAGAR)** vision and the newly announced **Mutual and Holistic Advancement for Security Across the Regions (MAHASAGAR)** initiative.

IOS Sagar: Strengthening Indian Ocean Partnerships

- **Mission Overview:**

- **INS Sunayna** will deploy to the **Southwest Indian Ocean Region (IOR)** for over a month in **April 2025**.
- It will carry a **multinational crew** including personnel from **India and nine Friendly Foreign Countries (FFCs)**:
 - **Comoros, Kenya, Madagascar, Maldives, Mauritius, Mozambique, Seychelles, Sri Lanka, and South Africa.**
- Conduct **joint surveillance of Exclusive Economic Zones (EEZs)** in **Tanzania, Mozambique, Mauritius, and Seychelles**.
- **Training & Capacity Building:**
 - FFC personnel will undergo a **two-week training capsule** at naval schools in **Kochi**.
 - Training will cover **watchkeeping, whole-ship activities, and trade-related expertise**.
 - Participants will observe **harbour phase activities of Exercise AIKEYME** in **Dar-es-Salaam, Tanzania**.

AIKEYME: Strengthening India-Africa Maritime Ties

- **Strategic Importance:**
 - Focuses on **maritime security cooperation**, including combating **piracy, illegal activities, trafficking, and unregulated fishing**.
 - Encourages **information sharing and joint surveillance** to secure **African coastal waters**.
 - AIKEYME is named after the Sanskrit word for **"Unity"**, symbolizing **India-Africa collaboration**.

Strategic Implications

- **Positioning India as a Key Maritime Partner:**
 - Consolidates the **Indian Navy's role as the "Preferred Security Partner"** and **"First Responder"** in **IOR**.
 - Strengthens India's **defense diplomacy** in the **Indo-Pacific**.
- **Enhancing Regional Security & Stability:**
 - Improves **maritime interoperability and intelligence-sharing**.
 - Establishes frameworks for **tackling transnational security threats**.
- **Deepening Indo-Africa Defense Cooperation:**
 - Reinforces India's **long-term maritime commitments** in **Africa**.
 - Supports the **development of African naval capabilities** through joint exercises.



Conclusion

With **IOS Sagar** and **AIKEYME**, the Indian Navy is taking **proactive steps** toward **maritime security leadership**. These initiatives strengthen **defense cooperation**, bolster **regional security**, and solidify India's role as a **trusted maritime ally** in the Indian Ocean Region.

India Participates in INIOCHOS-25 Multinational Air Exercise in Greece

News excerpt:

The **Indian Air Force (IAF)** has deployed its contingent for **INIOCHOS-25**, a **multinational air exercise** hosted by **Greece's Hellenic Air Force** at **Andravidia Air Base**. The exercise, running from **April 1 to April 11, 2025**, aims to enhance **interoperability, tactical coordination, and international military cooperation**.

Key Details of INIOCHOS-25

Participating Forces:

- **Fifteen countries** will take part, integrating **air and surface assets**.
- Designed to simulate **modern air warfare challenges**.

IAF's Contingent:

- **Su-30 MKI** fighters.
- **IL-78** air refueling aircraft.
- **C-17** transport aircraft.

Exercise Objectives:

- Train in **Combined Air Operations**.
- Refine **combat tactics** in complex scenarios.
- Strengthen **strategic partnerships** and military ties.

Significance for India

- **Enhances combat readiness** and coordination in **joint operations**.
- **Provides valuable insights** into operational **best practices**.
- **Boosts India's global military diplomacy** by reinforcing **international cooperation**.

Conclusion

India's participation in **INIOCHOS-25** showcases its commitment to **military collaboration, skill development, and strengthening strategic alliances**. This exercise reinforces **India's global defense engagements**, ensuring preparedness for evolving air warfare challenges.



DRDO Successfully Tests Directed Energy Weapon (DEW) System

News Excerpt:

On **April 13, 2025**, the **Defence Research and Development Organisation (DRDO)** announced the **successful trial** of the **Mk-II(A) Laser-Directed Energy Weapon (DEW) system**, designed to disable **missiles, drones, and smaller projectiles**. This achievement places India among a **select group of nations** possessing **high-power laser-DEW systems**.

Key Features of the Laser-DEW System

- **Engagement Capability:**
 - **Targets fixed-wing drones at long range.**
 - **Disrupts multiple drone attacks.**
 - **Destroys enemy surveillance sensors and antennae.**
- **Speed & Precision:**
 - Operates at **lightning speed**, engaging threats **within seconds**.
 - **Highly precise targeting**, reducing **collateral damage**.
- **Cost Efficiency:**
 - The firing cost for a **few seconds** is equivalent to just a **few liters of petrol**.
 - Offers a **low-cost alternative** to traditional missile defense systems.



Operational Significance

- **Radar Detection & Engagement:**
 - The DEW system can detect threats using **radar or Electro Optic (EO) sensors**.
 - Once locked on, it **uses intense laser beams** to cause **structural failure or destroy warheads**.
- **Future of Defense Technology:**
 - Reduces dependence on **expensive ammunition**.
 - Offers a **revolutionary shift in modern warfare**.

Testing & Development

- **Trial Location:** Conducted at the **National Open Air Range, Kurnool, Andhra Pradesh**.
- **Development Agency:** Developed by **DRDO's Centre for High Energy Systems and Sciences (CHESS), Hyderabad**, in collaboration with **academic institutions and Indian industries**.

Strategic Importance

- **Countering Emerging Threats:**
 - Addresses the **proliferation of unmanned aerial systems (UAS)**.
 - Provides **counter-drone and counter-swarm capabilities**.
- **Replacement of Traditional Weapons:** DEWs could **replace traditional missile defense systems** due to their **cost-effectiveness and ease of operation**.

Conclusion

DRDO's successful trial of the **Mk-II(A) Laser-DEW system** demonstrates **India's advancements in cutting-edge defense technologies**. As directed energy weapons gain prominence, they promise to **transform warfare, enhance security, and provide cost-efficient defense solutions**.

GEOGRAPHY

The Water Crisis in Morocco

Morocco, like many arid countries, is **grappling with water scarcity**, worsened by **climate change, prolonged droughts, and urban population growth**. Key cities like **Rabat and Casablanca**—home to **over 8 million people combined**—were approaching a **critical shortage** of drinking water in early 2023. Reservoirs supplying these cities had dropped to dangerously low levels, prompting **emergency measures** by the government.

The "Water Highway" Project

- As a **rapid-response solution**, Morocco launched a **major water transfer project**: a **67-kilometre canal** built to move water from the **Sebou River basin** in the **wetter northwest** to the **Bouregreg basin**, which feeds water to Rabat and Casablanca.
- The canal has a **transport capacity of up to 15 cubic meters per second**, allowing a significant redirection of fresh water.
- Construction was completed in **less than a year**, underlining the project's urgency and scale.

Short-Term Relief

- The new water transfer helped **replenish reservoirs** near Casablanca and prevented a **full-blown urban water crisis** in 2023.
- The initiative is credited with **averting rationing** in some regions and **maintaining supply stability** in key economic zones.

Long-Term Sustainability Concerns

- Experts warn** that while the project offers immediate relief, it may not be **sustainable**:
 - Environmental degradation**: Diverting water from the Sebou basin risks harming **agriculture, fisheries, and wetlands** downstream.
 - Climate vulnerability**: As **rainfall becomes less predictable**, relying on **inter-basin water transfers** could become unreliable.
 - Energy costs**: Transporting large volumes of water over long distances involves **high operational and maintenance costs**.

Calls for Alternative Approaches

- Environmentalists are urging Morocco to focus on **diverse, long-term water strategies**, including:
 - Desalination plants** (already under development in coastal cities),
 - Wastewater recycling**, and
 - Water conservation programs** in agriculture and households.

- Public awareness and behavioral change** around water use are also seen as essential for long-term resilience.

Government's Position

- Moroccan officials defend the project as a **necessary emergency response** while working on parallel **sustainable water management plans**.
- The government sees this as part of a **broader national strategy** to future-proof urban water supplies.

Broader Significance

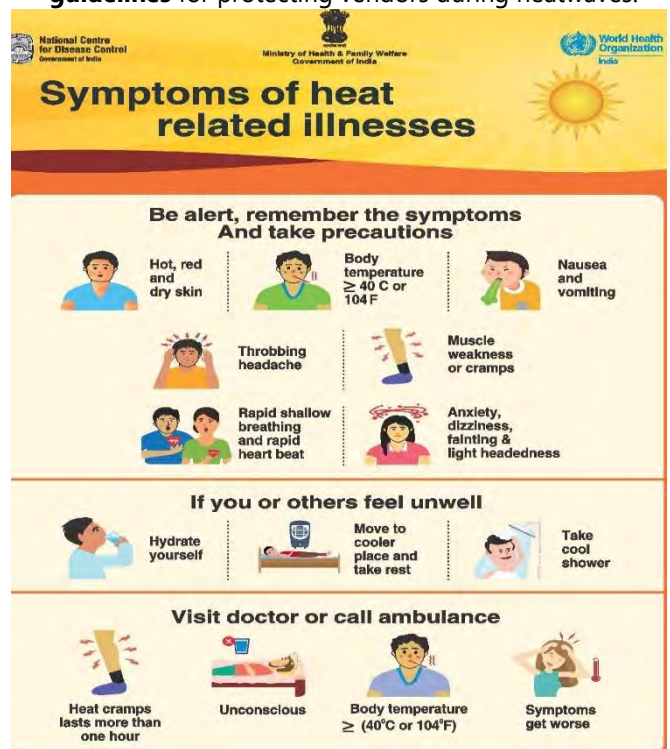
- Morocco's water highway reflects a **growing global trend**: nations under water stress are turning to **large-scale infrastructure projects** to maintain supply.
- However, the project also raises a fundamental question: **can engineering alone solve a climate-driven water crisis**, or must nations also **adapt behaviors and ecosystems**?

Rising Concern Over Heatwaves

India is witnessing an **increasing frequency and severity of heatwaves**, with cities recording record-breaking temperatures. **Street vendors**, who spend long hours in open, unshaded spaces, are among the **most vulnerable groups** affected by extreme heat. These vendors often lack access to **basic facilities like drinking water, shade, or rest areas**, making them susceptible to **heatstroke, dehydration, and exhaustion**.

NHF's Demand for National Guidelines

- The **National Hawkers Federation (NHF)**, which represents over 1.2 crore vendors across India, has **urged the Central Government** to issue **uniform national guidelines** for protecting vendors during heatwaves.



- NHF emphasized that this is not just a health issue but also a **livelihood crisis**, as intense heat reduces customer footfall and hampers earning capacity.

Key Recommendations Proposed by NHF

1. Infrastructure and Support Measures

- Shaded vending zones** or temporary shelters in high-footfall areas.
- Access to free and safe drinking water** at marketplaces and street corners.
- Installation of public misting systems** or cooling stations.

2. Health and Safety Provisions

- Regular **medical check-ups** and awareness drives about **heat-related illnesses**.
- Availability of **first aid kits** at vending clusters.
- Distribution of **protective items** like hats, cloth umbrellas, and sunblock.

3. Work Timing Flexibility

- Guidelines to allow **flexible working hours**, enabling vendors to avoid peak heat hours (12 pm–4 pm).
- Encouragement to **local municipalities** to revise their timing enforcement rules during summer.

Collaboration With Local Authorities

- NHF stressed the need for **collaborative action** between:
 - Central and State governments,
 - Municipal bodies,
 - Public health departments, and
 - Street vendor unions.
- Suggests that **ward-level planning** can help identify heat-prone areas and vendor clusters in need of immediate relief.

Long-Term Urban Resilience Strategy

- NHF recommends integrating **heatwave adaptation measures** into India's **urban planning and disaster risk management frameworks**.
- Street vendors must be considered in **climate action plans**, particularly in the design of **inclusive public spaces**.

Why This Matters

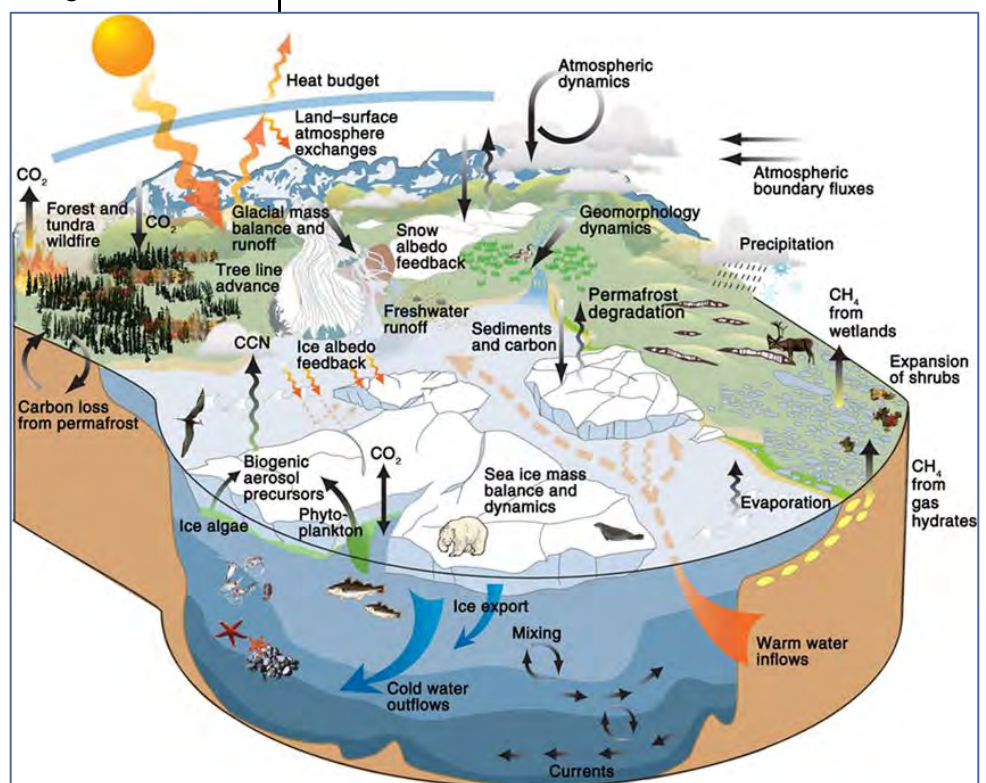
- Street vendors form a critical part of India's **urban informal economy**, providing affordable goods and services to millions.
- Protecting their health and safety during heatwaves is not just a matter of compassion but **essential for maintaining urban economic resilience and social equity**.

