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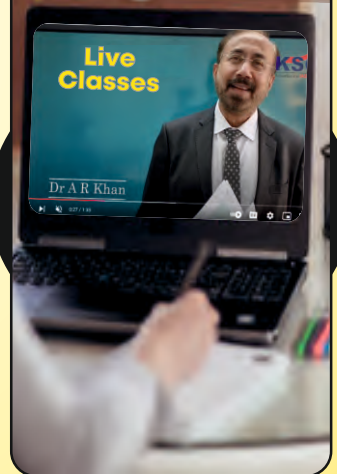
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### MESSAGE FROM DR. KHAN ....

Dear Students,

The right gate to enter into a state of competition is the gate of **"why" instead of "how"**. Rather than immediately seeking procedural guidance, individuals should first establish a clear and compelling reason for getting into the competition with self. **Here, I wish to explore the significance of clarifying one's purpose and its transformative impact on the journey towards achieving the esteemed goal.**

Prior to exploring the intricacies of any preparation, individual must answer a vital question - **why do they desire to enter into the competition?** This intrinsic motivation serves as a driving force that propels them towards their objective.

The "why" represents the magnetic pull that draws individuals to this noble pursuit. It encapsulates their deep-rooted aspirations, whether it be a desire to serve the nation, **fulfill familial expectations, pursue personal growth, or harness the strength offered by the goal upon accomplishment.**

Take time to introspect and consolidate your reasons. You may want to write them down or even discuss them with mentors or peers. A student I once knew, Raj, dreamed of becoming a doctor not just for personal success but to bring quality healthcare to his rural village. **His "why" became a guiding light during the struggles of medical school, helping him overcome challenges that many others succumbed to.**

Your motivation may stem from various sources, whether grand or seemingly modest, as long as it holds personalized significance it is enough force. Recognise that the power of purpose lies within.

Even if your reasons may appear trivial to others, if they resonate profoundly within you, they possess the potential to drive your unwavering commitment.

When your **purpose is clear, the "how" becomes a mere process that you can navigate with determination and direction.** Like Polaris guides sailors across turbulent seas, your "why" will illuminate the path through the complexities of preparation and competition. Think of it as the North Star during your academic and professional pursuits.

Rather than fixating on a specific approach, adopt any of the multitude of routes available. As long as **your purpose remains unwavering, you possess the resilience and adaptability to overcome challenges and forge your path to success.** But remember, When setting a goal for yourself list all that you would not do and all the price you are willing to pay for the same.

Before embarking on the journey of meta competition, **individuals must establish a profound connection with their purpose - the driving force behind their aspirations.** By investing time in self-reflection and consolidating their reasons, individuals cultivate an unbreakable commitment that transcends procedural guidance. **Understanding the "why" empowers individuals to adapt, persevere, and navigate any path towards their desired destination.** With absolute clarity of purpose, success becomes an inevitable outcome.

**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).**

Additionally, this month, we are introducing a new section called **"SNAPSHOTS,"** offering themes **inspired by** four monthly magazines to provide comprehensive coverage of various topics. We are also providing a **complimentary full-length test** with 100 objective questions. **Scan the QR code** to revise the previous month's current affairs and test yourself.

When it comes to evaluation, we are all together at a different level. We are also reaching every nook and corner with this expertise for the aspirants of CSE. Now you can write a Mains Answer and get it evaluated by our Expert Team and can get Feedback. Drop a mail at **evaluation@ksgindia.com** to register yourself in our race to perfection. Don't wait, it's your golden chance to crack this exam and fulfill your passionate dream.

**Team KSG**

S. No.	GS -I	GS- II	GS- III	GS-IV	Mis
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

### The Right to Work

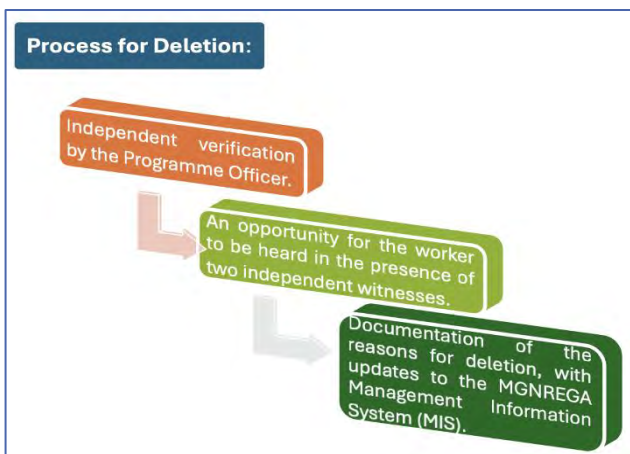
#### News Excerpt

Recent data suggests that there was a surge in **worker deletions from job cards**, a mandatory document for availing employment opportunities under the **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)**. It has raised serious concerns about the process's implementation, fairness, and transparency.

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#### About MGNREGA 2005

- Legal Right to Employment:** MGNREGA legally guarantees **at least 100 days** of unskilled manual labour per year to an adult member of every eligible rural household. Payment of **unemployment allowance** if work is not provided **within 15 days** of demand.
  - Mazdoor Kisan Shakti Sangathan (MKSS)** pioneered efforts to organise workers employed in government drought relief programs. Focused on transparency and accountability, laying the groundwork for the right-to-work legislation.
- Objective:** The main objective of the MGNREGA is to provide employment to rural citizens and improve their economic conditions.
- Eligibility:** Rural households willing to do manual labour are entitled to register and receive work.
- Demand-Based Model:** Work is provided based on the demand from registered households.
- Local Governance:** The Gram Panchayat is responsible for registering workers, issuing job cards, and allocating work within a specified timeframe.
- Job Card System:** Each household is provided with a unique job card listing all eligible adult members. Possession of this card is contingent upon employment under the scheme.



- Grounds for Job Card Deletion:** According to the Master Circular for 2021-22, job cards can only be deleted under specific circumstances, such as migration of the household, duplicate or fraudulent entries, and issuance based on false documents.

#### Emerging Trends in Worker Deletions

- Significant Increase in Deletions:** In 2021-22, 1.49 crore workers were removed from the system. This number skyrocketed to 5.53 crore in 2022-23, marking a **247% increase in deletions**. Over four years, 10.43 crore workers were deleted across India.

**Significance of MGNREGS**

- Livelihood Security:** Provides 100 days of paid work annually, reducing rural poverty and supplementing agricultural income during lean seasons.
- Asset Creation:** Develops durable rural infrastructure, including water conservation systems, roads, and irrigation facilities, boosting agricultural productivity and sustainability.
- Water and Environmental Security:** This program promotes water conservation, drought-proofing, afforestation, and soil conservation, ensuring ecological sustainability.
- Empowering Marginalized Groups:** Ensures inclusion of SCs, STs, and disadvantaged groups, fostering equitable workforce participation.
- Gender Equality:** Mandates equal wages for women, enhancing their financial independence and decision-making power.
- Countering Migration:** Provides local employment to reduce rural-to-urban migration and stabilise livelihoods within communities.
- Economic Stabilization:** Boosts rural economies by generating demand for local goods and services and bridging development gaps in underdeveloped regions.

- State-Wise Variations:** Bihar and West Bengal saw significantly higher deletions in sampled villages.
  - Madanpur Block, Bihar:** 53,000 workers deleted.
  - Mayureshwar-I Block, West Bengal:** 32,000 workers deleted.
  - Intra-block disparities were also evident, with some villages experiencing mass deletions while others saw minimal changes.
  - West Bengal Case:** The Union Government stopped releasing MGNREGA funds to West Bengal after December 2021. Consequently, no MGNREGA work was conducted in the state, but deletions surged from 550 in 2021-22 to 31,861 in 2022-23 in sampled villages.

#### Role of Aadhaar-Based Payment System (ABPS)

- Mandatory Aadhaar Seeding:** Aadhaar-based Payment Systems were made compulsory for MGNREGA wage disbursements. Workers were required to link their Aadhaar numbers to job cards to process payments.
- Impact on Deletions:** Under pressure to meet Aadhaar seeding targets, field officials reportedly resorted to arbitrary deletions without following due processes. Workers unable to link their Aadhaar numbers, often due to systemic or technical issues, were excluded from the scheme.

- **Reduction of Denominator Effect:** Critics argue that deleting workers artificially inflates the compliance percentage for Aadhaar seeding. This practice undermines the program's transparency and inclusivity.

**Challenges in Worker Deletions**

- **Violations of Due Process:** Many deletions bypassed Gram Sabha consultations and were carried out without workers being informed. Mandated verification protocols were often ignored, undermining the Act's emphasis on transparency.
- **Arbitrary and Unverified Deletions:** There were widespread instances of wrongful deletions due to clerical errors, systemic issues, or pressures to meet ABPS compliance. Nearly 20,000 workers were deleted for being "not willing to work" despite having demanded or completed work.
- **Disruption of Livelihoods:** Denial of job cards effectively strips workers of their legal entitlement to employment, exacerbating rural unemployment and poverty.

**Way Forward**

- **Strengthening Adherence to Protocols**
  - **Verification and Documentation:** Ensure deletions are verified by independent officials and documented thoroughly. Reasons for deletions should be publicly available and reviewed periodically.
  - **Worker Involvement:** Mandate consultations with Gram Sabhas and involve worker representatives in decision-making panels.
- **Enhancing Oversight and Transparency:** Conduct independent audits of deletion processes and outcomes. Review the MIS data regularly to identify anomalies and address discrepancies.
- **Improving Grievance Redressal Mechanisms:** Establish accessible grievance systems for workers affected by wrongful deletions. Expedite the resolution of disputes related to job card and worker status.
- **Responsible Use of Technology:** Streamline Aadhaar seeding processes to ensure inclusivity, particularly for marginalised workers.
- **Empowering Gram Panchayats:** Provide capacity-building programs for Gram Panchayats to conduct impartial inquiries and enforce accountability.

**PEPPER IT WITH:**

Livelihood Security, Poverty Alleviation, Social Audits.

**Municipal Corporations Struggle with Financial Woes**

**News Excerpt**

A recent report by the Reserve Bank of India (RBI) has spotlighted the dire financial state of municipal

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corporations (MCs) across urban India despite cities contributing nearly 60% of the nation's economic output.

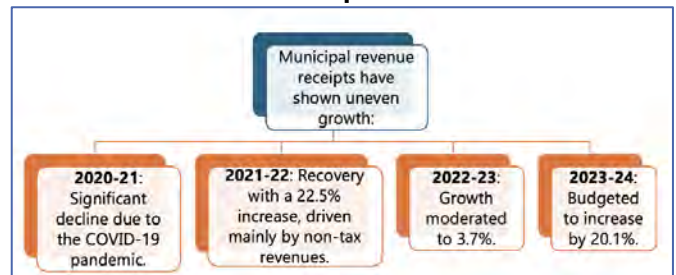
**About Municipal Corporation**

- The municipal corporation is the **urban local government** responsible for developing any metropolitan city with a population of **more than one million people**. Other names for it are **Mahanagar Palika, Nagar Palika, Nagar Nigam**, etc.
- These are established in the states through the **acts of the state legislatures**, whereas in the Union Territories, they are established through the **acts of the Parliament**.
- The **74th Amendment Act 1992** inserted a new **Part IX-A** into the Constitution, which deals with the administration of Municipalities and Nagar Palikas. It consists of **Articles 243P to 243ZG**. It also added a new **twelfth schedule** to the Constitution, which consists of 18 items.
- Came into force on 1<sup>st</sup> June 1993.



**Key Highlights from the RBI Report on Municipal Finances**

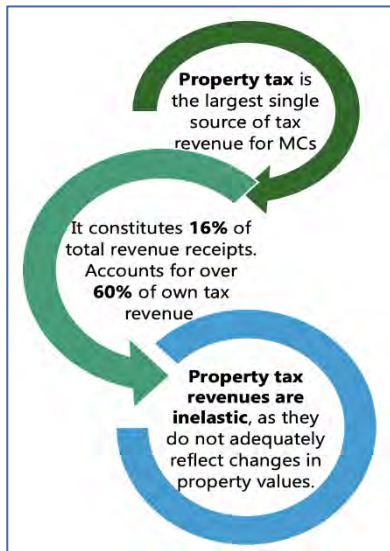
**Revenue Trends and Inequities:**



- **Revenue concentration is a significant issue:** The top 10 Municipalities account for 58% of total municipal revenues, reflecting stark disparities in resource mobilisation among cities.
- Revenue surplus, which fell to ₹1,034 crore in 2020-21 from ₹4,914 crore in 2019-20, is budgeted to improve to ₹20,819 crore in 2023-24, indicating some recovery.
- **Non-Tax Revenue Streams:** Municipalities also earn from fees, user charges, and income from investments, but these streams remain underutilised.



- Grants and Transfers from Higher Authorities:** In 2022-23, grants from the Central government grew by 24.9%, while those from State governments increased by 20.4%. However, these transfers account for only 2.5% of total MC revenue receipts.



**Challenges Facing Municipal Corporations in Urban India**

- Economic Significance vs. Financial Constraints**
  - Urban areas in India generate nearly **60% of the country's economic output**, highlighting their critical role in the economy.
  - Despite this contribution, municipal corporations (MCs) — responsible for essential urban services such as roads, drainage, water supply, and waste management — are hampered by **debilitating financial constraints**.
  - Property tax revenues**, the primary source of income for MCs, amount to an abysmally low **0.12% of GDP**, underscoring their chronic underfunding. Outdated valuation systems and poor enforcement further erode revenue potential.
- Limited Financial Autonomy**
  - Due to their weak financial health, most MCs heavily depend on **state and central government transfers** to meet their basic operational needs.
  - In 2023-24, MCs' revenue receipts were only **0.6% of GDP**, starkly contrasting the **9.2% and 14.6% of GDP** for the Central and State governments, respectively.
  - This dependency curtails their ability to make independent decisions, plan for long-term projects, and implement strategic urban development initiatives.

**Recommendations for Improving Municipal Finances**

- Technology-Driven Reforms in Property Tax:** The report emphasises modernising property tax systems.
  - GIS-based property tax mapping** to accurately identify properties and assess taxes.
  - Digital platforms for tax collection** to enhance compliance, improve transparency, and plug leakages.

- Non-Tax Revenue Streams:** Periodic user charges for water supply, sanitation, and waste management adjustments to ensure **cost recovery**.
- Reforming local taxation:** Rationalising user charges to align them with the cost of service provision. Strengthening enforcement of tax laws to curb evasion.
  - Digitalisation and Streamlining Expenditures:** Automating processes through **digital platforms** to improve administrative efficiency and reduce wasteful expenditures.
  - Streamlining committed expenditures to free up funds for **capital investments** in infrastructure and public services.
- Infrastructure Development through Partnerships:** Promoting **Public-Private Partnerships (PPPs)** in critical areas such as Urban transport, Waste management, and Renewable energy.
- Leveraging Municipal Bonds:** Diversifying funding sources through bonds and other instruments can reduce dependence on higher authorities and allow for more flexibility in urban planning.
- Rule-Based Transfers:** Developing predictable, rule-based frameworks for inter-governmental transfers:

**PEPPER IT WITH:**  
 Fiscal Federalism, Urban Financing Models, Municipal Bonds.

**State of India's Undertrial Prisoners**

**News Excerpt**

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Union Home Minister announced that undertrial prisoners who have spent more than one-third of the maximum sentence for their alleged crime should be released by **Constitution Day** (November 26, 2024). This directive aligns with **Section 479** of the **Bharatiya Nagarik Suraksha Sanhita, 2023 (BNSS)**.

**Key Provisions of Section 479 of BNSS**

- Maximum Period of Detention for Undertrials:** Section 479 specifies that undertrial prisoners not accused of offences punishable by death or life imprisonment must be released on bail if they have served:
  - Half the maximum sentence prescribed** for the offence (as previously stated in Section 436A of the Code of Criminal Procedure, 1973).
  - One-third of the maximum sentence** for **first-time offenders** who have no prior convictions.
- Exclusions:** Bail will not be granted under this provision if:
  - The accused faces **multiple charges**.
  - Pending investigations or trials relate to **more than one offence** involving the same person.

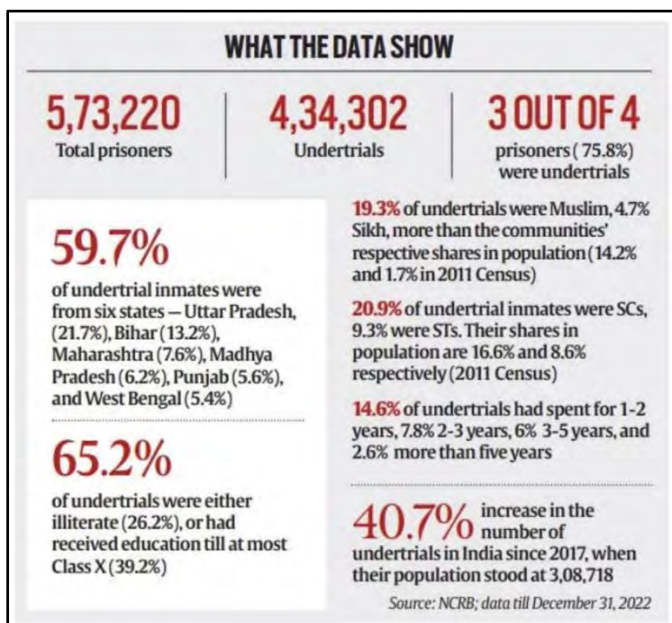
- **Duties of Jail Superintendents:** Jail superintendents are required to submit applications to courts for the release of eligible prisoners once they complete the specified detention period.

**Significance of the Relaxed Provisions**

- **Decongesting Prisons:** Overcrowding remains a critical issue, with undertrials constituting the majority of the prison population. The relaxed provisions will reduce the burden on jails, improving conditions for inmates.
- **Ensuring Justice:** Long pre-trial detentions often violate the principles of fair trial and human rights. Expediting the release of eligible undertrials ensures that the principle of **justice delayed is justice denied** is addressed.
- **Prioritising First-Time Offenders:** A special focus on first-time offenders underlines a **reformatory approach** to justice, reducing unnecessary incarceration for minor crimes.
- **Promoting Efficiency:** With jail superintendents mandated to report and courts instructed to act promptly, systemic efficiency in handling undertrial cases is expected to improve.

**State of Indian Prisons**

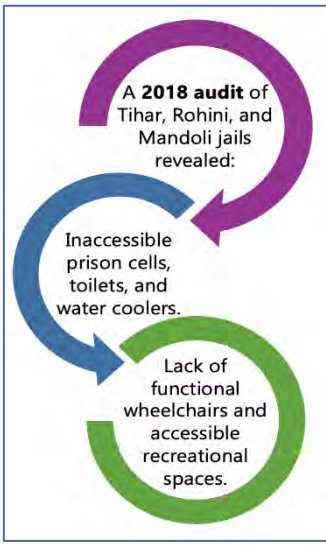
- **Overcrowding in Prisons:** As per the **National Crime Records Bureau's (NCRB) Prison Statistics India 2022**, published in December 2023:
  - **5,73,220 prisoners** were incarcerated in Indian prisons, amounting to **131.4% occupancy** of the total capacity.
  - Of these, **4,34,302 (75.8%) were undertrials** awaiting resolution of their cases.



- **Undertrial Women:** Among 23,772 women prisoners, 18,146 (76.33%) were undertrials, indicating the disproportionate burden on women awaiting trial.

- **Duration of Detention:** As of December 31, 2022, 8.6% of all undertrial prisoners had been in custody for over three years. The data does not specify how many undertrial prisoners were first-time offenders.