The Arctic-Boreal Zone (ABZ)

The **Arctic-Boreal Zone** spans vast areas of **northern forests (boreal)** and **tundra** across countries like **Russia, Canada, Alaska**, and parts of **Scandinavia**. It acts as a **massive carbon sink**, storing **hundreds of billions of tons of carbon** in its **trees, soil, and permafrost** (permanently frozen ground). This zone plays a **critical role in regulating Earth's climate** by absorbing more carbon dioxide than it releases.

Increasing Wildfires in the ABZ

- Recent studies** highlight a worrying trend: **wildfires in the Arctic and boreal regions are increasing** in both **frequency and intensity**, mainly due to **rising global temperatures** and **longer dry seasons**.



- 2023 saw record-breaking fires** in parts of Canada and Siberia, with smoke even reaching the Arctic Circle.

Impact on Carbon Balance

- These wildfires are **releasing massive amounts of CO₂**, reversing the role of the ABZ from a **carbon sink to a carbon source**.
- How?
 - Vegetation burns** and releases stored carbon.
 - Permafrost thaws**, releasing long-trapped **methane and carbon dioxide**.
 - Peatlands**, which store carbon over centuries, become highly flammable and release large carbon stores when burnt.

A Dangerous Feedback Loop

- The **more carbon is released**, the **faster the planet warms**, which in turn makes **wildfires and permafrost thaw** even more likely.

- This sets up a **feedback loop** that could significantly accelerate **global climate change**.

Scientific Monitoring and Research

- Scientists are using **satellite imagery**, **ground sensors**, and **carbon models** to monitor changes in carbon flux in the ABZ.
- The data shows that if **current wildfire trends continue**, the ABZ could **lose its status as a net carbon sink by mid-century**.

The Way Forward

- **Urgent global climate action** is needed to:
 - Reduce greenhouse gas emissions.
 - Monitor and manage **fire-prone zones**.
 - Protect **intact forests and wetlands**.
- There's also a growing call for **international cooperation** to **fund fire prevention and permafrost protection** in Arctic nations.

World's oldest known meteorite impact crater

Scientists have recently identified the **world's oldest known meteorite impact crater** in Western Australia's **Pilbara region**, dating back approximately **3.47 billion years**. This discovery surpasses the previous record-holder, the **Yarrabubba impact structure**, by over a billion years.

Key Highlights:

- **Discovery Location:** The crater is situated near **Marble Bar** in the **Pilbara Craton**, an area renowned for some of Earth's oldest rocks.
- **Age and Size:** Estimated to be **3.47 billion years old**, the original impact structure is believed to have been over **100 kilometers in diameter**.
- **Evidence of Impact:** The presence of **shatter cones**—distinctive cone-shaped rock formations—provided definitive proof of the meteorite impact.

Geological Significance:

- **Pilbara Craton:** This region contains crustal rocks up to **3.8 billion years old**, offering a unique window into Earth's early geological history.
- **Impact Structures:** Prior to this discovery, the **Yarrabubba impact structure**, dated at **2.229 billion years**, was considered the oldest known. **Implications of the Discovery:**
- **Insights into Early Earth:** This finding provides valuable information about the frequency and scale of meteorite impacts during Earth's formative years.
- **Origins of Life:** Such ancient impacts may have played a role in creating environments conducive to the emergence of life.

Kazakhstan Discovers One of the World's Largest Rare Earth Reserves

Introduction

Kazakhstan has announced the discovery of a **major rare earth elements (REE) deposit** in **Karagandy**, potentially making it the **third-largest reserve in the world**. The site, dubbed "**New Kazakhstan**," is estimated to hold **20 million tonnes** of rare earth elements, though further exploration is required.

Key Highlights of the Discovery

- **Rare Earth Elements Identified:**
 - **Cerium, Lanthanum, Neodymium, Yttrium**—critical components for:
 - Smartphones
 - Digital cameras
 - Computer hard disks
- **Estimated Reserves:**
 - **935,400 tonnes** confirmed across **four prospective areas**.
 - Potential to **reach 20 million tonnes** at a depth of **300 meters**, with an average REE content of **700 grams per tonne**.
- **Strategic Announcement:**
 - Kazakhstan revealed its findings ahead of the **EU-Central Asia Summit in Uzbekistan**, highlighting its role in global **critical raw material supply**.
 - The EU announced a **2025–2026 Roadmap** for enhanced **geological exploration and research** cooperation with Kazakhstan.



Location of Karaganda Region in Kazakhstan, shown in red.

Challenges & Next Steps

- **Exploratory Work Needed:** Experts caution that **hydrogeology, geomechanics, and feasibility assessments** must be conducted before the site can be classified as a full-fledged deposit.
- **Long-Term Development:**
 - Could take **six years** to prepare for full extraction, with an estimated **\$10 million investment**.
 - Mining operations may take **10–12 years** before ore extraction begins.

Foreign Partnerships:

- Kazakhstan lacks **deep processing technologies** and will likely seek **China and the EU** as strategic partners.
- **China** dominates rare earth consumption and production (e.g., batteries, solar panels).
- **The EU** prioritizes **green technology and sustainable energy resources** but faces **logistical challenges**.

Development Strategies:

- Kazakhstan's **national mining company Tau-Ken Samruk** may take the lead.
- Government considering either an **auction or a local company** for further development.

Global Implications

- **Rare earths are essential for modern technology**, making Kazakhstan's discovery **strategically significant for Europe's supply chain security**.
- The find **strengthens Kazakhstan's role in global mineral markets**, potentially reducing reliance on **China's rare earth monopoly**.

Conclusion

Kazakhstan's rare earth discovery positions it as a **major global player** in critical mineral supply. However, **extensive research, foreign investment, and logistical improvements** are necessary before full-scale mining can begin. The next decade will determine how Kazakhstan capitalizes on this **strategic natural resource**.

Government Pushes for Saline Aquaculture Hubs in Northern India

Introduction

The **Union Department of Fisheries (DoF)** is spearheading an initiative to establish **saline aquaculture hubs** in **Haryana, Punjab, Rajasthan, and Uttar Pradesh**. This effort aims to **convert saline-affected lands into productive aquaculture zones**, boosting **employment, livelihoods, and shrimp exports**.

Key Updates from States

- **Uttar Pradesh:**
 - **1.37 lakh hectares** identified for **saline aquaculture**.
 - Supported by **Pradhan Mantri Matsya Sampada Yojana (PMMSY)**.
- **Rajasthan:**
 - **500 hectares** dedicated to **shrimp farming** in **salt-affected districts like Churu & Ganganagar**.
 - **Diagnostic lab in Churu** established under **PMMSY**.
- **Punjab:**
 - Shrimp farming expanded in **Sri Muktsar Sahib & Fazilka**.
 - **30-tonne cold storage & ice plant**, plus **training center**.
- **Haryana:**

- **13,914 tons of saline aquaculture production** achieved.
- **₹57.09 crore investment** under **PMMSY**.

Challenges Faced by Farmers

- **High setup costs** and **insufficient subsidies**.
- **Restrictive 2-hectare area limit** for saline aquaculture.
- **Fluctuating salinity levels** impacting production.
- **Limited local availability** of high-quality shrimp seed.
- **Absence of proper marketing channels** and **cold storage facilities**.
- **Low market prices** affecting return on investment.

Proposed Strengthening Measures

- **Increase aquaculture unit cost** to **₹25 lakh**.
- **Expand land limit** from **2 hectares to 5 hectares**.
- **Higher subsidies** for **polythene lining** in shrimp farms.
- **Develop Integrated Aqua Park in Sirsa** for better price realization.
- **Enhance awareness campaigns** on **shrimp consumption**.
- **Form National Level Committee** to review shrimp farming guidelines.
- **Strengthen research and regulatory frameworks** for sustainable aquaculture.

Key Concepts in Saline Aquaculture

Concept	Explanation
Saline Aquaculture	Farming of aquatic species in saline-affected lands unsuitable for traditional agriculture.
Pradhan Mantri Matsya Sampada Yojana (PMMSY)	Government scheme to promote fisheries and aquaculture growth.
Krishi Vigyan Kendras (KVKs)	Agricultural research and training centers that support farmer education and outreach.
Brackish Water Shrimp Farming	Cultivation of shrimp in water with salt levels between freshwater and seawater.

Conclusion

With **58,000 hectares of saline land identified**, but only **2,608 hectares utilized**, the government's push for **sustainable saline aquaculture** can **unlock economic potential, boost shrimp exports, and transform wastelands into wealth lands**. Strategic investments and **policy reforms** will be crucial for scaling this initiative.

DISASTER MANAGEMENT

Rethinking Flood Management

News Excerpt:

Traditional methods of flood control—like **levees, dams, and embankments**—have long been used to **confine rivers**

and protect settlements. However, these structures often **disrupt natural ecosystems**, increase flood risk downstream, and **degrade river health** over time.

The "Room for the River" Approach

- A growing number of scientists and planners advocate for a **nature-based solution**: giving rivers **room to move** naturally.
- This approach involves restoring **floodplains, wetlands, and natural river courses** so rivers can expand during high-flow periods without causing damage.

Benefits of This Approach

- **Reduced Flood Risk:**
 - By letting rivers spill into natural buffers like **floodplains**, pressure on **urban areas** is reduced during heavy rains.
- **Ecological Balance:**
 - It supports **biodiversity**, rejuvenates wetlands, and improves **ecosystem services** like water purification and soil fertility.
- **Groundwater Recharge:**
 - Water that spreads naturally over land can **percolate into aquifers**, improving **water availability** in drier seasons.

Global Examples

- **Netherlands' "Room for the River"** program:
 - A successful large-scale initiative where the Dutch government **relocated dykes, created flood channels**, and restored **wetlands** to manage floods more sustainably.
- **India's Potential:**
 - With increasing urbanization and erratic rainfall, Indian cities could benefit from **integrating floodplain zoning, restoration of wetlands, and community-based water management**.

Challenges Ahead

- **Land Use Conflicts:**
 - Floodplain restoration can conflict with **agriculture, real estate, and infrastructure** development.
- **Policy and Implementation:**
 - Requires a **multi-stakeholder approach** involving **governments, local communities, urban planners, and ecologists**.
- **Climate Change Factor:**
 - With more **frequent and intense weather events**, strategies need to be **flexible, resilient, and science-driven**.

Conclusion

- Giving rivers space to breathe is not just about flood prevention—it's about **harmonizing human development with nature**.

- This **ecologically intelligent strategy** enhances resilience to climate impacts and fosters **sustainable coexistence** with river systems.

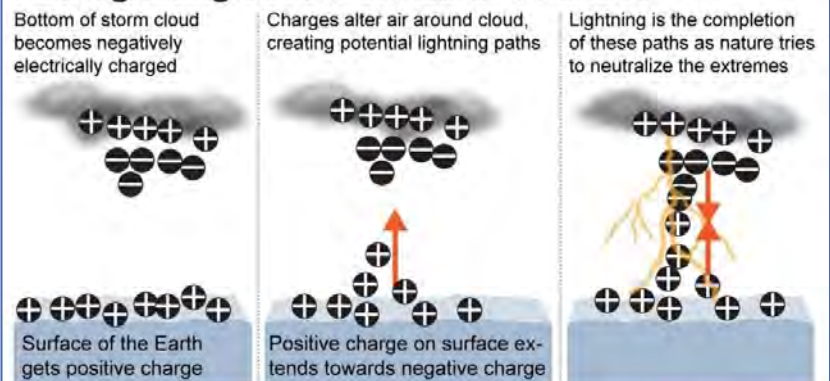
At Least 25 Killed in Lightning Strikes, Hailstorms Across Bihar

News Excerpt:

Severe weather swept through Bihar on April 10, 2025, resulting in at least 25 fatalities due to lightning strikes and hailstorms across several districts.

The worst-hit was **Nalanda, which reported 18 deaths, followed by Siwan (2), and one each in Katihar, Darbhanga, Begusarai, Bhagalpur, and Jehanabad**. The disaster also caused significant infrastructural damage,

How lightning strikes the Earth's surface



Sources: Ariel Cohen, Tina Stall; Meteorologists NOAA National Weather Service @latimesgraphics

particularly in Nalanda.

Rising Death Toll and Official Response

- As data from districts was consolidated, the total death toll from lightning, hailstorms, and rain-related incidents on April 10 climbed to 61, with Nalanda recording the highest number at 23.
- Other affected districts included Bhojpur (6), Siwan, Gaya, Patna, and Sheikhpura (4 each), with additional deaths reported in **Jamui, Jehanabad, Gopalganj, Muzaffarpur, Arwal, Darbhanga, Begusarai, Saharsa, Katihar, Lakhisarai, Nawada, and Bhagalpur**.
- On the previous day, 13 people had died in lightning strikes in four districts of Bihar.

Meteorological Warnings and Weather Conditions

- The India Meteorological Department (IMD) issued an **'orange alert'** for **multiple districts**, including Darbhanga, East Champaran, Nalanda, Patna, and others, forecasting heavy rainfall, thunderstorms, lightning, and gusty winds (40-50 kmph).
- The IMD warned of continued adverse weather, with **heavy to moderate rainfall, hailstorms, and lightning** expected over the next several days.
- Waterlogging and damage to property were reported in Patna and other areas following the downpour.

Impact on Agriculture and Relief Measures

- **The storms caused widespread crop damage**, prompting calls from political leaders and farmers' representatives for the state government to declare the crop loss a "state disaster" and provide adequate compensation.
- **The Bihar government directed officials to urgently assess crop damage** and provide relief to affected farmers, including possible reductions in farm loan interest rates and distribution of relief materials

Measures Taken:

Bihar, facing frequent and deadly lightning strikes and hailstorms, is implementing a range of preventive and mitigation measures.

While it is not possible to prevent these natural phenomena entirely, the state is focused on minimizing casualties and damage through technology, awareness, and infrastructure improvements.