- **Prisoners with Disabilities:** Disabled prisoners are more susceptible to abuse and violence from other inmates and staff. Their special needs for daily activities are often ignored.
- **Bhagalpur Blindings (1979-80):** The shocking incident of acid pouring into prisoners' eyes highlighted systemic cruelty.



**Rights of Prisoners with Disabilities**

- **Constitutional Guarantees:** Right to equality, freedom, and life with dignity for all prisoners (**Article 14, 19, 21**). Upheld in **Upendra Baxi vs State of U.P. (1983)**, affirming humane prison conditions.
- **National Legislation:** The **Rights of Persons with Disabilities Act, 2016** prohibits abuse, violence, and the denial of food and fluids. The **Model Prison Manual (2016)** mandates dignified living conditions.
- **Accessibility Guidelines (2024):** The Ministry of Home Affairs outlines infrastructure requirements to ensure prison accessibility, including wheelchair access and disabled-friendly facilities.
- **Nelson Mandela Rules (2015):** Require reasonable accommodations for disabled prisoners.
- **UN Convention on the Rights of Persons with Disabilities:** Prohibits cruel or inhuman treatment.

**Case of Electronic Tracking of Prisoners: A Measure to Decongest Prisons**

- The **Supreme Court of India's Centre for Research and Planning** proposed a **pilot programme** to test the effectiveness of electronic tracking devices for undertrials with low or moderate risk.
- The **Model Prisons and Correctional Services Act, 2023** also includes provisions for granting prison leave to inmates who agree to wear electronic tracking devices.
- The **Odisha State Government** was the first to propose tamper-proof electronic trackers for undertrials accused of non-heinous offences.
- **Advantages of Electronic Tracking**
  - **Decongesting Prisons:** Reduce prison overcrowding by allowing eligible prisoners to be monitored outside prison walls.
  - **Enhanced Monitoring:** Ensure compliance with parole or furlough conditions by tracking movement and activities.

- **Cost Efficiency:** Reduce the administrative costs of managing overcrowded prisons and constant physical supervision.
- **Challenges and Concerns**
  - **Supreme Court Observation:** Earlier this year, the Court disapproved of a bail condition requiring an accused to share their live location on Google Maps, citing privacy concerns.
  - **Need for Guidelines:** The absence of clear guidelines raises the risk of misuse, potentially violating the **right to privacy** guaranteed under Article 21 of the Constitution.

**Supreme Court's Interpretation**

- **Rama Murthy vs State of Karnataka (1996):** The **Supreme Court** directed the government to address overcrowding, torture, and neglect in prisons, based on the **Mulla Committee Report (1980)**. Despite these recommendations, conditions remain appalling.
- **In re: Inhuman conditions in 1382 prisons case:** This Public Interest Litigation (PIL) has been addressing issues such as overcrowding in prisons, unnatural deaths of prisoners, and the lack of trained prison staff since 2013.
- **Retrospective Application of Section 479:** In **August 2024**, the **Supreme Court** ruled that Section 479 would apply retrospectively, benefiting first-time offenders whose cases were registered before the BNSS came into effect on July 1, 2024. States and Union Territories were directed to:
  - Identify undertrial prisoners eligible for release.
  - Submit affidavits detailing the number of eligible prisoners and actions taken.
  - The court also instructed jail superintendents to expedite the process by sending reports for court consideration.
- **Current Status**
  - By **October 22, 2024**, only **19 of the 36 states and Union Territories** had filed implementation responses.
  - On **November 19, 2024**, the Supreme Court reiterated its directive, emphasizing the identification and prioritisation of undertrial women for release under Section 479.

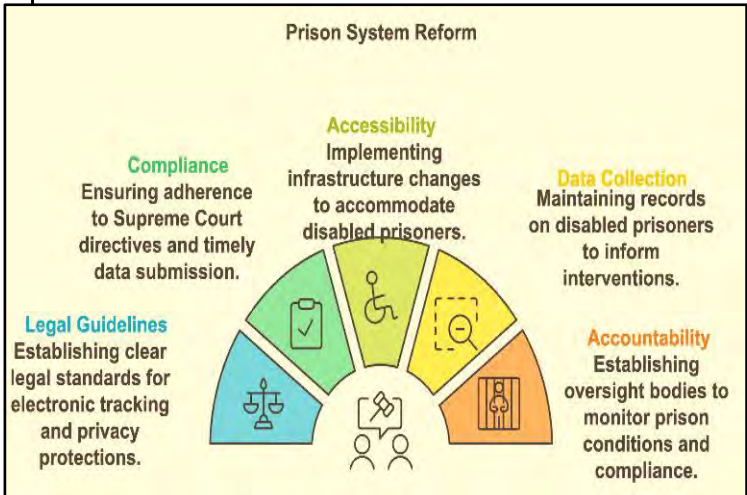
**PEPPER IT WITH:**  
Human Rights, Judicial Delays, Reformative vs. Retributive Justice.

**Challenges in Prison Reforms Case of Electronic Tracking of Prisoners: A Measure to Decongest Prisons**

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- **Challenges and Concerns**
  - **Supreme Court Observation:** Earlier this year, the Court disapproved of a bail condition requiring an accused to share their live location on Google Maps, citing privacy concerns.
  - **Need for Guidelines:** The absence of clear guidelines raises the risk of misuse, potentially violating the **right to privacy** guaranteed under Article 21 of the Constitution.
- **Political Will:** Many states and Union Territories have not fully complied with Supreme Court directives, delaying the release process.
- **Lack of Data:** Lack of official data on the number and condition of prisoners with disabilities hampers effective policy implementation.
- **Public Perception:** Societal indifference perpetuates a belief that prisoners, including those with disabilities, deserve harsh treatment.
- **Multiple Offences:** The exclusion of prisoners with multiple charges limits the scope of the reform for those caught in legal complexities.
- **Judicial Backlog:** Overburdened courts may struggle to promptly process the influx of applications for bail under Section 479.

**Way Forward:**



## Grievance Redressal Assessment And Index (GRAI) 2023

### News Excerpt

Recently, the Grievance Redressal Assessment and Index (GRAI) 2023 was launched.

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### Key Highlights of GRAI 2023

- **Eighty-nine** Central Ministries and Departments were assessed and ranked based on a comprehensive index in the dimensions of
  - **Efficiency, Feedback, Domain and Organisational Commitment.**
- The index incorporates **11 indicators** to provide a detailed evaluation under the above dimensions.
- To compute the index, **data between January and December 2023** was used from the Centralised Public Grievance Redressal and Management System (CPGRAMS).
- As part of GRAI, ministries and departments are grouped into **three groups** based on the number of grievances registered in 2023 at CPGRAMS.
- The **Department of Agriculture and Farmers Welfare**, O/o the **Comptroller & Auditor General of India** and the **Department of Investment & Public Asset Management** have topped the rankings in Groups A, B and C, respectively.

Groups	Registered Grievance Range	No. of Ministries/ Departments
A	registered grievances > 10,000	28
B	registered grievances 2,000 to 9,999	33
C	registered grievances < 2,000	28

- In the GRAI 2023, a detailed **Root-Cause Analysis** has been included with **specific inputs** on areas of further improvement.
- It also briefly describes the **technical partners** DARPG has engaged in facilitating the ministries and departments to **utilise CPGRAMS** as an optimal and effective grievance redressal media.
- The GRAI 2023 report presents a clear **roadmap** with an **advisory** for the **Ministries and Departments** to leverage CPGRAMS and its features like IGMS 2.0, Tree Dashboard, etc., to enhance grievance redressal.
  - Integrating advanced technologies like AI and ML for data analysis.
  - Predictive analytics and preventive measures while revising ATR formats for better reporting.

- Capacity building for GROs
- Enhancing accountability through audits

### About Grievance Redressal Assessment And Index (GRAI)

- It was conceptualised and designed by the **Department of Administrative reform & Public Grievances (DARPG)**, Govt. of India, based on the **recommendation** of the **Parliamentary Standing Committee** of the Ministry of Personnel, Public Grievances and Pensions.
  - The **first edition** of **GRAI 2022** was released on 21 June 2023.
- It **aims** to present an organisation-wise **comparative picture** and provide valuable **insights** about **strong and weak areas** that would help improve their performance.
  - Extending CPGRAMS integration to the third tier of government.

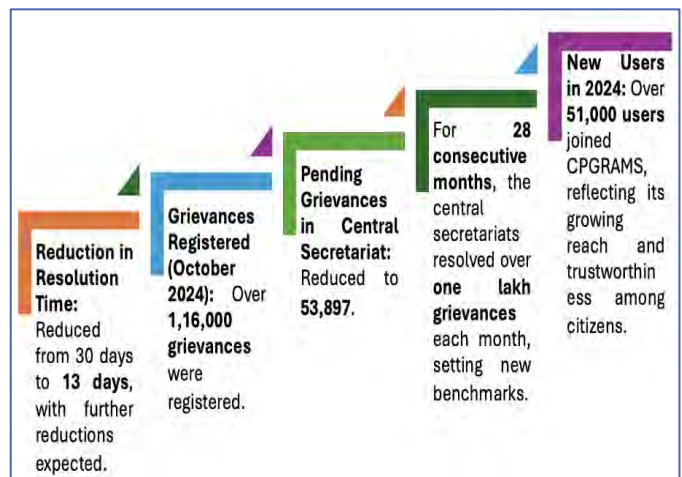
### About CPGRAMS

- It is a platform for citizens to **file and track grievances online**, which improves government transparency and accountability.
- It was launched in **2007** by the Department of Administrative Reforms & Public Grievances under the Ministry of Personnel, Public Grievances and Pensions.
- Since its launch, it has undergone **ten-step reforms**, revolutionising grievance management through
  - Improved workflow automation.
  - Centralised monitoring for better accountability.
  - Enhanced reporting capabilities.
- The **Commonwealth Secretariat** recognised it as a **best practice** in April 2024.

### Significance of Public Grievances Redressal

- **Citizens' Feedback:** Public grievances directly reflect citizen satisfaction with government services and policies. Identifying systemic gaps and improving governance are strategic priorities.
- **Citizen-Centric Governance:** The government prioritises measurable outcomes and citizen satisfaction. Grievance redressal is viewed as a **key indicator of good governance**.