1. Early Warning Systems

- **Lightning Sensors:** The Bihar government, in collaboration with **Earth Networks**, has installed early-warning lightning sensors in seven districts (Khagaria, Nawada, Rohtas, East Champaran, Patna, Darbhanga, and Purnia).
- These sensors can detect **lightning strikes up to 30 minutes** in advance within a 15–20 km radius, enabling timely alerts to vulnerable populations.
- **Mobile Alerts:** The disaster management department regularly sends **mass SMS alerts** to villagers, warning them of impending storms and lightning. For example, on April 10, 2025, 12 crore SMS alerts were sent across the state.
- **Indravajra App:** The state government has launched the *Indravajra* app, which issues alarm tones and messages about 40 minutes before a thunderstorm, helping people take timely precautions.

2. Public Awareness and Education

- **Awareness Campaigns:** Ongoing public awareness programs educate people about lightning risks, safe practices during storms, and the importance of heeding official warnings.
- **Safety Guidelines:** The **National Disaster Management Authority (NDMA)** and local authorities promote safety measures such as **seeking shelter indoors, avoiding open fields**, staying away from trees and metal objects, and not using electrical appliances during storms.

3. Technological Innovation

- **Wearable Lightning Alert Devices:** IIT Patna has developed a wearable locket called **NITISH (Novel Initiative Technological Intervention for Safety of Human Lives)**, which alerts wearers to impending lightning using body heat as a power source. This

device is particularly targeted at rural workers and farmers.

4. Infrastructure and Building Codes

- **Lightning Arresters:** Although not yet mandatory statewide, the installation of lightning arresters on buildings is recognized as an effective measure. In neighboring Jharkhand, building codes require G+2 and above structures to have lightning arresters, and similar measures are under consideration for Bihar.
- **Lightning Protection Systems:** Encouragement of lightning protection systems for public buildings, schools, and community centers is part of the broader disaster management strategy.

Preventive Steps from the Disaster Management Act During and After a Lightning Strike Incident

The Disaster Management Act and associated state guidelines provide a structured approach to minimizing the risks and impacts of lightning strikes. The steps are divided into measures to be taken **during** and **after** a lightning incident.

During a Lightning Strike Incident

- **Issue Warnings:** Authorities send alerts via SMS, radio, and other channels to warn people.
- **Take Shelter:** Move indoors or into a hard-topped vehicle; avoid open fields, tall trees, and metal objects.
- **Avoid Electrical Items:** Do not use corded phones or electrical appliances.
- **Follow Safety Rules:** Stay inside for at least 30 minutes after the last thunder.

After a Lightning Strike Incident

- **Medical Response:** Provide first aid and call emergency services for lightning strike victims.
- **Rescue Operations:** Authorities coordinate rescue and relief, and assess damage.
- **Restore Services:** Check and restore power and other essential services safely.
- **Public Awareness:** Inform the community about safety and support available.
- **Risk Reduction:** Install lightning arrestors and update disaster management plans.

These steps help minimize injuries and damage during and after lightning incidents, as guided by the Disaster Management Act.

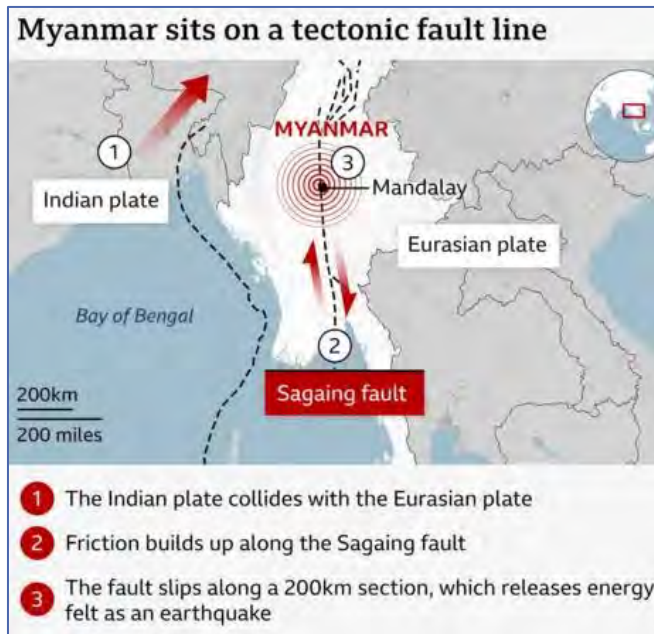
Conclusion:

The severe weather in Bihar underscores the urgent need for advanced warning systems, infrastructure upgrades, and public awareness. Strengthening disaster resilience will help mitigate future risks and protect vulnerable communities effectively.

Myanmar Earthquake

News Excerpt:

On **March 28, 2025**, a **massive earthquake** measuring **7.7 on the moment magnitude scale** struck **central Myanmar**. The **epicenter** was located near the **Sagaing–Mandalay region**, a seismically active area associated with the **Sagaing Fault**, a major tectonic boundary in the region. This was the **strongest earthquake in Myanmar** in over a century — the last comparable quake occurred in **1912**.



Areas Affected

- The most severely affected regions include:
 - Sagaing** – where **about 90% of buildings** were damaged or collapsed.
 - Mandalay** – Myanmar's second-largest city, experienced major structural damage.
 - Naypyidaw** – the capital, where **over 600 deaths** were reported.
 - Surrounding regions like **Bago** and parts of **Shan State** also suffered destruction.
- Tremors were **felt across international borders**, including in:
 - Bangkok, Thailand**, where buildings swayed and mass evacuations were carried out.
 - Parts of **China, Vietnam**, and even **India's Northeast**.

Casualties and Aftershocks

- The death toll has exceeded **1,600** people, with thousands more injured.
- Sagaing city** alone reported around **1,000 fatalities**.
- Over **394 aftershocks** have been recorded since the main event, the strongest being **6.7 magnitude**.
- The continuous aftershocks have delayed **rescue and recovery operations**, and added to public fear.

Emergency Response

- Myanmar's **military junta** declared a **state of emergency** in **six regions**, requesting **international aid**.
- Infrastructure damage and the ongoing **internal conflict** in Myanmar have hindered response efforts.
- The **National Unity Government (NUG)**, a parallel authority, pledged **\$1 million** in humanitarian relief and declared a **two-week ceasefire** to prioritize rescue operations.

Preventive Steps from the Disaster Management Act During and After an Earthquake

The **Disaster Management Act, 2005**, together with guidelines from the **National Disaster Management Authority (NDMA)**, outlines a comprehensive approach for earthquake preparedness, response, and recovery. The measures are categorized into actions during and after an earthquake.

Preventive Steps During an Earthquake

- Immediate Protective Actions:**
 - Drop to the ground, take cover under sturdy furniture, and hold on until the shaking stops.
 - If no furniture is available, protect your head and neck with your arms and crouch in an inside corner of the building.
 - Stay away from glass, windows, outside doors, walls, and objects that could fall.
 - If outdoors, move to an open area away from buildings, trees, streetlights, and utility wires.
 - If in a vehicle, stop safely away from overpasses, bridges, and power lines; remain inside until shaking ends.
- Institutional Response:**
 - District Disaster Management Authorities (DDMAs)** activate emergency response plans, coordinate search and rescue, and ensure resource mobilization.
 - Emergency communication systems are established in affected areas to coordinate rescue and relief.

Preventive Steps After an Earthquake

- Immediate Safety and Assessment:**
 - Check yourself and others for injuries and provide first aid as needed.
 - Inspect buildings for structural damage; evacuate if cracks or instability are detected.
 - Stay alert for aftershocks and avoid re-entering unsafe structures.
- Rescue and Relief Operations:**
 - Authorities conduct search, rescue, and evacuation operations in coordination with local administration and trained personnel.
 - Provide temporary shelters, food, drinking water, medical care, and sanitation facilities for affected populations.
- Debris Removal and Restoration:**
 - Remove debris and clear access routes for emergency services.
 - Construct temporary structures or demolish hazardous ones if necessary.

- **Resource Management and Support:**
 - Mobilize and deploy emergency equipment and trained personnel for continued rescue and relief.
 - Maintain updated resource inventories and ensure the availability of essential supplies.
- **Public Awareness and Communication:**
 - Disseminate information regarding safe practices, aftershock risks, and available assistance through official channels.
 - Regularly update the public on ongoing response and recovery efforts.
- **Monitoring and Documentation:**
 - Document best practices and lessons learned for future preparedness.
 - Conduct vulnerability assessments and update disaster management plans accordingly.

Institutional Mechanisms Under the Disaster Management Act

- The National, State, and District Disaster Management Authorities are responsible for planning, coordinating, and implementing all preventive and responsive measures.
- Regular training, mock drills, and capacity-building initiatives are mandated to ensure readiness.
- Enforcement of building codes and seismic retrofitting of critical infrastructure are prioritized for long-term risk reduction.

Regional Implications

- The quake underscores the region's **seismic vulnerability**, particularly due to the presence of the **Sagaing Fault**, which accommodates movement between the **Indian and Sunda tectonic plates**.
- The disaster has **prompted safety assessments and earthquake preparedness reviews** in neighboring countries like Thailand and China.
- The earthquake has also drawn **global attention** to the need for better **urban planning, early warning systems, and resilient infrastructure** in seismically active regions.

Way forward:

To stay safe in future earthquakes, Myanmar must strengthen early warning systems, enforce quake-resistant building codes, conduct public awareness campaigns, hold regular drills, and improve disaster preparedness. Regional cooperation and community engagement are also vital for resilience and swift response.

Operation Brahma: Indian Army's Assistance to Myanmar Earthquake

News Excerpt:

In response to the **devastating 7.7 magnitude earthquake** that struck **Myanmar on March 28,**

2025, India launched **Operation Brahma**, a **humanitarian relief effort** to provide medical assistance, disaster relief, and support to affected communities. Under this mission, the **Indian Army deployed a specialized medical task force** to aid Myanmar's strained healthcare system.

Key Features of Operation Brahma

1. Deployment of Medical Responders

- **118-member team** from the **Shatrueet Brigade Medical Responders**, led by **Lieutenant Colonel Jagneet Gill**.
- The **Airborne Angels Task Force**, equipped to deliver **advanced medical and surgical care**, will operate in **disaster-affected zones**.

2. Establishment of Medical Treatment Centre

- A **60-bed Medical Treatment Centre** will be set up to provide:
 - **Immediate care** for trauma victims.
 - **Emergency surgeries** for critically injured individuals.
 - **Essential medical services** to support Myanmar's overwhelmed health infrastructure.

3. Humanitarian Aid & Disaster Relief (HADR)

- Essential **medical equipment and supplies** have been airlifted to Myanmar.
- The relief effort is coordinated between the **Indian Ministry of External Affairs** and Myanmar's local authorities.

Operation Name	Year	Context	Key Actions
Operation Brahma	2025	7.7 magnitude earthquake in Myanmar & Thailand	India delivered humanitarian aid (food, medicine, tents), deployed search & rescue teams , set up a field hospital in Mandalay , and dispatched naval and air assets .
Operation Ajay	2023	Israel-Hamas conflict	Evacuated Indians from Israel & Palestine , ensuring safe passage amid military escalations.
Operation Kaveri	2023	Sudan conflict between rival factions	Used IAF aircraft & naval ships to rescue over 3,800 stranded Indians from Sudan.
Operation Ganga	2022	Russia-Ukraine war	90 flights, 14 Air Force aircraft were mobilized to evacuate thousands of stranded Indians .
Operation Devi Shakti	2021	Taliban's takeover of Afghanistan	Brought back Indian citizens and Afghan partners , ensuring their safety amid political instability.
Vande Bharat Mission & Operation Samudra Setu	2020	COVID-19 pandemic	Mass evacuation of stranded Indians worldwide using air & naval transport .
Operation Raahat	2015	Yemen conflict	Rescued 4,500 Indians and 900 foreign nationals amid Saudi-led intervention in Yemen.
Operation Maitri	2015	Nepal earthquake (8.8 magnitude)	Provided disaster relief , evacuations, and assistance to Nepal, aiding over 2,200 individuals .
Operation Safe Homecoming	2011	Libya crisis	Air and sea-based evacuation of 15,000 Indians from Libya.
Operation Sukoon	2006	Lebanon war (Israel-Hezbollah conflict)	Evacuated 2,280 individuals including Indians, Sri Lankans, and Nepalese nationals from Lebanon.

Strategic Significance

1. India as a First Responder

- India's prompt action reflects its commitment to **regional stability and disaster assistance**.
- Strengthens India's **Neighbourhood First policy**, ensuring **timely support to partner nations**.

2. Upholding Vasudhaiva Kutumbakam

- Embodies India's philosophy that "**The world is one family**", highlighting its humanitarian values.

3. Military-Civilian Coordination

- Demonstrates the **Indian Army's capability** in rapid disaster response and medical crisis management.

Conclusion

Operation Brahma showcases **India's leadership in humanitarian assistance**, reinforcing its role as a **trusted regional partner** in times of crisis. The deployment of **trained medical professionals, advanced surgical units, and logistical support** underlines India's **commitment to protecting lives and strengthening bilateral ties** with Myanmar.

ART & CULTURE

Revival of Traditional Art Forms

News Excerpt:

The **Chief Minister of Tripura, Manik Saha**, inaugurated the Jatra Utsav at the **Vivekananda Sardha-Satabarshiki Bhavan** in **Dharmanagar**, North Tripura. The festival is a part of the state government's initiative to preserve and promote **Tripura's traditional cultural forms**, particularly **Jatrapala**, a popular Bengali folk theatre.

Key Highlights of the Jatra Utsav:

Promoting Traditional Folk Theatre: Jatrapala

- The Jatra Utsav is dedicated to **Jatrapala**, a form of **traditional Bengali folk theatre** that has been a significant cultural expression in Bengal and its neighboring regions, including Tripura. The performances combine **dramatic storytelling, music, and dance**, often staged in open-air settings, and are known for their vibrant performances and narrative style.
- Jatrapala** holds historical and cultural importance, often depicting stories from mythology, history, and social life. The festival aims to rejuvenate interest in this traditional art form, which is slowly losing popularity due to the rise of modern entertainment mediums like cinema and television.



Government's Commitment to Cultural Preservation

- Chief Minister Saha** highlighted the government's resolve to **revive and preserve** other traditional art forms such as **Putul Khela** (doll play), **Natak** (drama), and other folk traditions, which are integral to Tripura's cultural identity.
- He noted that these art forms are **endangered** due to technological advancements, globalization, and changing lifestyles. As modern entertainment options dominate, older, culturally significant performances are in danger of being forgotten, and the government aims to bridge this gap through initiatives like the Jatra Utsav.