### Achievements in Grievance Redressal



### Way Forward - Future Roadmap For Grievance Redressal

- **Further Reduction in Resolution Time:**

To set global standards to reduce the average grievance resolution time beyond 13 days.

**PEPPER IT WITH:**  
Participatory Governance, AI and ML Applications in Policy Implementation, Administrative Reforms.

- **Preventive Governance:**

Shift focus from resolving grievances to preventing their recurrence through systemic reforms. Leverage AI and ML to predict common issues and address them proactively.

- **Enhanced Collaboration:** Senior officials, ministry representatives, and stakeholders are working to refine grievance redressal mechanisms. Workshops and deliberations aim to build a **citizen-friendly governance ecosystem**.

### India Needs a Globally Recognised Public Policy School

#### News Excerpt

India, despite being the **world's largest democracy**, has yet to establish a globally renowned public policy institution akin to the **Harvard Kennedy School** or the **London School of Economics**.

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#### Need for a Public Policy School in India

- **Complex Democratic Structure:** India's democracy, characterised by its diversity, requires nuanced policymaking that addresses regional, social, and economic disparities.
- **Urgent Developmental Challenges:** Poverty alleviation, healthcare, education, and climate change demand innovative and inclusive solutions.
- **Strengthening Policy Ecosystems:** India lacks a vibrant ecosystem of think tanks, advocacy groups, and policy analysts that can influence decision-making.
- **Localised Expertise:** Policy education tailored to India's socio-political realities is essential to produce professionals who can operate effectively within the country's informal and decentralised power structures.

#### Significance of a Public Policy School

- **Capacity Building for Governance:** A public policy school can train leaders and administrators in evidence-based policymaking, improving governance's overall efficiency and responsiveness. Empathy-driven training can create a more inclusive approach to addressing citizens' needs.
- **Bridging Theory and Practice:** Such institutions can integrate theoretical insights with practical strategies, enabling graduates to address real-world problems effectively. Collaboration with grassroots movements and local governance bodies can foster practical learning.

- **Fostering Policy Innovation:** By leveraging advanced technologies like Artificial Intelligence (AI) and Machine Learning (ML), a public policy school can contribute to innovative solutions and predictive policymaking.
- **Stabilising the Policy Ecosystem:** An institution can provide a stable space for policy discourse, ensuring resilience to regime changes and fostering non-partisan collaboration.
- **Global Leadership:** Establishing a world-class institution would position India as a global leader in public policy education, attracting talent and fostering international partnerships.

#### Challenges in Establishing a Public Policy School

- **Centralisation of Power:** The concentration of decision-making within the executive branch limits the influence of policy experts, reducing the relevance of such institutions.

**PEPPER IT WITH:**  
Role of Think Tanks, Informal Power Structures, Good Governance Practices.

- **Weak Policy Ecosystem:** India lacks robust networks of think tanks, advocacy groups, and funding mechanisms that sustain policy schools in other democracies like the U.S. and Europe.
- **Cultural and Structural Barriers:** Informal power dynamics, such as caste hierarchies and regional politics, create additional complexities in policymaking. Policy education must address these realities to remain relevant.
- **Funding and Resources:** Building and sustaining a world-class institution requires significant investment in faculty, research infrastructure, and global collaborations. Reliance on state funding or political patronage can compromise independence.
- **Disconnect Between Politics and Policy:** Policymaking in India often lacks integration with larger political platforms, relegating policy discussions to secondary importance.
- **Lack of Localised Curricula:** Most existing policy schools in India follow Western models, which may not fully address the country's informal and decentralised governance structures.

#### Comparative Analysis: U.S. vs India

Indian Model: Centralised Power	U.S. Model: Decentralised Power
In India, decision-making is heavily centralised in the <b>executive and party leadership</b> .	The U.S. Congress independently <b>crafts legislation</b> , creating <b>multiple access points</b> for policy expertise.
<b>Policy experts</b> and institutions <b>must align</b> with the <b>political priorities</b>	A decentralised process sustains a <b>robust policy school, think tank</b> and

of top leaders to have any influence.	<b>advocacy</b>	<b>group</b>
This centralisation <b>diminishes</b> the independence and impact of think tanks, commentators, and public policy schools.	<b>Funding</b> and <b>client support</b> for these entities are tied to their ability to influence policymaking.	

**Way Forward - A Roadmap for Creating a World-Class Public Policy Institution in India**



the substance needed for intellectual nourishment. This leads to:

**Impact on Health: Brain Rot's Far-Reaching Consequences**

- Cognitive Health:** Declining attention span, forgetfulness, and procrastination impact work efficiency.
- Mental Health:** Anxiety, depression, and obsessive-compulsive tendencies are common outcomes.
- Social Well-Being:** Isolation and detachment from meaningful connections contribute to loneliness and dissatisfaction.
- Physical Health:** Irregular sleep patterns, headaches, and fatigue result from overstimulation and poor mental health.

- **Attention Deficits:** Difficulty focusing on tasks for extended periods.
- **Memory Decline:** Consuming large volumes of unchallenging content makes it harder for the brain to retain meaningful information or create long-term memories.
- **Social Disconnect:** Preference for online communication over face-to-face interactions erodes interpersonal skills and emotional understanding.
- **Compulsive Behaviors:** Fear of Missing Out (FOMO) and compulsive checking of social media for updates.
- **Example:** Many people report feeling overwhelmed when trying to stay updated on social media, news apps, and email notifications, often leading to a sense of mental fatigue known as "**brain rot**."

**SOCIAL ISSUES**

**How brain rot, Oxford's new word of the year, can hit you?**

**News Excerpt:**

**Oxford University** named "**brain rot**" as its **Word of the Year 2024**, defining it as the "deterioration of a person's mental or intellectual state due to overconsumption of trivial or unchallenging online content."

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**Understanding Brain Rot**

- Brain rot refers to a condition where **overstimulation** overwhelms the brain, impairing its ability to process information.
- It primarily affects the brain's **cortex (grey matter)**, which governs:
  - **Sensory Perception:** Hearing, taste, and smell.
  - **Cognitive Functions:** Thinking, reasoning, memory, problem-solving, and learning.
  - **Emotional Stability:** Intelligence, personality, and consciousness.

**Social Media and Brain Rot: The Junk Food Analogy**

- Mental health experts liken **excessive social media consumption** to indulging in junk food. While notifications and new content trigger the brain's reward system, providing **short bursts of pleasure**, they lack

- **Chronic stress** has been shown to severely impact cognitive function, leading to symptoms commonly referred to as "brain rot." **High-stress levels can contribute to anxiety, which impairs focus, memory, and decision-making abilities.**

**How to Prevent and Overcome Brain Rot**

- **Set Screen Time Boundaries:** Limit daily screen usage to manageable levels.
- **Foster Real-Life Connections:** Make an effort to meet loved ones in person at least once a week.
- **Be Mindful Online:** Engage with meaningful and value-adding content; avoid aimless scrolling.
- **Schedule Digital Detoxes:** Allocate specific times for device-free activities, locking distracting apps when necessary.
- **Develop Offline Hobbies:** Pursue creative or physical activities that offer fulfilment beyond screens.
- **Adopt Healthy Lifestyle Habits:**
  - Stick to a consistent sleep routine.
  - Eat a nutritious diet and avoid substance use.

**PEPPER IT WITH:**  
Digital Well-Being, Digital Minimalism and Detox, Cognitive Health.

- Regular exercise, including aerobic activities and yoga, should be practised to improve cognitive function and memory.

**Conclusion:** "Brain Rot" reflects the cognitive fatigue and diminished mental clarity resulting from information overload, monotonous tasks, chronic stress, and the pervasive use of technology. Recognizing these factors is crucial for developing strategies to combat brain rot, including managing information intake, fostering engaging activities, reducing stress, and leveraging technology mindfully.

## Garima Greh: A Safe Haven for Transgender People Amid Struggles

### News Excerpt

Government-funded **Garima Grehs**, vital safe spaces for transgender individuals, **face closure** due to delayed funds, forcing shelters to rely on loans and personal sacrifices.

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### About Garima Greh

- **Support for Marginalised Individuals for Livelihood & Enterprise (SMILE)**, a comprehensive scheme launched by the **Ministry of Social Justice & Empowerment**, provides a component named Garima Greh that exclusively provides shelter to transgender persons with basic amenities like food, medical care, and recreational facilities.
- The **Transgender Persons (Protection of Rights) Act, 2019**, under **Section 8(4)**, mandates the government to take steps for the **rescue, protection, and rehabilitation** of transgender persons, addressing their unique needs and ensuring their rights are safeguarded.
  - **Section 12(3)** further emphasises the legal responsibility to provide safe rehabilitation for transgender individuals when their immediate family is unable to care for them, as directed by a competent court.

### Transformative Impacts of Garima Grehs

- **Safe and Secure Environment:** Garima Grehs provide transgender individuals with a safe and supportive space, shielding them from societal stigma, discrimination, and violence.
- **Emotional and Psychological Support:** Counseling services help residents heal from past traumas, rebuild self-esteem, and gain mental clarity. For many, these sessions are life-saving, offering a new perspective and hope after difficult experiences.
- **Rehabilitation and Empowerment:** Skill development workshops in fields like tailoring, make-up artistry, jewellery-making, and catering equip residents with vocational skills for self-sufficiency. Access to medical care, including hormone therapy, enables residents to align their physical identities with their gender.

### Objectives of Garima Greh

The **main aim** of Garima Greh is to provide **shelter** to Transgender persons with **basic amenities** like shelter, food, medical care, and recreational facilities.

To **safeguard the rights** of Transgender persons and protect them from atrocities.

To **empower** a Transgender person through **skill development**, skill-upgradation programmes and facilitate **employment**.

To provide a safe and inclusive environment for their **holistic development**.

- **Community and Belonging:** Residents find a sense of family and camaraderie with others who share similar struggles and journeys. This environment fosters self-acceptance and personal growth, allowing individuals to live authentically.
- **Opportunities for a Fresh Start:** Garima Grehs give residents a chance to rebuild their lives, pursue their dreams, and break free from societal constraints. Many discover newfound confidence and happiness, embracing their identity and potential.
- **Facilitation of Basic Rights:** The shelters assist in securing essential identity documents, jobs, and scholarships, helping residents reintegrate into society and access opportunities they were previously denied.

### Challenges Faced by Garima Greh

- **Delayed Payments:** Annual funds have been stalled since **March 2023**, forcing shelters to rely on **loans** and directors' personal sacrifices for essentials like rent and rations.
- **Bureaucratic Delays:** The Ministry cites incomplete documentation for withholding funds, leaving shelters struggling to sustain operations.
- **Stringent Requirements:** Shelters must meet costly infrastructure guidelines, such as maintaining **3,000 square feet of space**, adding financial strain.
- **Discrimination and Exclusion:** Many transgender individuals lack **TG cards**, barring them from accessing government welfare. Societal stigma persists despite protections under the **Transgender Persons (Protection of Rights) Act, 2019**.
- **Police Harassment:** Instances of mistreatment, like the alleged 2022 assault on Delhi shelter residents, highlight gaps in protection mechanisms.
- **Overwhelming Demand:** Each shelter is designed for **25 residents** but receives far more applications annually, leaving many without support.

**PEPPER IT WITH:**  
Social Justice, Gender Equality, Social Discrimination, Right to Safe Shelter.

**Way Forward**

- Timely Fund Disbursement:** The government must streamline fund transfers and resolve documentation hurdles to ensure uninterrupted operations.
- Infrastructure Flexibility:** Relaxing stringent guidelines for space and design can alleviate financial pressures on shelters.
- Increased Capacity:** Expand the number of shelters and increase their capacity to accommodate more residents.
- Skill Development Programs:** Allocate additional funds to vocational training, enabling residents to achieve economic independence.
- Awareness Campaigns:** Educate the public and officials about transgender rights to reduce stigma and ensure fair treatment.
- Legal Support:** Strengthen legal protections against discrimination and ensure sensitive handling of complaints by law enforcement.

## Indians Need to Share Contraceptive Responsibility

### News Excerpt:

Despite the simplicity, safety, and cost-effectiveness of **male sterilisation (vasectomy)**, its adoption has **declined** significantly, with women disproportionately bearing the burden of sterilisation. This **gender disparity** hampers progress toward achieving **Sustainable Development Goal 5 (SDG 5)**, which seeks to promote gender equality and empower women by 2030.

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### About Contraception

- It refers to **methods or devices** used to **prevent pregnancy** resulting from sexual intercourse. It includes many options, allowing individuals and couples to choose what best suits their needs and circumstances.
- Types of Contraceptive Methods**
  - Barrier Methods:** An example is **condoms** (male and female), which act as physical barriers to prevent sperm from reaching the egg.
  - Hormonal Methods:** Examples include **Pills, implants, and injections** that alter hormonal levels to prevent ovulation.
  - Intrauterine Devices (IUDs):** Small devices inserted into the uterus to prevent fertilisation or implantation.
  - Natural Methods: Fertility awareness** involves tracking ovulation cycles to avoid intercourse during fertile periods.
- Sterilisation Procedures:**
  - Vasectomy (Male Sterilization):** A surgical procedure where the **vas deferens** (tubes carrying sperm) are cut or sealed to block sperm release during ejaculation.
  - Non-scalpel Vasectomy (NSV):** A minimally invasive method involving a small puncture instead of incisions, offering quicker recovery and fewer complications.

- Tubectomy (Female Sterilization):** A surgical procedure where the **fallopian tubes** are cut, tied, or blocked to prevent eggs from reaching the uterus for fertilisation.

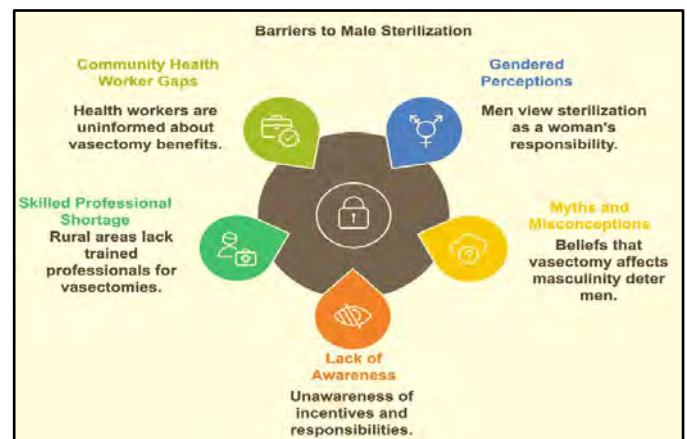
### Decline of Male Sterilization

- During the period **1966-70**, **80.5%** of sterilisations in India were **vasectomies**. Over time, however, male sterilisation lost focus due to policy shifts and socio-cultural barriers.
- Data from the **National Family Health Survey (NFHS)** shows:
  - Male sterilisation rates have steadily decreased over the last three decades.
  - In both **NFHS-4 (2015-16)** and **NFHS-5 (2019-21)**, vasectomy prevalence was stagnant at **0.3%**, while female sterilisation was at **37.9%**.
- The **National Health Policy (2017)** set a target of increasing male sterilisation to **30%**, but the country remains far from achieving this goal.

### Gender Disparity in Family Planning

- The stark gap between female and male sterilisation indicates that **women bear the overwhelming burden** of sterilisation:
  - Female sterilisation involves a **more invasive procedure, higher medical risks, and longer recovery times** compared to vasectomy.
  - This disparity perpetuates gender inequality in

**PEPPER IT WITH:**  
Family Planning, Maternal Health, Reproductive Rights.



reproductive responsibilities, undermining efforts toward **shared accountability in family planning**.

### Existing Efforts to Promote Vasectomy

- Awareness Campaigns:** The world observes **Vasectomy Day** on the **third Friday of November** to promote male sterilisation. India took a significant step in **2017** by organising a '**vasectomy fortnight**', aiming to increase awareness, address misconceptions, and generate demand.



- **Cash Incentives:** Conditional cash incentives have proven effective in encouraging vasectomy uptake:
  - A **2019 study in Maharashtra** found that rural men were more likely to opt for vasectomies when offered financial compensation.
  - In **2022**, Madhya Pradesh increased cash incentives for vasectomy by **50%**, demonstrating the impact of financial support in improving male participation.

**Global Case Studies**

- **South Korea:** Progressive societal norms and gender equality have normalised male contraceptive responsibilities. South Korea boasts the **highest vasectomy prevalence** globally.
- **Bhutan:** Bhutan popularised vasectomy through **government-run camps**, quality healthcare services, and awareness campaigns, making the procedure socially acceptable.
- **Brazil:** Brazil used **mass media campaigns** to educate the public about vasectomy safety and benefits, increasing its prevalence from **0.8% in the 1980s** to **5% in the last decade**.

**Way Forward**

- **Education & Awareness:** Promote family planning education in schools and use community engagement to address cultural taboos and destigmatise vasectomy through sustained campaigns.
- **Financial & Logistical Support:** Provide higher cash incentives for men and establish accessible sterilisation centres in underserved areas to increase vasectomy uptake.
- **Strengthening Healthcare Infrastructure:** Train healthcare providers in no-scalpel vasectomies (NSV) and enhance reporting systems to identify gaps and improve intervention targeting.
- **Media & Policy Reforms:** Use mass media campaigns tailored to regional contexts and set actionable national targets to position NSV as a safer, quicker alternative to tubectomy.

**The State of the World's Children 2024**

**News Excerpt**

The United Nations International Children's Emergency Fund (**UNICEF**) recently **released** the State of the World's Children 2024 (**SOWC 2024**) **report**, which examines the forces and trends shaping children's future by 2050.

**Key Highlights of the Report**

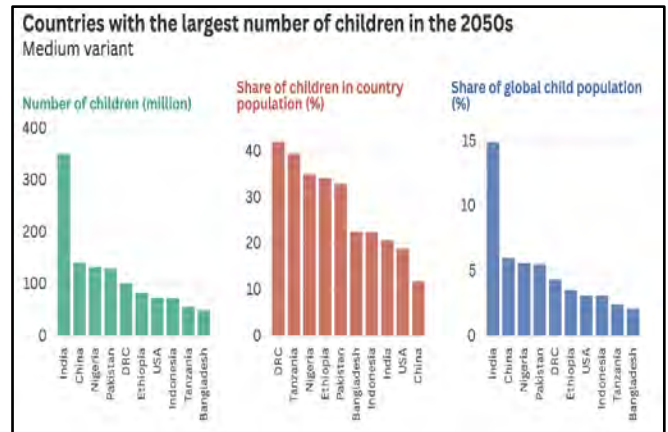
- **Megatrends Shaping Children's Lives:** The report highlights three megatrends shaping children's lives by 2050.
  - **Demographic Shift:** By 2050, the global child population will stabilise at 2.3 billion. Child populations will grow in

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**PEPPER IT WITH:**

Child Rights Advocacy, Education Policies, (IMR), Global Policies,

South Asia, Eastern and Southern Africa, and West and Central Africa. Africa's child population share is



expected to fall below 40% (from 50% in the 2000s), while it will drop below 19% in East Asia, Western Europe, and North America.

**Climate Crisis:** Nearly 1 billion children live in countries with high exposure to climate hazards, such as pollution, extreme weather, and biodiversity loss. Children's developing bodies are particularly vulnerable to pollution and extreme weather, with their brains, lungs, and immune systems at risk even before birth. Since 2022, 400 million students worldwide have experienced school closures due to extreme weather.