Infrastructural Development and Cultural Integration

- As part of the event, **CM Saha** also **inaugurated and laid the foundation** for **45 development projects** in the region. These projects are part of the broader plan to not only promote cultural preservation but also enhance overall infrastructure and development in the state.
- This includes the development of local amenities and public spaces that can host such cultural events, as well as efforts to create **platforms for local artists** to showcase their work and reach wider audiences. The government believes that **cultural preservation and state development** go hand-in-hand, offering both growth and identity to the region.

Putul Khela meaning "**Doll Play**" in Bengali, refers to the **traditional art of puppetry** in Bengal, primarily in **West Bengal and Bangladesh**. It is a form of **folk theatre** where handcrafted puppets are used to tell stories, entertain, and often educate rural audiences.



Key Features of Putul Khela

- Puppets:** Made from wood, cloth, clay, or papier-mâché. Often brightly painted with exaggerated features.
- Types of Puppets:**
 - String (Suto) Puppets**
 - Glove (Haat) Puppets**
 - Rod (Danda) Puppets** – unique to Bengal.
- Themes:**
 - Epics** like the *Ramayana* and *Mahabharata*
 - Local legends, devotional tales, and even **social messages**
- Music & Narration:** Stories are narrated through **songs, dialogues, and rhythmic beats**, often using **dhol, ektara, and khol** drums.

Cultural and Social Role

- **Village Entertainment:** Traditionally performed in open-air village gatherings, fairs, and festivals.
- **Educational Tool:** Used to spread **awareness** on health, hygiene, or social reforms.
- **Cultural Heritage:** Reflects the **folk wisdom and artistry** of Bengal.

Status Today

- **Declining Popularity:** Modern entertainment has pushed Putul Khela to the margins.
- **Revival Efforts:** NGOs, theatre groups, and cultural organisations are **working to preserve and revive** this heritage form.

Conclusion

- The **Jatra Utsav** serves as an important reminder of the state's commitment to reviving and nurturing traditional cultural expressions that have shaped the identity of Tripura.
- By bringing back forms like **Jatrapala** and **Putul Khela**, the government not only provides a stage for artists but also reconnects the community with their cultural roots.
- Additionally, by incorporating **modern development projects** into these initiatives, the government is ensuring that the region remains progressive while still honoring its traditions.
- The scheme reflects the importance of balancing **modernization with cultural continuity**, offering a model for integrating tradition and development in a rapidly changing world.

Reviving Vikramshila University: Bihar's Next Ancient Center of Learning

News Excerpt:

Following the successful revival of **Nalanda University**, work has begun to restore **Vikramshila University** in **Antichak village, Bhagalpur**, another ancient seat of learning in Bihar. This project aims to reconnect with India's rich educational heritage and bolster tourism and academic prominence.



Historical Significance of Vikramshila University

- **Foundation:**
 - Established during the **Pala Dynasty** (late 8th to early 9th century AD) by **King Dharmapala**.

- Flourished alongside Nalanda University during the Pala Period (8th-12th century).

- **Specialized Studies:**

- Known for teaching **Tantrayana Buddhism**, incorporating **tantric practices and occult sciences**.
- Subjects like **theology, philosophy, grammar, metaphysics, and logic** were integral to its curriculum.
- Produced eminent scholars like **Atisa Dipankara**, a key figure in establishing Buddhism in Tibet.

- **Decline:**

- Prosperity lasted for about four centuries before fading in the 13th century due to:
 - The **rise of Hinduism** and decline of Buddhism.
 - **Bakhtiyar Khalji's invasion**, which devastated many academic centers, including Vikramshila.

Current Restoration Efforts

- **Site Preservation:**

- The **Archaeological Survey of India (ASI)** has been developing the site since **December 2024**.
- Excavations have exposed features like a **cruciform brick stupa** (the site's centerpiece), student cells, and remains of a vast library.
- Conservation involves maintaining the **original form of excavated structures**.

- **Modern Advancements:**

- **Cooling systems** in the ancient library have been uncovered, highlighting advanced practices for manuscript preservation.
- A **museum at the site** showcases antiquities, including carvings of Buddha's life and sculptures of Hindu and Buddhist deities.

Establishing a New University

- **Land Acquisition:** **202.14 acres** have been identified for the new university, funded by the **Central Government with ₹500 crore** and **₹87.99 crore** from the Bihar Government for land acquisition.
- **Infrastructure Development:**
 - **NH-80** connecting Vikramshila to Bhagalpur (50 km away) is under construction and repair.
 - The project envisions a collaboration between the new **Nalanda and Vikramshila universities**, similar to their ancient partnership.

Cultural and Academic Importance

Tourism Potential:

- Conservation of Vikramshila aims to **attract tourists**, enhancing visibility of Bihar's historical heritage.
- The **museum and preserved ruins** serve as cultural landmarks showcasing India's ancient knowledge systems.

Educational Revival:

- Reviving Vikramshila alongside Nalanda reinforces Bihar's status as a **global center for higher education and cultural diplomacy**.

- Promotes **tantric and Buddhist studies**, allowing India to rediscover historical academic contributions.

Conclusion

The restoration of Vikramshila University is a step toward reclaiming India's glorious academic past. Once complete, the university will serve as a bridge between **ancient traditions** and modern academic aspirations, fostering cultural preservation and global recognition.

Revival of Ganjifa Art in Sawantwadi

News Excerpt:

Ganjifa, a centuries-old art form of hand-painted playing cards, is experiencing a cultural renaissance in Sawantwadi, Maharashtra. With royal patronage and the dedication of local artisans, this intricate tradition is being preserved, modernised, and adapted to the 21st century.

Historical Background

- **Origin:** The term "Ganjifa" is derived from the Persian word *ganji*, meaning treasure or money.
- **Introduction to India:** Brought by the Mughals in the 16th century, Ganjifa was popularised under emperors like Akbar and Shah Jahan.
- **Form:** Unlike modern rectangular playing cards, Ganjifa cards are **circular**, serving as miniature canvases adorned with mythological and cultural themes.



The Sawantwadi Legacy

- **Royal Patronage:** The art form flourished in Sawantwadi under King Khem Sawant III in the late 16th–early 17th centuries.
- **Revival:** The tradition was revived in 1971 by the royal family, and today continues under the stewardship of Yuvrani Shraddha Lakham Sawant Bhonsle.

Artisan Involvement

- About **12 artisans** are currently involved, many from generational artisan families.
- The process is highly labor-intensive:
 1. Border creation
 2. Colour filling
 3. Detailing of figures

4. Lacquer application

- A full set takes **over 1.5 months** to complete.

Government Recognition

- In **January 2024**, Ganjifa received a **Geographical Indication (GI) tag**, offering cultural and economic validation to the craft.

Challenges

- **Artisan Retention:** Lack of patience and low remuneration deter new artists.
- **Economic Viability:** Despite each set being handmade, a full set costs only ₹14,000—often deemed expensive by uninformed buyers.
- **Lack of Government Support:** Artisans and promoters alike call for stronger institutional backing.

Way Forward

- **Awareness campaigns** to educate the public on the cultural value of Ganjifa.
- **Skill development programs** to train and retain young artisans.
- **Integration with fashion and tech** to attract modern consumers.
- **Government support** for infrastructure, promotion, and fair pricing.

Conclusion

The Ganjifa art revival in Sawantwadi exemplifies how cultural heritage can thrive through innovation, passion, and responsible stewardship. As India strides toward modernity, traditions like Ganjifa must be preserved not just as relics of the past, but as living legacies reimaged for future generations.

Bhagavad Gita & Natyashastra Inscribed on UNESCO's Memory of the World Register

News Excerpt:

On **April 17, 2025**, the **Shrimad Bhagavad Gita** and **Bharat Muni's Natyashastra** were inscribed on the **UNESCO Memory of the World Register**, acknowledging their global significance as part of the world's documentary heritage.

About the Register

- The **Memory of the World Register** was launched by UNESCO in 1992.
- Its goal is to **preserve and promote valuable archival holdings and library collections** worldwide.
- In the latest update, **74 new entries** from **72 countries** and **four international organizations** were added.
- This brings the total to **570 inscribed collections** globally.

Significance of the Inscriptions

1. Shrimad Bhagavad Gita

- A 700-verse Hindu scripture, part of the Indian epic **Mahabharata**.

- Philosophical dialogue between **Lord Krishna and Arjuna**, focusing on **dharma (duty)**, **karma (action)**, and **moksha (liberation)**.
- A spiritual and ethical guide that has influenced global thinkers and leaders.

2. Natyashastra

- An ancient Sanskrit treatise attributed to **Bharata Muni**.
- Regarded as the **foundational text on Indian performing arts**, covering **theatre, dance, and music**.
- Outlines key concepts like **rasa (aesthetic flavor)** and **bhava (emotion)**.

Official Reactions

- **Prime Minister Narendra Modi** hailed the recognition as "a proud moment for every Indian."

"The Gita and Natyashastra have nurtured civilisation and consciousness for centuries," he said.

- **Union Culture Minister Gajendra Singh Shekhawat** called it a "historic moment" and emphasized that these texts are:

"Philosophical and aesthetic foundations that shaped Bharat's worldview."

India on the Memory of the World Register

- With these additions, **India now has 14 entries** on UNESCO's Memory of the World Register.
- This continues the country's effort to gain international recognition for its **civilisational heritage and knowledge systems**.

Conclusion

The inclusion of the **Bhagavad Gita and Natyashastra** in the **UNESCO Memory of the World Register** reinforces their global relevance. These ancient texts represent the **intellectual and artistic heights** of Indian civilisation and continue to inspire across cultures and centuries.

Cuttack's GI-tagged Tarakasi art form

What is Tarakasi?

- **Tarakasi** is a 500-year-old **silver filigree art** from **Cuttack, Odisha**, known for intricate designs using molten silver wires.
- Used especially during **Durga Puja** to decorate crowns and ornaments (like **chandi medhas**) for the goddess.



The Present Struggle

- Despite receiving a **GI tag in 2023**, the **promised support hasn't materialized**.
- **Imitations** from outside Odisha (like Kolkata) are hurting sales due to being cheaper, albeit of lower quality.
- **Prices** range from ₹700 to ₹12,000 based on intricacy.

The Artisans' Reality

- Many artisans, like **Raghunath Patra** and **Jayant Sahu**, say **earnings are seasonal** and dropping.
- **Workshops** are cramped with poor ventilation and lighting.
- The **younger generation** is leaving for urban jobs — many **families who once had 25 artisans now have just a few**.

Health Concerns

- Repetitive, posture-heavy tasks cause **musculoskeletal issues**.
- 95% of artisans report physical pain, per a 2023 study.

Adapting for the Future

- Artisans are now designing **modern, minimalist jewellery** (cocktail rings, hairpins).
- **Social media** is becoming a platform for visibility and sales.
- They seek **government incentives, subsidized silver**, and **dedicated artisan hubs** for training and revival.

Way Forward:

To ensure Tarakasi's preservation, provide **government subsidies on silver**, establish **artisan hubs with modern facilities**, and promote the craft globally through **social media** and **e-commerce platforms**. Encourage youth participation via **training programs** and financial support.

Ugadi: A Festival of Renewal, Reflection & the Arts

News Excerpt:

Ugadi, also known as **Yugadi**, marks the **New Year** in many parts of India, especially in the southern states. Celebrated at the **onset of spring**, it is deeply rooted in ancient scriptures and is a **symbol of change, cultural expression, and inner reflection**.



Spiritual & Cultural Significance

- Ugadi is more than a ritual—it's a **celebration of nature's cyclical transitions**.
- Rooted in ancient texts, it is both a **vrata** (spiritual vow) and an **utsava** (festive gathering).
- Celebrations honor **Surya (Sun)** and **Bhumi (Earth)** through **pujas, feasting, music, and dance**.
- Nature is seen not merely as a resource but as a **divine manifestation** in Indian thought.

Types of Ugadi

There are two forms of Ugadi:

- Souramana Yugadi** – Solar calendar based, aligned with the 27 nakshatras.
- Chandramana Yugadi** – Lunar calendar based, aligned with the moon's phases.

Together, these calendars help track time, festivals, and astrological events accurately.

Rituals & Traditions

- Bevu-Bella** (neem and jaggery) is consumed, often with **raw mango**:
 - Neem** (bitter) and **jaggery** (sweet) signify **life's dualities** — sorrow and joy.
 - Raw mango adds a **pungent tang**, enriching both taste and meaning.
- Sahabhajana** (community feasting), cultural performances, games, and **Panchanga Shrivana** (almanac reading) are integral parts.
- In Karnataka, **Hosa-Tadaku** (post-Ugadi celebration) involves **non-vegetarian feasts** for those who choose.

Ugadi & the Fine Arts

- Historically, Ugadi was part of **Vasanthotsava**, India's grand spring festival lasting **up to three months**.
- It served as a **platform for performing arts**, with:
 - Poets, musicians, and dancers presenting new works**
 - Royal patronage and public participation**
 - Temples with Vasanta-mantapas** and **okali-hondas** (stone tubs for Holi-like celebrations)
- References found in:
 - Ramayana, Mahabharata**
 - Kamasutra, Lalitavistara, Ratnavali**

Deeper Meaning of Bevu-Bella

- Symbolizes the **balance of life** — joy, sorrow, and resilience.
- Encourages a **calm and cheerful mind** to navigate uncertainties.
- Blends **Ayurvedic wisdom** with **spiritual symbolism**.

Conclusion:

Ugadi is a vibrant reflection of India's **seasonal rhythms, philosophical depth, and artistic heritage**. It invites inner renewal, social bonding, and a celebration of life in all its flavors.

Theyyam: Dancing with Fire and Spirits in North Kerala

News Excerpt:

Theyyam is a centuries-old ritualistic performance art from North Kerala, blending dance, music, myth, and devotion. It is especially renowned for its dramatic fire rituals, such as Thee Chamundi (Ottakolam) Theyyam, where performers repeatedly enter or leap into burning embers, captivating audiences with both spectacle and spiritual intensity.