- **Frontier Technologies:** Artificial intelligence (AI), neurotechnology, next-generation renewable energy and mRNA vaccine breakthroughs could significantly improve childhood in the future. However, While over 95% of people in high-income countries are internet-connected, only 26% in low-income countries have access.
- **Child survival:** Global newborn survival rates stand at over 98%, while the likelihood of a child surviving to age 5 is 99.5%. Life expectancy increases from 70 years for girls and 66 for boys born in the 2000s to 81 and 76 years, respectively.
- **Socioeconomic conditions:** 23% of the world's children are projected to live in the 28 countries currently classified as low-income, more than double the share in these countries in the 2000s (11%).
- **Education:** The global education gap between girls and boys is expected to narrow, with more girls completing upper secondary education in some regions.
- **Gender Equality:** By the 2050s, gender inequality is expected to reduce in children's lives globally. However, many children are projected to live with high gender inequality in Eastern and Southern Africa and West and Central Africa.
- **Climate Hazards:** Children are projected to be exposed to extreme weather events at significantly higher rates: 8 times more to heatwaves, 3.1 times more to river floods, 1.7 times more to wildfires, 1.3 times more to droughts, and 1.2 times more to tropical cyclones.

- **Conflict Exposure:** The number of children living in conflict-prone areas is projected to drop from more than 833 million in the 2000s to 622 million in the 2050s.
- **Urbanisation:** Nearly 60% of children globally are projected to live in urban areas in the 2050s, up from 44% in the 2000s.

**India-Specific Findings**

- **Child Population:** By 2050, India is expected to have the largest child population, with about 350 million children, making up 15% of the global total. India, China, Nigeria, and Pakistan are expected to account for over a third of the world's children.
- **Climate Risks:** India ranks 26th out of 163 countries on the Children's Climate Risk Index (CCRI) 2021, reflecting high exposure to climate-related hazards. Indian children face significant risks from extreme heat, floods, droughts, and air pollution.

From the above, we can consider that prostitution is **not a crime** if it is done or **practised voluntarily** as a profession because the person involved in it believes that there are no other means of living for their livelihood, and also in cases where this prostitution is their **tradition or custom**.

**Judicial Interpretations**

- **Articles 23(1) and 23(2)** of the **Constitution**, which prohibit the trafficking of human beings and forced labour, have been interpreted by the courts to **include sex workers** within their ambit.
- **State of UP vs Kaushalya:** The Allahabad High Court **upheld** the constitutionality of the **Immoral Trafficking (Prevention) Act, 1956**, emphasising the distinction between prostitution and nuisance, thus affirming sex workers' fundamental right under **Article 21**.
- **Budhadev Karmakar vs State of West Bengal:** The Supreme Court unequivocally asserted that **sex workers are entitled to dignity and humanity**, declaring prostitution a recognised profession under **Article 19(1)(g)**. Additionally, the court ruled that sex workers should not be deprived of their **parental rights** solely due to their profession.
  - To ensure their safety and dignity, **law enforcement agencies** are instructed to treat complaints of sexual harassment against sex workers seriously, **refrain from arbitrary raids, arrests, or harassment**, and uphold their identity confidentiality during any law enforcement proceedings.

**Way Forward: Securing Children's Future**

**Demographic Transitions:** Ensure access to maternal, child, and adolescent healthcare, sexual and reproductive health services, and family planning. Develop child-friendly cities with safe, inclusive spaces and support for marginalised children, including those with disabilities.

**Climate, Mitigation & Education:** Integrate children's needs into climate strategies (e.g., NAPs, NDCs) and build climate-resilient schools, healthcare, and social services.

**Connectivity & Safe Design:** Promote digital literacy for children and educators while ensuring rights-based governance and oversight of emerging technologies.

**A Community on the Margins, Its Hidden Scars**

**News Excerpt**

**Netflix series Heeramandi** sheds light on the resilience, agency, and mental health challenges faced by sex workers — challenges that remain globally relevant today.

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**Legal Provisions For Protection of Sex Workers**

- Under the **Immoral Traffic Suspension Act 1956**, "prostitution can be **legally done**, but soliciting people and luring them into sexual activities is illegal. And prohibited by law, if any person involved in this kind of work shall be penalised."
- The law does **not** make prostitution "**per se illegal**." Still, at the same time, the **use of brothels**, living off the earnings of prostitution, **pimping, soliciting, luring others into prostitution** in prison or elsewhere, and **prostitution in public** places, etc. are crimes that are **punishable** by law.

**Intersection of Sex Work and Mental Health**

- **Common Mental Health Issues:** Sex workers frequently face conditions such as **anxiety, depression, post-traumatic stress disorder (PTSD), and substance use disorders**. These arise from multiple interlinked factors, including violence, stigma, and chronic economic insecurity.
- **Role of Stigma:** Stigma remains a significant barrier, leading to the dehumanisation and ostracisation of sex workers. It alienates them from healthcare and mental health services, exacerbating psychological distress. Internalised stigma further damages their self-esteem and ability to seek support.
- **Impact of Violence:** Many sex workers endure physical, emotional, and sexual violence from clients, intermediaries, and even law enforcement. This violence creates a cycle of trauma, leaving deep psychological scars and perpetuating PTSD.
- **Economic Pressures:** Financial desperation often drives individuals into sex work as a last resort. **The lack of stable income and alternative employment options results in chronic stress, anxiety, and a sense of helplessness.**
- **Substance Abuse:** Substance use is often a coping mechanism to deal with trauma, stress, and stigma.

However, addiction exacerbates isolation, financial insecurity, and deteriorating mental health, trapping them in a harmful cycle.

- **Social Isolation:** Ostracization from family, friends, and community further compounds their mental health challenges. This lack of a support system leads to heightened feelings of loneliness, hopelessness, and despair.

**Status of Prostitution in Various Countries**

- **New Zealand:** They legalised prostitution in 2003, in which they operate licenced brothels working under public health and employment laws.
- **Canada:** They legalised prostitution in 2013 but with strict regulations.
- **Germany:** They legalised prostitution in 2002, where the brothels are under state control and sex workers are asked to pay tax to get health insurance, pension and advantage of another government scheme.
- **Greece:** They legalised prostitution in 1834 but only in state-licensed brothels.
- **Australia:** They decriminalised prostitution through the Prostitution Act of 1992, but brothels and prostituted persons must be registered.

**Case for Legalising Prostitution**

Pros	Cons
<ul style="list-style-type: none"> <li>• Legalising prostitution would significantly enhance the <b>working conditions</b> and <b>quality of life</b> for sex workers by affording them access to <b>government schemes</b> and healthcare services.</li> <li>• Legalisation would <b>curtail</b> societal, police, and administrative <b>exploitation</b> by guaranteeing sex workers their rightful entitlements.</li> <li>• The implementation of legalisation measures would also effectively <b>mitigate</b> the spread of sexually transmitted diseases (<b>STDs</b>) through enhanced healthcare interventions.</li> <li>• Legalisation could serve as a <b>safeguard</b> for numerous women against <b>spousal abuse</b>, particularly those facing dissatisfaction within their marital relationships.</li> <li>• The regulation of prostitution through <b>taxation, akin to online gaming platforms</b> such as Dream11 and My11Circle,</li> </ul>	<ul style="list-style-type: none"> <li>• The legalisation of prostitution may exacerbate the <b>objectification of women</b>, reducing them to mere <b>objects of gratification</b> rather than individuals deserving of respect.</li> <li>• Legalisation could inadvertently <b>fuel the trafficking</b> of women and girls, perpetuating their exploitation within the prostitution business.</li> <li>• Legalisation may <b>instigate moral decay</b> among the youth, as the pursuit of instant gratification could overshadow long-term consequences, potentially leading to a societal acceptance of prostitution as a <b>viable career path</b>.</li> <li>• The normalisation of prostitution could <b>erode traditional family values</b> and religious obligations among Indian citizens, potentially destabilising</li> </ul>

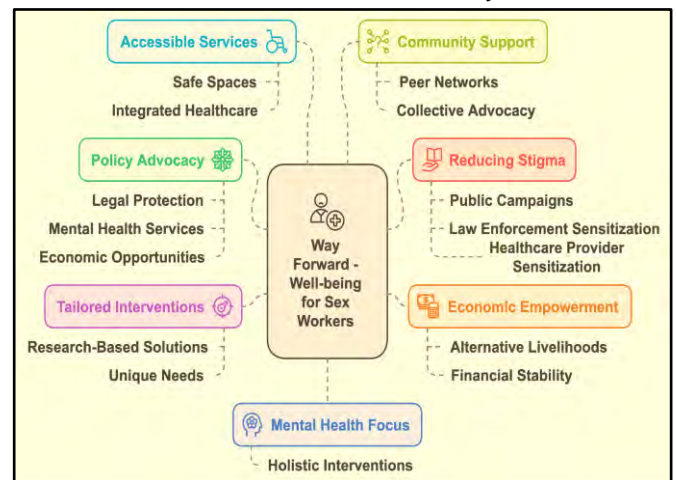
holds the potential to generate substantial government **revenue**, further bolstering the economic landscape.

societal norms and moral frameworks.  
 • Legalisation may inadvertently open the floodgates to **societal upheaval** and **moral decline** within India.

**Global Perspective on Sex Work and Mental Health**

- A report titled “**Sex Work and Mental Health: Access to Mental Health Services for People Who Sell Sex**” highlights the challenges faced in countries like Germany, Italy, Sweden, and the UK. **Peer support networks** have proven to be critical in offering emotional and social support to sex workers.
- The **Sonagachi project in Kolkata**, a red-light district initiative, has started a **mental health database** to provide targeted interventions for sex workers. This example underscores the importance of tailored, data-driven approaches to address mental health issues effectively.

**PEPPER IT WITH:**  
 Human Trafficking, Forced Labour, HIV Prevention, Stigma and Ostracisation.



**Evolving Senior Care Economy in India**

**News Excerpt**

The Ministry of Social Justice and Empowerment is actively working on reforming the **Maintenance and Welfare of Parents and Senior Citizens Act, 2007** and updating the **National Policy for Older Persons, 1999**, to address the growing demands of India’s ageing population.