Key Features of Theyyam

- Ritualistic Dance:** Theyyam performances are held in temples and sacred groves between October and June. Each theyyam represents deities, ancestral spirits, or legendary heroes, brought to life through elaborate costumes, face painting, and ornate headgear.
- Fire Rituals:** In Thee Chamundi Theyyam, the performer, often clad in coconut fronds, leaps into a pyre or burning embers multiple times—sometimes as many as 101 times—symbolizing mythic tales of divine endurance and protection. These acts are believed to bestow blessings and ward off evil.
- Community and Devotion:** The ritual is deeply rooted in local faith. While the atmosphere is festive, with crowds, food, and music, there is reverence for the transformation of the performer into a living deity. Devotees seek blessings, make offerings, and participate in communal feasts.
- Social and Cultural Significance:** Theyyam is performed mainly by members of specific communities, often from marginalized castes, reflecting both spiritual equality and the preservation of ancient traditions. The rituals are seen as living links to Kerala's tribal and folk heritage.

Human and Mystical Dimensions

- Physical and Mental Endurance:** Fire theyyams demand extreme stamina and spiritual discipline from performers,

who undergo rigorous preparation to withstand the ordeal of fire.

- **Inclusivity and Change:** While the ritual remains sacred, there are ongoing discussions about safety and the participation of children, highlighting evolving attitudes within the community.
- **Festive Spirit:** Despite the intensity of the performances, the events are marked by hospitality, communal meals, and a welcoming atmosphere, reflecting the warmth and openness of North Kerala's people.

Theyyam thus stands as a vibrant testament to Kerala's living traditions—where myth, devotion, and human resilience converge in a spectacle of fire, music, and spirit.

Way Forward:

To preserve Theyyam, ensure **government support**, set up **training centers**, and improve **performance infrastructure**. Promote global reach through **digital platforms** while fostering **community participation**. Encourage interfaith dialogue and sustain cultural tourism without disrupting its spiritual essence.

GOVERNMENT SCHEMES

M-CADWM approved

News Excerpt:

The Union Cabinet, chaired by Prime Minister Narendra Modi, has approved a new scheme called **Modernization of Command Area Development and Water Management (M-CADWM)**, which falls under the broader framework of the **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)**. This scheme is aimed at improving irrigation infrastructure and water management systems, benefiting farmers by enhancing water efficiency and increasing agricultural productivity.

Objectives of the Scheme

- **Improving Irrigation Efficiency:** The main objective of the M-CADWM scheme is to **modernize irrigation networks** and increase water-use efficiency. This is essential as India continues to face challenges like water scarcity and inefficient water management systems.
- **Micro-Irrigation Systems:** The scheme will emphasize the development of **micro-irrigation** systems, including drip irrigation and sprinklers. These systems are efficient, use water more effectively, and reduce wastage, which is crucial for areas that face water shortages.

Key Features of the Scheme

Micro-Irrigation Infrastructure Development

- The scheme will focus on creating a **robust micro-irrigation infrastructure**, facilitating better access to water for agricultural fields. The government plans to install underground, pressurized piped irrigation systems that will draw water from existing water sources and deliver it directly to farm gates. Each system will serve up to 1 hectare per farmer.

Technological Integration for Water Management

- The M-CADWM scheme will incorporate **Supervisory Control and Data Acquisition (SCADA)** systems and **Internet of Things (IoT)** technologies to improve the management of water resources. These technologies will enable real-time monitoring of water use and ensure that water is allocated efficiently, minimizing wastage.
- **SCADA** will help monitor water distribution and **IoT devices** will collect data for better analysis of water usage patterns, helping farmers manage irrigation schedules more effectively.

Farmer Participation and Pilot Projects

- Around **80,000 farmers** will be involved in **78 pilot projects** across different agro-climatic zones in India. These projects will serve as **demonstration models** for scaling up the initiative, showcasing the potential of modern irrigation systems and water management techniques.
- These pilot projects are designed to test and refine the technologies, systems, and methodologies before they are expanded to other areas of the country.

Sustainable Management and Community Involvement

- After the implementation of the irrigation systems, the assets will be handed over to **Water User Societies (WUS)** for management. These societies will be tasked with ensuring the sustainability and proper functioning of the irrigation systems.
- To further support the initiative, these societies will be linked with **Farmer Producer Organizations (FPOs)** and **Primary Agricultural Cooperative Societies (PACS)** for additional economic and technical support over a period of five years. This will help maintain the systems and allow for greater cooperation among local agricultural bodies.

Attracting Youth to Farming

- The government hopes to attract more **young people** into farming by promoting the use of **modern irrigation techniques** and technologies. By demonstrating that agriculture can benefit from innovation, the scheme aims to make farming more attractive to younger generations and help them stay in rural areas, combating the trend of urban migration.

Key Concept Definitions

Term	Explanation
Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)	A national scheme aimed at enhancing irrigation efficiency and promoting water conservation .
Water Use Efficiency (WUE)	The optimal utilization of available water to maximize agricultural productivity .
SCADA System	A technology used in industrial automation for monitoring and controlling water distribution networks remotely.

Irrigation Management Transfer (IMT)

A process where **farmers and local organizations** take charge of irrigation systems for **better efficiency and accountability**.

Expected Benefits and Outcomes

- **Increased Agricultural Productivity:** The modernization of irrigation systems is expected to enhance agricultural yields by ensuring that crops receive the right amount of water at the right time.
- **Better Water Use Efficiency:** By implementing micro-irrigation systems and advanced technologies like SCADA and IoT, the scheme will help optimize water usage, ensuring that water resources are used efficiently, particularly in water-scarce areas.
- **Boost to Farmer Incomes:** The initiative is expected to improve farmers' income by enhancing their productivity through modern, sustainable irrigation practices. Increased yields and reduced water wastage can lead to better crop performance and, consequently, higher profits for farmers.

Command Area Development and Water Management (CAD&WM) Programme

Originally launched in **1974-75**, the programme was comprehensively revamped in **2004** and renamed as the **Command Area Development and Water Management (CAD&WM)** programme. Since **2015-16**, it has been implemented as a key component of the **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)** under the sub-scheme **Har Khet Ko Pani**.

Objective:

The primary aim of the CAD&WM programme is to **maximize the effective utilization of irrigation infrastructure**. By doing so, it seeks to enhance **agricultural productivity**, ensure **judicious use of water**, and promote the **sustainability of farming systems** across the country.

Key Components:**1. Structural Interventions**

- Implementation of **On-Farm Development (OFD)** works to optimize water distribution up to the field level.
- Construction of **field drains, intermediate drains, and link drains** to improve surface drainage and prevent waterlogging.

2. Non-Structural Interventions

- Provision of a **one-time functional grant** to registered **Water Users' Associations (WUAs)** to empower participatory irrigation management.
- Organization of **training programmes, demonstrations, and adaptive research trials** to build capacity and promote **water use efficiency** at the grassroots level.
- **Sustainability:** By involving local water user societies in the management of the irrigation systems, the government aims to ensure that the infrastructure

remains well-maintained and functional in the long term. This focus on sustainability will ensure that the benefits of the scheme extend for many years.

Conclusion

- The **M-CADWM scheme** is an important step toward improving water management and irrigation systems across the country.
- By focusing on modern infrastructure, technological integration, and community participation, the scheme aims to tackle the challenges of **inefficient irrigation and water scarcity**.
- It is expected to enhance agricultural productivity, improve water use efficiency, and increase farmer incomes, all while promoting sustainable farming practices.
- The scheme's success could also set the stage for the **future expansion of modern irrigation techniques** across the country, benefiting millions of farmers and contributing to India's agricultural growth.

NAKSHA**News Excerpt:**

In February 2025, the **Union Ministry of Rural Development** launched a new initiative named **NAKSHA (National Geospatial Knowledge-based Survey of Urban Habitations)**, aimed at giving a modern technological boost to urban land record management. This initiative is a significant advancement under the broader umbrella of the **Digital India Land Records Modernisation Programme (DILRMP)**.

The **DILRMP** was originally launched in August 2008 as the **National Land Records Modernisation Programme (NLRMP)**. In 2016, it was renamed and integrated under the **Digital India** campaign to provide fresh momentum to digital land governance.

Benefits of Naksha

- Accurate and online land records will be available
- Improving urban land management
- Advanced urban land administration and disaster management
- Transparent and faster land-related processes

The programme was created by merging two earlier schemes: **Computerisation of Land Records (CLR)** and **Strengthening of Revenue Administration and Updating of Land Records (SRA & ULR)**.

NAKSHA is a geospatial technology-driven initiative designed to create, update, and digitize land ownership records in **urban areas**. Its primary goal is to enhance **transparency, accuracy, and efficiency** in property documentation and urban planning.

The **Ministry of Rural Development** is the nodal ministry for this scheme, with implementation being carried out by the **Department of Land Resources (DoLR)**, the **Survey of India**, and **National Informatics Centre Services Inc. (NICSI)**.

The main objectives of the **NAKSHA** scheme include:

- The **modernization of urban land records** to ensure precise and regularly updated digital ownership data,
- **Improved urban planning** to facilitate smart city development and infrastructure expansion.
- To **reduce land-related disputes** by ensuring clear and verifiable documentation, increase **transparency and accessibility** through a Web-GIS-based IT system,
- Promote **sustainable urban governance** through better land resource management.

The scheme has been launched as a **pilot project** in **152 Urban Local Bodies (ULBs)** across **26 States and 3 Union Territories (UTs)**. The selected towns meet specific criteria: they must have an area of less than **35 square kilometers** and a population of less than **2 lakhs**.

As per the 2011 Census, India has 7,933 towns covering around **1.02 lakh square kilometers**, out of which **4,142.63 square kilometers** will be surveyed in the pilot phase of NAKSHA.

The **duration of the pilot phase** is expected to be one year, with an **estimated project cost of ₹194 crore**, entirely funded by the Government of India. The scheme incorporates **drone-based aerial surveys** for high-precision spatial mapping and the development of an **end-to-end digital land record management system** hosted on a **Web-GIS platform**. With its **citizen-centric approach**, the scheme is expected to significantly improve ease of living by enabling public access to accurate and transparent land ownership records.

Vibrant Villages Programme-II (VVP-II)

News Excerpt:

The Union Cabinet has approved the **Vibrant Villages Programme-II (VVP-II)**, covering fiscal years **2024-25 to 2028-29**, with an allocation of **₹6,839 crore**. Building on **VVP-I**, which focused on the **northern frontier**, VVP-II shifts attention to border villages along India's **international land borders (ILBs)**. This initiative aligns with the vision of **Viksit**

Bharat@2047, emphasizing **secure, self-sufficient, and prosperous borders**.

Why Border Populations Are Strategic Assets

- **Local Knowledge:**
 - Border communities possess critical knowledge about **local conditions and cross-border activities**, bolstering **defense and surveillance efforts**.
 - Their informal networks provide actionable intelligence on potential security risks.
- **Early Warning Systems:**
 - Nomads and shepherds act as **first responders**, identifying border transgressions early.
 - Historic examples like **Tashi Namgyal's vigilance during the Kargil War** exemplify their contribution to national security.
- **Logistical Support:**
 - Border villages offer **food, shelter, and labor** to patrol forces navigating difficult terrains.
 - These communities act as logistical anchors for **effective border management**.
- **Territorial Claims:** Settled populations strengthen **territorial integrity** in disputed areas. For instance, **Article 7 of the 2005 India-China Agreement** emphasizes their importance in reinforcing territorial claims.

Key Features of Vibrant Villages Programme-II Central Sector Scheme

- Fully funded by the **Central Government**, unlike **VVP-I**, which was a **Centrally Sponsored Scheme**.

Ministry of Information and Broadcasting
Government of India

CABINET APPROVES VIBRANT VILLAGES PROGRAMME-II

- Total outlay: ₹6,839 crore
- Project duration: FY 2024-25 to 2028-29
- To be implemented in select strategic villages Arunachal Pradesh, Assam, Bihar, Gujarat, J&K, Ladakh, Manipur, Meghalaya, Mizoram, Nagaland, Punjab, Rajasthan, Sikkim, Tripura, Uttarakhand, Uttar Pradesh & West Bengal

- Focuses on strategic villages across **17 states/UTs**, excluding northern border blocks covered under **VVP-I**.

Objectives

- Improve **living conditions** and provide **livelihood opportunities** in border villages.
- Control **trans-border crimes** and integrate local populations into national security frameworks.
- Develop communities to act as the "**eyes and ears**" for border management agencies.

Core Components

- **Infrastructure Development:**
 - Investments in **housing, sanitation, drinking water, and SMART classrooms**.
 - **All-weather road connectivity** through the **Pradhan Mantri Gram Sadak Yojana (PMGSY-IV)**.
- **Value Chain & Livelihood Development:** Support for **Self-Help Groups (SHGs)**, cooperatives, and local outreach initiatives to create sustainable livelihoods.
- **Welfare Scheme Convergence:** Ensure full implementation of **existing welfare programs** for individual and household benefits.
- **Cultural & Tourism Promotion:**
 - Promote **local heritage** through fairs, festivals, and awareness camps.
 - Enhance **tourism potential** in border villages through organized activities and infrastructure development.
- **Technology Integration:** Utilize **PM Gati Shakti** for smooth project execution and leveraging data-driven governance mechanisms.

Coverage and Implementation

- Focuses on villages in **Arunachal Pradesh, Assam, Bihar, Gujarat, J&K (UT), Ladakh (UT), Manipur, Meghalaya, Mizoram, Nagaland, Punjab, Rajasthan, Sikkim, Tripura, Uttarakhand, Uttar Pradesh, and West Bengal**.
- High-powered committees chaired by the **Cabinet Secretary** will oversee relaxations in guidelines for efficient implementation.

Impact of VVP-II

- **Safe and Vibrant Borders:** Strengthens border security and empowers local populations to integrate into the national framework.
- **Improved Living Standards:** Enhances **education, connectivity, and infrastructure** in remote areas.
- **Boost to Tourism and Culture:** Promotes **local culture and heritage**, transforming villages into **self-reliant hubs**.
- **Economic Integration:** Creates sustainable livelihoods, reducing dependency on traditional practices.

Conclusion

The **Vibrant Villages Programme-II** marks a transformative step toward securing India's borders and empowering its border populations. With a focus on **safety, sustainability, and self-reliance**, VVP-II reflects India's long-term vision for **inclusive development and national security**.

Niveshak Didi Initiative Phase 2

News Excerpt:

The **Investor Education and Protection Fund Authority (IEPFA)**, under the **Ministry of Corporate Affairs**, and **India Post Payments Bank (IPPB)**, operating under the **Department of Posts**, have launched Phase 2 of the **Niveshak Didi Initiative**. This collaboration focuses on empowering women and promoting **financial literacy** in rural and underserved areas, building on the success of Phase 1.

Key Features of Niveshak Didi Initiative

- **Women-Led Financial Literacy:**
 - The initiative trains **women postal workers and community leaders** to act as financial educators.
 - In Phase 2, **40,000 women postal workers** will conduct financial literacy camps.
- **Coverage and Reach:**
 - Phase 1 impacted over **55,000 beneficiaries**, with **60% being women** from economically active age groups, mostly in rural locations.
 - Phase 2 aims to reach more grassroots populations by organizing **4,000 camps across India**.
- **Core Focus Areas:**
 - **Responsible Investing:** Promoting disciplined and informed financial decisions.
 - **Fraud Awareness:** Educating individuals on identifying and avoiding financial frauds.
 - **Savings Habits:** Encouraging better saving practices and financial planning.
 - **Digital Banking Tools:** Introducing people to paperless, cashless banking solutions.

Role of IEPFA and IPPB

- **Investor Education and Protection Fund Authority (IEPFA):**
 - A statutory body promoting financial literacy and protecting investor rights.
 - Focuses on empowering individuals, particularly in rural areas, to manage personal finances confidently.
- **India Post Payments Bank (IPPB):**
 - Operates under the **Department of Posts** with 100% government ownership.
 - Provides accessible, affordable banking solutions to the **unbanked and underbanked** across **5.57 lakh villages**.
 - Champions **cashless and paperless banking**, contributing to the vision of **Digital India**.

Impact and Goals

- **Empowering Women:**
 - Enables women to lead financial literacy campaigns, fostering **gender equity** in financial education.
 - Transforms beneficiaries into active participants in **rural financial ecosystems**.

- **Community Transformation:**
 - Promotes trust, inclusivity, and accessibility through grassroots initiatives.
 - Encourages sustainable financial practices, improving economic resilience.
- **Vision of Digital India:** Aligns with India's goal of achieving a **less cash economy**, ensuring equitable financial opportunities for all citizens.

Conclusion

The **Niveshak Didi Initiative Phase 2** is more than a program—it's a **movement** driving financial inclusion, rural empowerment, and community transformation. By leveraging the extensive reach of IPPB and the expertise of IEPFA, this initiative paves the way for a **financially literate and empowered India**, with women leading the charge at the grassroots level.

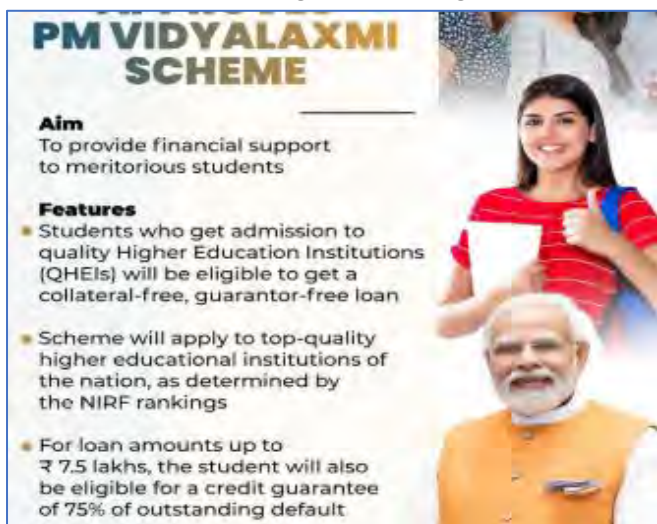
PM Vidyalaxmi Scheme

News Excerpt:

The **PM Vidyalaxmi scheme**, approved by the **Union Cabinet** and inspired by the **National Education Policy, 2020**, seeks to provide **financial assistance** to **meritorious students** across India. By eliminating **financial barriers**, the initiative aims to ensure that **quality higher education** remains accessible to all eligible students.

Key Features of PM Vidyalaxmi

- **Collateral-Free Loans:**
 - Students admitted to **Quality Higher Educational Institutions (QHEIs)** can avail **guarantor-free loans** to cover **tuition fees and other educational expenses**.
 - The **application process** is **transparent, student-friendly, and completely digital**.
- **Credit Guarantee for Loans:**
 - For loans up to **₹7.5 lakhs**, **75% credit guarantee** will be provided by the **Government of India**, supporting **banks in extending loan coverage**.



- **Interest Subvention Benefits:**
 - **For students with an annual family income up to ₹8 lakhs:**
 1. **3% interest subvention** on loans up to **₹10 lakhs** during the **moratorium period**.
 - **For students with an annual family income up to ₹4.5 lakhs:**
 1. **Full interest subvention** during the **moratorium period** for loans up to **₹10 lakhs**.
- **Scope and Eligibility:**
 - Covers students admitted to **860 QHEIs**, including:
 1. **Top 100 HEIs (Government & Private)** from **NIRF rankings**.
 2. **State Government HEIs** ranked **101-200** in **NIRF**.
 3. **All Central Government institutions**.
 - The list will be **updated annually** based on **latest NIRF rankings**.
 - Expected to benefit **over 22 lakh students annually**.

Implementation & Digital Accessibility

- **PM-Vidyalaxmi Unified Portal:**
 - A **centralized digital platform** where students can apply for:
 1. **Education loans**
 2. **Interest subvention benefits**
 - Payment of **interest subvention** will be processed via **E-vouchers & Central Bank Digital Currency (CBDC) wallets**.
- **Integration with Existing Schemes:**
 - PM Vidyalaxmi will complement:
 - **Central Sector Interest Subsidy (CSIS)** for **technical/professional courses**.
 - **Credit Guarantee Fund Scheme for Education Loans (CGFSEL)** under **PM-USP**.
 - Together, **PM Vidyalaxmi** and **PM-USP** ensure **holistic financial support** for students pursuing **higher education and professional courses**.

Impact on Higher Education & Financial Inclusion

- **Encourages students from economically weaker sections** to pursue **higher education** without financial stress.
- **Boosts enrollment in premier institutions**, ensuring **quality education is accessible** to all deserving candidates.
- **Strengthens India's education sector** by aligning financial assistance with **national academic excellence goals**.

Conclusion

The **PM Vidyalaxmi Scheme** is a **transformative initiative** that empowers students by removing **financial constraints** in higher education. By leveraging **digital accessibility, credit guarantees, and interest subvention**, the scheme **maximizes opportunities for youth** while reinforcing India's commitment to **educational inclusion and excellence**.

Electronics Component Manufacturing Scheme

News Excerpt:

The **Union Cabinet**, chaired by **Prime Minister Shri Narendra Modi**, has approved the **Electronics Component Manufacturing Scheme**, allocating **₹22,919 crore** to enhance India's **self-reliance (Atmanirbhar Bharat)** in the **electronics sector**. This scheme aims to attract **large domestic and global investments**, increase **Domestic Value Addition (DVA)**, and integrate **Indian manufacturers** into **Global Value Chains (GVCs)**.

Objectives of the Scheme

- **Boost Electronics Manufacturing:**
 - Drive **investment of ₹59,350 crore**.
 - Facilitate production worth **₹4,56,500 crore**.
- **Job Creation:**
 - Generate **91,600 direct jobs**.
 - Contribute to indirect employment growth.
- **Strengthen Component Supply Chain:**
 - Develop **core components and sub-assemblies**.
 - Enable India to **reduce import dependency** and **enhance exports**.

Key Features of the Scheme

- **Differentiated Incentives:**
 - Tailored support to **Indian manufacturers** addressing specific challenges.
 - Encourages technological development and **economies of scale**.
- **Incentives for Target Segments:**
 - **Turnover-linked incentives** for: **Display module sub-assembly, camera module sub-assembly, multi-layer PCBs, electro-mechanical components, Li-ion cells, and mobile enclosures**.
 - **Hybrid incentives** for: **High-density interconnect (HDI) PCBs and SMD passive components**.
 - **Capex incentives** for: **Parts used in electronics manufacturing and capital goods**.
- **Implementation Timeline:**
 - **Tenure of six years**, with **one-year gestation period**.
 - Incentives **linked to employment targets**.

Why This Scheme Matters?

1. **Global Electronics Market Integration:**
 - Electronics is one of the **fastest-growing industries**, shaping global economies.
 - India is emerging as a **manufacturing hub**, gaining **strategic importance**.
2. **Impressive Growth Trends:**
 - Domestic electronics production surged from **₹1.90 lakh crore (FY 2014-15) to ₹9.52 lakh crore (FY 2023-24)** at **17% CAGR**.
 - Exports grew from **₹0.38 lakh crore (FY 2014-15) to ₹2.41 lakh crore (FY 2023-24)** at **20% CAGR**.

3. Enhancing India's Strategic Capabilities:

- Improves **technological self-sufficiency**.
- Positions India as a **key player in global electronics supply chains**.

Conclusion

The **Electronics Component Manufacturing Scheme** marks a **significant step in India's journey toward technological independence**. By **expanding manufacturing capabilities, creating jobs, and boosting exports**, it enhances India's position in the **global electronics industry**.

India Skills Accelerator

News Excerpt:

The **Ministry of Skill Development and Entrepreneurship (MSDE)**, in collaboration with the **World Economic Forum (WEF)**, launched the **India Skills Accelerator**, a national public-private partnership. This platform aims to address critical skill gaps, fostering innovation and systemic progress for a future-ready workforce.

Objectives of the Initiative

- **Awareness and Mindset Shift:**
 - Focuses on identifying and promoting **future skills**.
- **Stakeholder Collaboration:**
 - Encourages **knowledge-sharing** across government, industry, and education sectors.
- **Policy and Institutional Reforms:**
 - Aims to modernize structures for an **adaptive and responsive skilling ecosystem**.

Key Features

- **Bridging Skill Gaps:**
 - Addresses skill gaps identified by **65% of organizations**.
 - Focuses on **AI, robotics, energy**, and other high-growth sectors.
- **Inclusive Upskilling:**
 - Mobilizes investment for **lifelong learning and reskilling**.
 - Aligns education with **industry demand**, ensuring agile career transitions.

Strategic Vision

- **Global Competitiveness:**
 - Establish India as the **global hub for next-generation talent**.
 - Embed competitiveness in sectors like **AI, cloud computing, cybersecurity**.
- **National Education Policy (NEP) Alignment:**
 - Promotes **flexibility, vocational pathways, and digital skilling**.
 - Encourages federal collaboration between **Centre and States**.

- **Impact at Scale:**
 - Leverages WEF's **Global Learning Network** for **peer benchmarking**.
 - Identifies **10-12 high-impact priorities** with measurable outcomes.

Significance

- Positions India at the forefront of **digital and innovation-driven economies**.
- Strengthens the foundation for a **future-ready, skilled workforce**.
- Creates pathways for **global employment opportunities** for Indian youth.

The **India Skills Accelerator** exemplifies India's commitment to equipping its workforce for a rapidly evolving world. By fostering cross-sector collaboration and innovation, this initiative will unlock potential across industries, creating opportunities for millions.

SMILE Program: Strengthening India's Logistics Infrastructure

News Excerpt:

The **Strengthening Multimodal and Integrated Logistics Ecosystem (SMILE) Program**, funded by the **Asian Development Bank (ADB)**, aims to improve **India's logistics efficiency, reduce costs**, and enhance **multimodal infrastructure**. It supports the implementation of the **National Logistics Policy** and **PM Gati Shakti National Master Plan**, strengthening India's position as a **global logistics and supply chain hub**.

Key Objectives of SMILE

- **Enhancing Logistics Efficiency:**
 - Strengthen institutional frameworks at **National, State, and City levels**.
 - Establish **smart systems** for efficient and **low-emission logistics**.
- **Standardizing Warehousing:**
 - Ensure standardized logistics assets to **strengthen supply chains**.
 - Attract **private sector investments** to create a robust ecosystem.
- **Boosting External Trade Logistics:**
 - Improve operational efficiency in **international trade logistics**.
 - Focus on streamlined **multimodal transport networks**.
- **Policy and Digital Interventions:**
 - Develop innovative mechanisms to boost India's **Logistics Performance Index (LPI)**.
 - Facilitate **gender-inclusive trade practices**.

Gender-Inclusive Measures

- Conduct **gender audits** of land ports under the **National Trade Facilitation Action Plan**.

- Ensure integrated check posts meet **gender-responsive standards**.
- Promote inclusion of women in trade logistics and port management systems.

Alignment with Atmanirbhar Bharat

- **Strengthening Domestic Manufacturing:**
 - Reduces reliance on inefficient logistics, boosting **local production**.
- **Global Integration:**
 - Enhances connectivity with the **global trade network**.
 - Positions India as a leader in **digital logistics and supply chain management**.
- **Economic Resilience and Growth:**
 - Fosters **private investment** for infrastructure upgrades.
 - Promotes **long-term sustainability** through **digital transformation**.

Impact of SMILE Program

- **Improved Supply Chain Resilience:**
 - Especially for India's growing **manufacturing sector**.
- **Economic Opportunities:**
 - Boosts competitiveness, driving **job creation** and economic growth.
- **Global Benchmarking:**
 - Positions India to improve its **Logistics Performance Index (LPI)** rankings.

Conclusion

The **SMILE Program** is a transformative initiative that strengthens India's **logistics ecosystem** through policy upgrades, technological innovation, and inclusive practices. By aligning with **Atmanirbhar Bharat**, it enhances domestic manufacturing, supports trade efficiency, and establishes India as a **global logistics powerhouse**.

PHILOSOPHY OF THE MONTH

Shoonya: The Festival of Nothingness

Shoonya, the Festival of Nothingness, presents a unique philosophical paradox: creating a space dedicated to "**nothing**" becomes a catalyst for profound self-discovery and human connection. The festival's concept invites a philosophical exploration of **emptiness, purpose, and the human search** for meaning in a world saturated with distractions and predefined narratives.

Emptiness and Meaning: Beyond Existential Angst

Existentialism often grapples with the inherent anxiety of human existence in a world without intrinsic meaning. Shoonya, however, reframes this existential void as an opportunity for liberation. This approach aligns with Buddhist philosophy, particularly the **concept of *śūnyatā***, which suggests that **emptiness is not a void to be feared but a potentiality from which all forms arise**.

The Festival as a Microcosm: Society Without Predefined Roles

Shoonya's emphasis on "meeting other people without any purpose" dismantles social constructs and expectations. It establishes a temporary society where individuals are freed from predefined roles and hierarchical structures.