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**Current Landscape of Senior Care in India**

- **Evolving Senior Living Market**
  - The senior living market is witnessing dynamic changes with contributions from private developers, operators, and service providers.

- Traditionally focused on state-supported old age homes, the sector now includes diverse options such as active living communities and intergenerational projects.

- Key Statistics**
  - Population Growth:** Citizens aged 60+ are projected to grow from **157 million in 2024 (11% of the population)** to:
    - 260 million in 2040 (16%)
    - 346 million in 2050 (21%)
  - Senior Living Units:** Launches have risen to an average of **2,000 units per year since 2022**, compared to 1,100 annually between 2014 and 2021.
  - Regional Concentration:**
    - South India: 60% of market share.
    - North India: 20%
    - West India: 16%
    - East India: 4%

- Private Sector Contributions**
  - Companies such as Ashiana Housing, Columbia Pacific, Antara, Pranjape, Athulya, Primus Life, and Covai Care account for 81% of the market inventory.
  - Demand for senior living units is expected to rise to **2.3 million by 2030**, compared to **1.6 million in 2024**. Policymakers are accelerating efforts to ensure senior care keeps pace with rapid population growth.
  - The market is dominated by units priced between ₹50 lakh and ₹1 crore, with sizes ranging from 500 to 1,500 sq. ft.
- Emerging Trends**
  - Seniors are increasingly seeking active, digitally connected lifestyles.
  - Intergenerational living models like Antara's new project aim to integrate seniors and non-seniors within the same community.

**Challenges in Senior Care Development**

- Growing Senior Population:** By 2050, India will have one senior for every five citizens, with a significant feminisation of the demographic requiring gender-specific care.
- Disease Burden:** Increased life expectancy leads to challenges like instability, immobility, impairment, and incontinence.
- Real Estate Delays:** Long development cycles (4–5 years) are unsuitable for time-sensitive senior needs.
- Urban Concentration:** Senior care facilities are mostly in cities, leaving rural areas underserved.
- Cultural Stigma:** Preference for ageing at home and misconceptions equate senior living communities with old-age homes.
- Inadequate Infrastructure:** Cities lack age-friendly public spaces, transport, and housing with safety features like elevators and ramps.

**Way Forward:**

- NITI Aayog Recommendations:** Develop elderly-friendly housing reforms. Ensure quality service delivery

through market stewardship. Reduce development cycle delays to meet urgent senior housing needs.

- Single Nodal Agency:** Establish a single agency to address senior care, integrating aspects of social justice, health, housing, and infrastructure.
  - A task force should study global best practices, such as Japan's and Switzerland's senior care models.
- Urban Planning:** Reserve land for senior living in city master plans to simplify allocations and reduce costs.
- Regulatory Framework:** Implement accreditation for senior care facilities. Develop a single-window approval system to expedite project timelines.
- Government Initiatives:** Extend health insurance under **Ayushman Bharat PM-JAY** to seniors aged 70+. Remove age limits on health insurance purchases, as approved by **IRDAI**.
- Updating the 1999 National Policy for Older Persons:** The **1999 policy** is being revised to guide senior care strategies for the next 25 years. The new policy will reflect changing demographic needs and promote inclusive and sustainable senior care.

**PEPPER IT WITH:**  
Demographic Transition, Ageing Population, Urban Planning, Social Security.

**ECONOMY**

**Building on the revival of the manufacturing sector**

**News Excerpt:**

India's journey to becoming a global manufacturing hub has gained momentum with the government's strategic policy initiatives, particularly the Production Linked Incentive (PLI) scheme.

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**Key Highlights of the Production Linked Incentive (PLI) Scheme and ASI 2022-23 Findings:**

- PLI Scheme's Impact on Manufacturing:** The scheme has significantly transformed manufacturing sectors such as mobile manufacturing, electronics, pharmaceuticals, automobiles, and textiles. It has driven enhanced production, exports, and job creation, showcasing its effectiveness.
- Annual Survey of Industries (ASI) 2022-23 Results:** Manufacturing output witnessed a 21.5% growth rate.. Gross Value Added (GVA) in manufacturing rose by 7.3%, reflecting increased value generation within the sector.
- Correlation Between PLI Scheme and Sectoral Performance:** The ASI report highlights a positive correlation. Sectors such as basic metal manufacturing, coke and refined petroleum products, food products, chemicals and chemical products, and motor vehicles contributed 58% to the total manufacturing output.

- **Sector-Specific Growth:** The sectors, many of which are part of the PLI scheme, recorded an impressive 24.5% growth in output during 2022-23.

### The Recovery of the Manufacturing Sector

- **ASI Survey Scope:** Covers registered, organized manufacturing sectors, including factories with:
  - 10+ workers using power.
  - 20+ workers without power.
- **India as a Global Manufacturing Hub:** The positive momentum sets the stage for India to emerge as a global manufacturing powerhouse. However, strong policy reforms are crucial to fully leverage this potential.
- **Suggestions to Expand the PLI Scheme:**
  - **Extend PLI incentives to labour-intensive sectors:** Apparel, leather, footwear, and furniture.
  - **Include sunrise industries:** Aerospace, space technology, and Maintenance, Repair, and Overhaul (MRO) sectors.
  - **Focus on import-dependent sectors:** Promote domestic capabilities in areas like capital goods to reduce reliance on imports.
- **Emphasis on Advanced and Green Manufacturing:** Promote green manufacturing to align with global sustainability trends.
- **Challenges Highlighted by ASI Data: Significant divergence between:**
  - Manufacturing output growth (21.5%).
  - Gross Value Added (GVA) growth (7.3%).
  - Driven by soaring input prices, which surged by 24.4% in 2022-23, eroding value addition.
- **Addressing High Input Costs:** High dependency on imported inputs impacts production costs.
  - Proposal for a streamlined import tariff structure:
    - 0-2.5% for raw materials.
    - 2.5-5% for intermediates.
    - 5-7.5% for finished goods.
  - Simplified tariffs can reduce input costs, boost competitiveness, and improve India's integration into global value chains.

### The Concentration of Industrial Activity:

- **Regional Concentration:** States like Maharashtra, Gujarat, Tamil Nadu, Karnataka, and Uttar Pradesh dominate India's manufacturing sector.
- **Together, these states account for:**
  - 54% of total manufacturing Gross Value Added (GVA) and 55% of employment in the manufacturing sector.
- **Imbalance and Challenges:**
  - **Uneven Development:** This concentration results in limited industrial growth in other regions, leading to regional disparities in economic and social development.

- **Restricted Growth Potential:** Over-reliance on a few states may hinder the holistic growth of India's manufacturing capabilities.
- **Need for Equitable Development:**
  - **Active Role of States:** To unlock the full potential of India's manufacturing sector, states across the country must actively participate in fostering industrial growth.
  - **Market Reforms:** Critical reforms are needed in areas such as:
    - **Land:** Streamlining land acquisition processes.
    - **Labour:** Reforming labour laws to promote flexibility and productivity.
    - **Power:** Ensuring reliable and cost-effective energy supplies.
- **Infrastructure and Investment Promotion:** Developing better infrastructure across all states can attract investments. Encouraging policy reforms and incentives for industries to set up operations in underdeveloped regions will drive balanced growth.

### MSMEs and Women's Participation in Manufacturing:

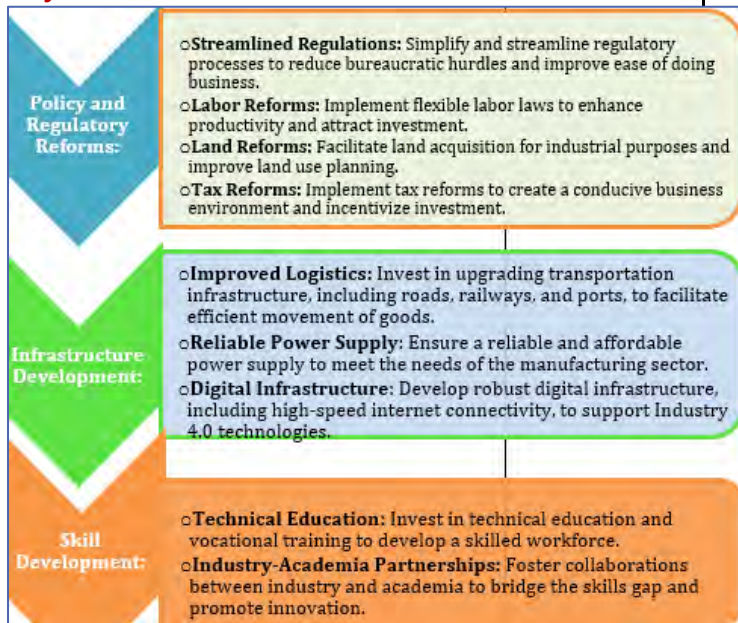
- **Importance of MSMEs:**
  - **Contribution to GDP:** MSMEs account for around 45% of India's manufacturing GDP.
  - **Employment Generation:** They employ approximately 60 million people, making them a critical component of the economy.
- **PLI Scheme for MSMEs:** To empower MSMEs, tailored incentives in the PLI scheme are recommended. Measures could include lowering capital investment thresholds and reducing production targets to help MSMEs scale up, innovate, and integrate into global value chains.
- **Boosting Women's Workforce Participation:**
  - **Potential Impact:** According to the World Bank, India's manufacturing output could increase by 9% with higher female workforce participation.
- **Strategic Goals for 2047:**
  - **Vision for Manufacturing:** To support India's transformation into a developed economy by 2047, manufacturing must play a pivotal role.
  - **The sector's share in Gross Value Added (GVA) could increase:** From 17% currently to over 25% by 2030-31. To 27% by 2047-48, provided consistent efforts are made to enhance domestic manufacturing capabilities.
- **Competitiveness and Cost Reduction:** Improving the ease of doing business and reducing the cost of operations are crucial steps. Leveraging ongoing policy

#### PEPPER IT WITH:

Labor Code, Manufacturing GDP Percentage, Tax on Industry

measures will help seize growth opportunities and boost the sector.