This philosophical experiment echoes utopian ideals, such as those explored by thinkers like **Thomas More or Charles Fourier, who envisioned communities based on voluntary association and mutual support.** In Shoonya, the absence of purpose becomes a catalyst for authentic connection, as individuals engage with each other based on genuine interaction rather than societal pressures.

Rituals of Deconstruction: Art, Breath, and Martial Arts

The activities offered at Shoonya—art therapy, breathwork meditation, sound bath healing, mindful journaling—serve as rituals of deconstruction. They encourage participants to dismantle ingrained thought patterns, emotional blockages, and physical tensions. These practices resonate with philosophical traditions that emphasize the importance of **self-examination and self-transformation.**

Radical Vulnerability and Connection

Philosophically, it echoes Levinas's emphasis on the Other as a source of ethical responsibility. By sharing intimate experiences with strangers, individuals enter a realm of mutual dependence and recognition, fostering a profound sense of connection.

Shoonya in Different Religious Traditions:

In **Buddhist philosophy**, particularly in **Nagarjuna's Madhyamaka school**, *Shunyata* refers to the emptiness of **inherent existence**. It teaches that all phenomena are interdependent and lack a permanent, independent self. This realization helps reduce attachment and ego, fostering compassion and clarity.

In **Hindu philosophy**, especially **Advaita Vedanta**, *Shunya* is not mere nothingness but the unmanifest source—*Brahman*—that **transcends all dualities**. It is seen as the silent witness, the ground of all being. In Kashmir Shaivism, *Shunya* is equated with pure consciousness or *Shiva* in his unmanifest form.

Jainism approaches *Shunya* as the **state of detachment and purity**, free from **karmic bondage**, which leads to liberation. Interestingly, *Shunya* also has a critical role in **mathematics and science**, with Indian scholars like Aryabhata and Brahmagupta **introducing zero to the world—not as a void**, but as a powerful placeholder, **symbolizing potential and balance.** In **Zen Buddhism**, *Shunya* appears as *Mu* or the Void, **emphasizing direct experience over intellectual reasoning.**

Conclusion: Across these traditions, *Shunya* symbolizes more than absence—it represents a fertile space of possibility, awareness, and truth. For students, understanding *Shunya* fosters **critical thinking, emotional balance, and ethical awareness.** It teaches the value of detachment, humility, and mindfulness while connecting ancient wisdom with **modern perspectives.** Recognizing the power of "emptiness" can open doors to deeper self-inquiry, clarity, and a more compassionate worldview.

ESSAY

1. Education is the passport to the future, for tomorrow belongs to those who prepare for it today.
2. Mental health struggles in today's fast-paced world

CONTEMPORARY ETHICS CASE STUDY

You are the District Collector of a district with a substantial tribal population. These communities' lives are inextricably linked to the extensive forest lands they have traditionally inhabited for generations. Their livelihoods depend on forest resources for sustenance, their cultural practices are rooted in their deep connection to the land, and their spiritual identity is intertwined with the natural environment. The state government has recently approved a major infrastructure project—such as a mining operation, a large dam, and an industrial corridor—intended to spur regional economic growth through job creation, improved infrastructure, and increased revenue. However, this project requires the acquisition of a significant portion of the tribal lands, immediately creating a complex and potentially volatile conflict. This situation pits development imperatives against the established rights and welfare of the tribal communities. The project developers, driven by timelines and profit margins, prioritize efficient project execution and maximizing returns on investment. Simultaneously, environmental activists and non-governmental organizations (NGOs) raise concerns about the project's potentially devastating environmental impact, including deforestation, habitat loss, and disruption of local ecosystems. They also advocate for the protection of tribal rights, highlighting the potential for displacement, loss of traditional livelihoods, and the erosion of cultural heritage. As District Collector, you are placed at the center of this conflict. You are responsible for navigating the competing demands of these various stakeholders while upholding the principles of just governance and sustainable development.



SCAN THIS QR FOR
MODEL CONTENT

(a) How would you balance the interests of different stakeholders?

(b) What long-term measures would you recommend to prevent future conflicts and promote sustainable development in the region?

(Answer in 250 words)20

SPECIES IN NEWS

The Black-tailed Godwit**News Excerpt:**

The **Black-tailed Godwit** (*Limosa limosa*) is a large, elegant migratory wader known for its **graceful posture** and **long legs and bill**.

These birds are admired for their seasonal transformation—from a **subdued, drab appearance** in winter to a **vibrant, striking plumage** during the breeding season.

IUCN Red list: **Near Threatened**

Chennai's Role as a Wintering Habitat

- Chennai's wetlands like **Pallikaranai Marsh**, **Kelambakkam backwaters**, and **Pulicat Lake** offer crucial stopover and feeding sites.
- Observers in the city have noted the gradual **transition in plumage** as the birds prepare to fly back.
- These sightings highlight Chennai's importance in the **global migratory map** for wetland birds.

Nilgiri Tahr Census 2025**News Excerpt:****Census Details**

- Census Period:** The **joint Nilgiri Tahr census** will be conducted from **April 24–27, 2025**.
- Participating States:** The census is a collaborative effort between **Kerala** and **Tamil Nadu**, two states that share the **Nilgiri Tahr's** habitat in the Western Ghats.

IUCN Status: **Endangered**

- Coverage:**
 - In **Kerala**, the census will be carried out across **89 census blocks**, covering a wide area from

Seasonal Transformation: From Drab to Dazzling

- In their **non-breeding plumage** (seen in India), Godwits appear pale grey or brown, blending easily into muddy wetland surroundings.
- As spring approaches, they begin their **moult into breeding plumage**—a process noticeable even before they migrate.
 - Males display **chestnut-orange coloring** on the breast and neck.
 - Their wings and tail feathers develop more prominent **black-and-white contrasts**.
- This visual shift marks their readiness for the **journey back to their breeding grounds** in northern Europe and Central Asia.

**Migratory Journey**

- The Black-tailed Godwit is a **long-distance migrant**, flying from breeding areas in **Iceland, Europe, and Central Asia** to wintering areas in **India, Sri Lanka, and Africa**.
- In Chennai and other parts of India, they arrive around **October** and begin their return journey by **March or April**.
- These birds rely heavily on **wetlands** for foraging, feeding mainly on worms, insects, and aquatic invertebrates.

Conservation Concerns

- The Black-tailed Godwit is listed as **Near Threatened** on the IUCN Red List.
- Major threats include:
 - Habitat loss** due to encroachment and urban expansion.
 - Wetland degradation** from pollution and water diversion.
 - Climate change** affecting breeding grounds and migratory cues.
- Protecting wetlands is critical not only for this species but for the **entire ecosystem of migratory birds**.

Methodology of the Census

- The **census methodology** will include a mix of traditional and modern techniques to ensure an accurate count of Nilgiri Tahr populations.
 - Direct sightings** will be the primary method, with forest officials and volunteers monitoring and recording sightings of the species.
 - Camera traps** will be strategically placed to gather photographic evidence of the tahr's movement and numbers.
 - Pellet sampling** will be used to gather genetic data to assess the health and genetic diversity of the population.
- The **"bounded count" method** will be employed to estimate the population. This method involves counting the animals within defined geographical areas to avoid double counting and improve accuracy.
- GPS mapping** and **data collection apps** will be used to increase efficiency in tracking and documenting sightings, ensuring that the data is precisely recorded and easily analyzed.



Thiruvananthapuram to Wayanad.

- In **Tamil Nadu**, the census will cover **176 census blocks**.

About the Nilgiri Tahr

- The **Nilgiri Tahr** (*Nilgiritragus hylocrius*) is a species of wild goat endemic to the **Western Ghats**, found primarily in the high-altitude **grasslands and rocky outcrops** of the region.
- **Conservation Status:** The species is currently classified as **Endangered** due to threats such as **habitat loss, fragmentation, poaching, and human encroachment**. The census is part of broader efforts to understand and protect this iconic species of the Western Ghats.
- **Significance:** The Nilgiri Tahr is an important indicator of the health of the **high-altitude ecosystems** it inhabits. Their presence and population density often reflect the overall state of these fragile ecosystems.

Conservation and Ecological Significance

- **Ecological Importance:** Nilgiri Tahrs are **keystone species** in their habitat, helping to shape the structure of the ecosystems they live in. They graze on grasses and shrubs, preventing overgrowth that could choke out other plant species. Their behavior helps maintain biodiversity in the Western Ghats.
- **Tourism Impact:** The Nilgiri Tahr is a major **attraction** for eco-tourism in areas like **Munnar** and **Eravikulam National Park** in Kerala, and **Mukurthi National Park** in Tamil Nadu. Protecting this species is vital not only for conservation but also for the local economy that benefits from wildlife tourism.
- **Interstate Collaboration:** The joint census is a **significant move** in terms of interstate cooperation for conservation. Both Kerala and Tamil Nadu will share data and findings, creating a unified strategy to protect the Nilgiri Tahr across state borders. This collaboration sets a **precedent** for future conservation initiatives in the **Western Ghats**, a UNESCO World Heritage Site.

Kashmir's Lesser-Known Spring Blooms

News Excerpt: Spring in Kashmir is not only about the famous tulip gardens. The region is home to a vibrant and diverse array of wildflowers, many of which are lesser-known but deeply significant ecologically and culturally.

Ecological Significance

- These wildflowers play a vital role in maintaining **pollinator populations**.
- Their presence indicates **healthy ecosystems** and supports biodiversity in alpine and subalpine regions.

Cultural & Medicinal Importance

- Many of these plants are used in **local medicine**, folk remedies, and traditional practices.
- They are part of the region's **ethnobotanical heritage**, often passed down through generations.

Hidden Floral Treasures

- The Kashmir Valley bursts into color with various **wildflower species** in spring.
- These blooms include rare and **endemic species** often overshadowed by popular flowers like tulips.

Examples of Lesser-Known Blooms

- **Iris kashmiriana** – A native iris species with beautiful white or lilac flowers.
- **Fritillaria roylei** – A bell-shaped flower, locally known as *Kaiser-e-Hind*.
- **Primula denticulata** – Known for its round clusters of purple flowers.
- **Anemones, Corydalis, and Ranunculus species** – Add to the color and diversity of high-altitude meadows.

Threats & Conservation

- **Climate change, overgrazing, and unregulated tourism** are impacting these delicate habitats.
- Lack of awareness leads to neglect in conservation efforts.
- Botanists and conservationists are working to **document and protect** these species through research and education.

Need for Awareness

- There's a growing call to appreciate the **lesser-seen aspects of Kashmir's natural beauty**.
- Promoting **eco-tourism** and **native plant walks** can help create interest and preserve these floral treasures.



Mongolia-Tagged Fishing Eagle in Kaziranga News Excerpt:

A fishing eagle tagged in Mongolia has been visiting **Kaziranga National Park**, Assam, each breeding season since **2020**. The bird's journey spans **thousands of kilometers**, showcasing one of the most fascinating long-distance migrations in the bird world.

Breeding in Kaziranga

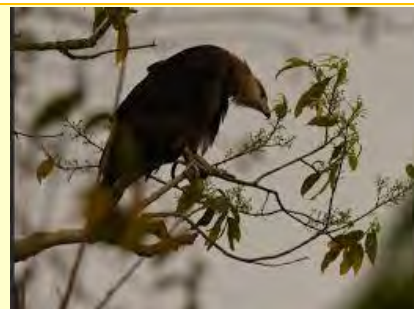
- The eagle chooses Kaziranga for its **rich aquatic habitat** ideal for breeding and feeding.
- It indicates the park's global ecological significance beyond local fauna.

Research & Conservation Significance

- The bird was satellite-tagged as part of an international **raptor conservation program**.
- The data provides crucial insights into the migratory routes, behavior, and habitat use of **transboundary bird species**.

Cross-Border Environmental Importance

- This repeated migration underlines the need for **collaborative conservation** across countries, from Central Asia to South Asia.
- It highlights how protected areas like Kaziranga serve as **vital nodes in global migratory bird networks**.



Discovery of Theobaldius konkanensis

News Excerpt: A new species of land snail has been discovered in the **Konkan region of Maharashtra**. Named *Theobaldius konkanensis*, this species honors the region where it was first found. It marks the **first record of the genus Theobaldius in India**, previously known only from Southeast Asia.

Conservation Relevance

- Since it has a **narrow distribution**, it may be vulnerable to habitat disturbance.
- The discovery emphasizes the **need for further research and conservation** in the **underexplored Konkan belt**.

Habitat and Range

- The snail was located in the **Northern Western Ghats**, a global biodiversity hotspot.
- It inhabits **tropical evergreen and semi-evergreen forests**, at elevations between 80–240 meters.
- Typically found **under leaf litter and moist logs**, especially during the **monsoon season (June–September)**.

Key Features of the Snail

- **Shell Structure:** Thick, conical, and slightly flattened with a wide opening.
- **Coloration:** Yellowish with brownish streaks.
- **Operculum (lid-like structure):** Has small spines and whorls.
- **Size:** Small in size but morphologically distinct from other Indian snails.

Behavior and Reproduction

- The snail is **hermaphroditic**, capable of both self- and cross-fertilization.
- Lays eggs in damp soil or leaf litter; they hatch in about **2–4 weeks**.
- Active during both day and night in the wet season.
- It has an estimated **lifespan of 2–7 years**.

Ecological Importance

- Acts as a **bioindicator**—its presence reflects the health of the forest ecosystem.
- Plays a role in **nutrient cycling**, breaking down leaf litter and aiding decomposition.



Discovery of the Small Hive Beetle in India

News Excerpt: A new species, *Aethina tumida*, also known as the **Small Hive Beetle (SHB)**, has been recorded for the first time in **India**.

The beetle was discovered in an **apiary** located in **Amdanga**, a village in the **North 24 Parganas district of West Bengal**, marking a significant moment in India's ecological history.

Impact on Beekeeping

Origin and Global Spread

- The SHB is **native to sub-Saharan Africa**, where it primarily targets honeybee hives.
- Over the past few decades, it has spread globally and has been reported in:
 - **United States (1999)**
 - **Australia (2002)**
 - **Canada (2007)**
 - **Philippines (2016)**
 - **China and South Korea (2017)**

- The primary mode of its spread is through the **international movement of beekeeping equipment and bee colonies**, which unfortunately carries invasive pests across borders.

Physical Characteristics

- The **Small Hive Beetle** is a small, **oval-shaped** beetle, measuring between **5–7 mm** in length.



- The SHB poses a significant **threat to honeybee colonies**, as its larvae feed on **honey, pollen, and bee brood**, which are the larvae and pupae of the honeybees.
- This feeding behavior contaminates the hive and leads to a **disrupted hive environment**, causing the bees to abandon the hive.
- The **economic impact** on beekeepers can be significant, leading to financial losses and threatening the livelihoods of those dependent on honey production and pollination services.

- Its body is typically **reddish-brown** and flattened, allowing it to fit easily into the narrow spaces within beehives.
- Despite its small size, its effects on the hive can be devastating, as it infests the colony and can spread rapidly within an apiary.

Conservation and Policy Implications

- The SHB is now considered a **serious invasive alien species** in India, joining a list of species that threaten local ecosystems and agriculture.
- **Biosecurity measures** such as quarantine regulations are being recommended to prevent further spread of the beetle, particularly across India's beekeeping hubs.
- There's a strong call for **public awareness** programs to educate beekeepers about SHB and its impacts, as well as to foster a collective effort in managing its spread.
- The **Indian government** may need to implement specific **policies** regarding beekeeping practices and the import/export of bee-related products to mitigate further risks.

Study on Blackflies in North Bengal

News Excerpt: The **Zoological Survey of India (ZSI)** has identified **four blackfly species** from the **Simulium** genus in the **North Bengal** region, which are suspected to be the vectors responsible for transmitting **river blindness** (onchocerciasis). **River blindness** is caused by the parasitic worm *Onchocerca volvulus*, and the disease is spread through the bites of infected blackflies. The study represents a significant breakthrough in understanding the **geographic distribution** of these vectors, which can help in better-targeted disease control strategies.

DNA Barcoding for Accurate Identification

- To ensure **precision in species identification**, the study employed **DNA barcoding**, a modern genetic technique.
- **DNA barcoding** analyzes specific gene markers to differentiate between species at a molecular level, making it easier to distinguish between similar-looking blackfly species. This technique is particularly helpful in areas with a **high diversity of species**, such as the **central Himalayas**.
- This approach allows for more accurate tracking of the species that are actually responsible for the transmission of river blindness, helping to **fine-tune surveillance and control efforts**.



Implications for River Blindness Control

- The identification of these species is critical for **controlling river blindness**. By pinpointing the specific blackfly species responsible for the disease, scientists can focus their control efforts more efficiently.
- **Targeted control measures**, such as the **use of insecticides** on specific blackfly populations and habitat management (removing breeding grounds), can be implemented to **reduce the spread of the disease**.
- Additionally, this discovery paves the way for more effective **public health interventions**, as it enables authorities to focus on the areas where these blackflies are most prevalent.

Broader Impact

- The study is a major contribution to global **efforts to control neglected tropical diseases** (NTDs), such as **onchocerciasis**, that affect millions of people worldwide, particularly in Africa and parts of South Asia.
- The use of **molecular techniques** like DNA barcoding is revolutionizing vector control, as it enables more **precise identification** of disease vectors and improves the effectiveness of control programs.
- The findings also underscore the importance of **integrating advanced molecular methods** into ongoing **public health surveillance programs** to combat infectious diseases and prevent their spread.

PLACES IN NEWS – INDIA

Guindy National Park:

Guindy National Park, located in **Chennai, Tamil Nadu**, is one of India's **smallest national parks**, covering just **2.70 km²**. Despite its size, it serves as a **vital ecological zone** in the urban landscape. Ongoing restoration efforts focus on **reviving grasslands** to support the dwindling **blackbuck population**, ensuring a balanced ecosystem.

Location and Importance

- Situated **within a metropolitan area**, adjacent to **IIT Madras** and **Raj Bhavan**, making it a **unique urban sanctuary**.
- Characterized by **dry evergreen scrub forests, thorn forests, and grasslands**, providing habitat for **diverse flora and fauna**.
- Acts as a **green lung for Chennai**, benefiting **both wildlife and residents**.

Flora and Fauna**Plant Diversity**

- Hosts over **350 plant species**, including:
 - **Neem, wood apple, sugar apple, and Acacia planifrons.**
- Supports **native plant ecosystems** essential for **herbivores and pollinators**.

Animal Species

- **14 mammal species**, with the **blackbuck** as its **flagship species**.
- Other notable animals:
 - **Spotted deer, jackals, civets, bonnet macaques.**
 - **Fan-throated lizards, various amphibians, and reptiles.**
- Over **150 bird species**, including:
 - **Paradise flycatchers, yellow-wattled lapwings, and black-winged kites.**
- Home to a **rich variety of insects and amphibians**, contributing to its **ecological balance**.

Ecological Challenges**Grassland Degradation**

- **Polo Ground**, historically used for polo matches during British rule, is **overrun by invasive species like Mexican grass**.
- **Loss of grazing land** has caused a **decline in blackbuck population**.
- **Lek mating displays** of blackbucks require **large, open grasslands**, which are now disappearing.

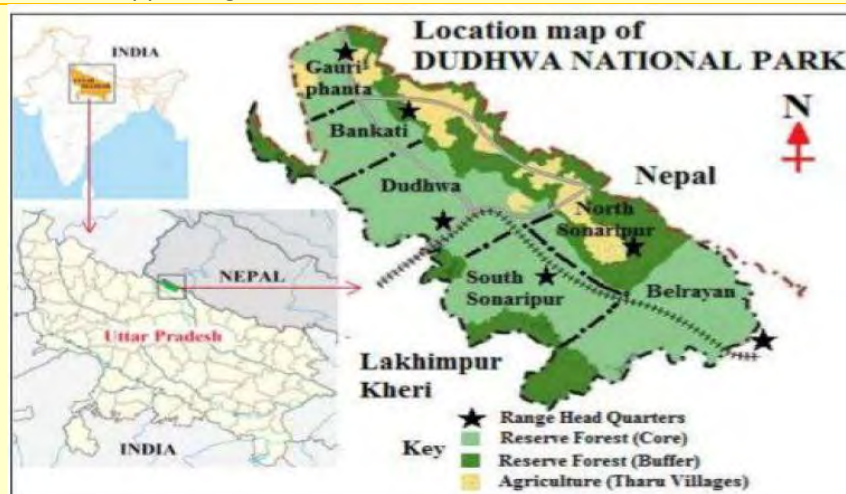
**Dudhwa Tiger Reserve:**

A rare long-snouted vine snake was recently rediscovered in Dudhwa Tiger Reserve, Uttar Pradesh.

Dudhwa Tiger Reserve: A Biodiversity Hotspot**Location and Geography**

Dudhwa Tiger Reserve, nestled in **Lakhimpur Kheri** and **Bahraich districts of Uttar Pradesh**, lies near the **Indo-Nepal border**. The reserve spans **1,284.3 km²**, comprising:

- **Dudhwa National Park**



<ul style="list-style-type: none"> • Kishanpur Wildlife Sanctuary • Katarniaghat Wildlife Sanctuary 	<p>Situated within the Terai belt, it features alluvial plains of the Ganga and its tributaries, with elevations between 110-185 meters. Several streams and wetlands enhance its ecological richness. While heavily forested, it is surrounded by agricultural land, making core zone conservation crucial.</p> <p>Flora and Fauna</p> <p>Dudhwa's ecosystem thrives with tropical and subtropical moist deciduous forests, grasslands, and wetlands, serving as a vital habitat in the Terai Arc Landscape.</p> <p>Notable Wildlife:</p> <ul style="list-style-type: none"> • Big Mammals: Tigers, leopards, rhinoceroses, elephants, sloth bears, and Asiatic black bears. • Deer Species: Swamp deer, cheetal, hog deer, sambar, and barking deer. • Rare Species: Hispid hare, a small endangered mammal unique to the Terai region. • Bird Diversity: Rich avifauna, contributing to its ecological vibrancy. <p>Historical Significance</p> <ul style="list-style-type: none"> • Conservationist Billy Arjan Singh played a pivotal role in global tiger conservation. • He successfully reintroduced Tara, a zoo-born tigress, into the wild in the 1970s, aiding in tiger genetics research. <p>Conclusion</p> <p>Dudhwa Tiger Reserve remains a critical wildlife sanctuary, balancing conservation and human impact. Its diverse landscapes and species make it a high-priority biodiversity zone, deserving continued protection and ecological management.</p>
<p>Gandhi Sagar Wildlife Sanctuary: Preparing for Cheetah Reintroduction</p>	<p>Location:</p> <ul style="list-style-type: none"> • Situated in Mandsaur and Neemuch districts, Madhya Pradesh. • Area: 368.62 km², divided by the Chambal River into eastern and western parts. • Part of the Khathiar-Gir dry deciduous forests ecoregion, with wooded hills and grasslands. <p>Flora:</p> <ul style="list-style-type: none"> • Predominantly dry deciduous forests. • Major species: Khair, Salai, Kardhai, Dhawda, Tendu, Palash. <p>Fauna:</p> <ul style="list-style-type: none"> • Deer species: Chinkara, nilgai, sambar. • Carnivores: Indian leopard, Indian wild dog. • Other animals: langur, peacock, otter, mugger crocodile.
<p>Bannerghatta National Park: Protecting Wildlife through Anti-Snare Drive</p>	<p>Location:</p> <ul style="list-style-type: none"> • Located in Bengaluru and Ramanagara districts, Karnataka. • Area: 260.51 km², part of an elephant corridor connecting BR Hills and Sathyamangalam Forest. • Features the Suvarnamukhi stream, supplemented by bore wells for water availability. <p>Flora:</p> <ul style="list-style-type: none"> • Moist deciduous forests, scrublands, and artificial forests. • Major species: Sandalwood, neem, tamarind, bamboo, eucalyptus.



Fauna:

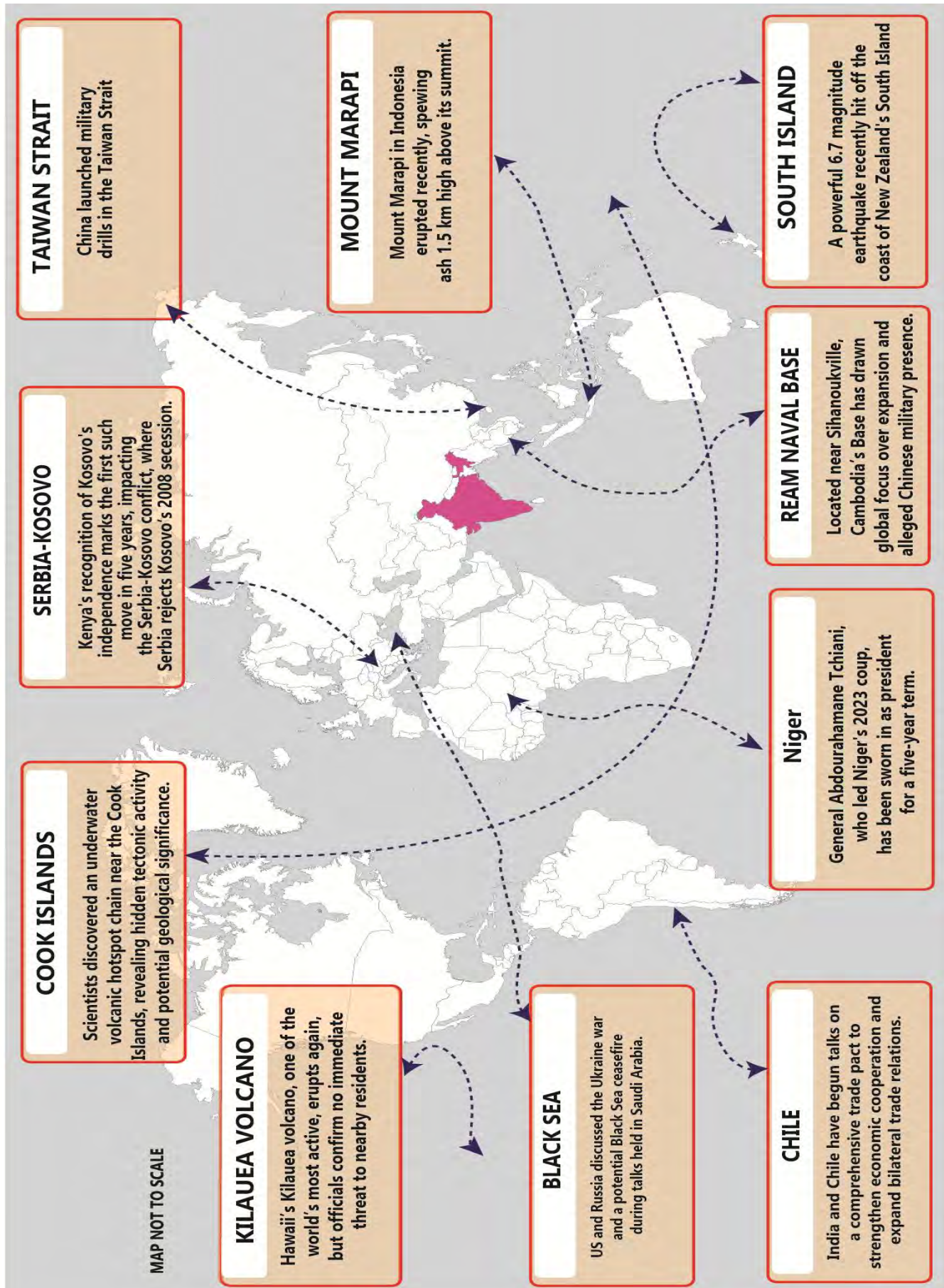
- **Large mammals:** Indian elephants, leopards, gaurs, sloth bears, jackals, wild boars.
- **Deer species:** Spotted deer, barking deer, Indian gazelle (chinkara).
- **Carnivores:** Royal Bengal tiger, Indian wolf, striped hyena, Asiatic lion.
- **Reptiles:** Monitor lizards, cobras, pythons, Russell's viper, kraits.
- **Birds:** Flamingos, pelicans, peacocks, and over **101 bird species**.

Anti-Snare Drive:

- Focuses on removing snares/traps to protect wildlife like **tigers, leopards, and elephants**.
- Involves collaboration between **forest officials, NGOs, and local communities**.
- Aims to reduce **human-wildlife conflicts** and safeguard animals from poaching threats.



PLACES IN NEWS – WORLD



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