**Way forward:**



- **CCI's Observations:** The CCI noted that prolonged pilot programmes and preferential policies could distort competition. A lack of transparency in Google's policy enforcement raised concerns about potential anti-competitive practices.

**Allegations Against Google in the RMG Ecosystem Probe:**

- **Selective Pilot Program:** In 2022, Google initiated a pilot programme to allow only two types of real money gaming (RMG) apps—Daily Fantasy Sports (DFS) and rummy—on its Play Store in India. The pilot was limited to one year, and other RMG apps were excluded, which Winzo described as discriminatory, arbitrary, and without justification.

- **Restrictive Advertisement Policy:** Google allegedly updated its advertisement policies in 2022, permitting only DFS and rummy apps to host ads. Winzo argued that this restriction on advertisements denied non-DFS and non-rummy apps the opportunity to benefit from Google's extensive user base.

- **Warnings on Sideloaded Apps:** Winzo claimed that when users sideloaded its app (i.e., installed it directly from its website rather than the Play Store) and attempted to make in-app payments using Google Pay, warning messages were displayed: Messages included alerts like "This person might be flagged as risky" and "This is an unusually high amount". These warnings, according to Winzo, negatively impacted user trust and transactions on their platform.

**The implications of CCI's investigation into Google over real money gaming**

**News Excerpt:**

The CCI's investigation comes just days after it fined Meta Rs 213.14 crore for "abusing" its dominant position in relation to WhatsApp's controversial 2021 update to its privacy policy – showing the growing antitrust scrutiny on tech giants in India.

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**CCI Probe into Google's Alleged Abuse of Dominance in RMG Ecosystem:**

- **Probe Initiation:** The Competition Commission of India (CCI) has initiated a probe against Google for alleged abuse of its dominant position in the real money gaming (RMG) sector.
- **Complaint Details:** The complaint was filed by Winzo, an RMG platform, which raised concerns over Google's pilot project that selectively allowed apps like Dream11 and rummy games on its Google Play Store. Winzo alleged that this selective policy created discrimination and market distortion, disadvantaging other players in the industry.
- **Impact on RMG Industry:** User acquisition and marketing costs make up 60-70% of expenditures for RMG businesses. Preferential access to the Play Store reportedly boosted margins for DFS (Daily Fantasy Sports) and rummy apps, while non-DFS players did not benefit similarly. Winzo argued that this policy could disrupt the market, harm early-stage ventures, and stifle innovation and fair competition.

**Google's Defence in the RMG Ecosystem Probe:**

**Lack of Objective Definition for Games of Skill:** Google argued that in India, there is no clear or objective definition of what constitutes a "game of skill." The determination depends on the specific format, features, and rules of each game, requiring a case-by-case evaluation.

**Pending Online Gaming Regulations:** Google highlighted that the online gaming rules notified by the IT Ministry are still under consideration. These rules mandate the establishment of self-regulatory bodies to decide which games can be hosted on intermediaries like the Play Store, but their implementation remains incomplete.

**Fragmented Legislative Framework:** Google raised concerns about the fragmented nature of gaming laws in India. Different state governments have distinct regulations governing online gaming, leading to inconsistent and varied legal frameworks across the country.

**Increasing Scrutiny on Tech Giants in India:**

- **CCI Investigation into Meta:** The Competition Commission of India (CCI) recently fined Meta, the parent company of WhatsApp, ₹213.14 crore for abusing its dominant position. The case pertains to WhatsApp's 2021 privacy policy update, which was found to be controversial and raised antitrust concerns.
- **Cease-and-Desist Directions:** The CCI issued cease-and-desist orders against Meta and WhatsApp, requiring them to halt specific practices.
- **Behavioural Remedies Imposed:** Meta and WhatsApp were directed to implement certain behavioural remedies within a defined timeline to ensure compliance with fair practices.
- **Restrictions on Data Sharing:** For a period of five years, WhatsApp is prohibited from sharing user data collected on its platform with other Meta-owned companies for advertising purposes.
- **Growing Antitrust Scrutiny:** This decision reflects increasing regulatory scrutiny of major tech companies in India, particularly their dominance and practices in the digital ecosystem.

**PEPPER IT WITH:**  
 Consumer policy in India  
 Cyber fraud protection  
 Technical protection laws



**Global Wage Report 2024-25**

**News Excerpt:**

The International Labour Organization (ILO) has released the Global Wage Report 2024-25.

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**Global Wage Report 2024: Key Highlights:**

**Part I - Global Wage Trends**

- **Recovery in Wage Growth:** After sustained inflation-driven declines, average nominal wages began to grow faster than inflation globally in 2023. Global real wage growth increased from -0.9% in 2022 to 1.8% in 2023. In 2024, real wage growth recorded a 2.7% increase, the largest in over 15 years.
- **Regional Disparities:**
  - **2023 Trends:** Positive real wage growth in most regions **except Africa (-2.4%), Northern America**

**(0.0%), and Northern, Southern, and Western Europe (-0.2%).**

- **2024 Trends:** Wage growth ranged from 17.9% in Central and Western Asia to 0.3% in Northern America. Africa and Arab States experienced stable wage levels.
- **Advanced vs. Emerging Economies:** Advanced G20 economies saw negative wage growth in 2022 (-2.8%) and 2023 (-0.5%), but a recovery to 0.9% in 2024. Emerging G20 economies sustained growth with 1.8% (2022), 6.0% (2023), and 5.9% (2024).
- **Excluding China's Influence:**
  - Global real wage growth excluding China was:
    - 1.3% in 2023.
    - 2.3% in 2024.

**Inflation and Economic Growth:**

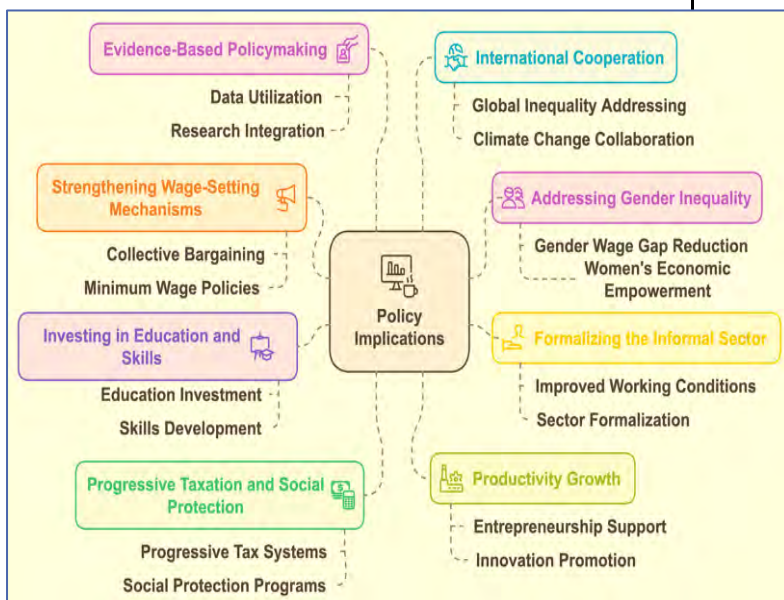
- **Global Inflation Trends:** Inflation decelerated markedly in high-income countries in 2023 and 2024 but remained a challenge in emerging and developing nations.
- **Economic Resilience:** Despite inflation-control measures slowing post-pandemic recovery, global economic growth remained strong at:
  - 3.3% in 2023.
  - Projected 3.2% in 2024.
- **Minimum Wages**
  - **Adjustments and Challenges:** In 2022, 60% of countries adjusted minimum wages, but only 25% saw real wage value increase. In 2023, 55% of countries witnessed real minimum wage increases, though these were insufficient to offset prior declines.
  - **Cost-of-Living Crisis Impact:** The 2021–2022 crisis disproportionately affected low-wage earners, who spend more on essential goods and services, which saw sharper price increases.
- **Labor Productivity and Wages**
  - **Long-Term Trends:** In high-income countries (1999–2024), labor productivity rose 29%, outpacing real wage growth (15%). Most of the productivity-wage gap occurred between 1999 and 2006, with temporary deviations during major crises (e.g., 2008 financial crisis, COVID-19).
  - **Recommendation: Prioritize Low-Wage Earners:** Adjust minimum wages to preserve purchasing power, particularly for low-wage earners. Account for economic conditions while protecting against inflationary pressures.

**Part - II Trends in labour income inequality in the twenty-first century**

- **Wage Inequality:**
  - **Global Disparities:** Significant wage inequality exists across countries, with low-income countries exhibiting higher levels.
  - **Gender Wage Gap:** Women consistently earn less than men across all income groups and wage levels.

- **Informal Sector Disadvantage:** Workers in the informal sector, often women, are disproportionately concentrated at the lower end of the wage distribution.
- **Declining Wage Inequality:** In many countries, wage inequality has decreased over the past two decades, particularly in low-income and lower-middle-income countries.
- **Global Wage Distribution:** The global wage distribution is skewed, with a large proportion of workers concentrated at the lower end and a small minority at the top.
- **Labour Income Inequality:**
  - **Non-Wage Workers:** A significant portion of the global workforce, particularly in low- and middle-income countries, consists of non-wage workers.
  - **Gender Disparities:** Women are overrepresented among non-wage workers, often in low-paying and informal jobs.
  - **Informal Sector Dominance:** Informal employment is prevalent among non-wage workers, especially in low-income and middle-income countries.
  - **Increased Inequality:** Including non-wage workers in the analysis typically increases the measured level of inequality.
  - **Declining Inequality:** Despite the inclusion of non-wage workers, labour income inequality has decreased in many countries, particularly in lower-middle-income countries.

**Key Policy Implications:**



**Part - III Way-Moving Forward:**

- **Key Findings:**
  - **Persistent Wage Inequality:** High levels of wage inequality persist globally, particularly in low-income countries.

- **Gender Wage Gap:** Women continue to earn less than men across all income groups.
- **Informal Sector Disadvantage:** Workers in the informal sector, often women, face lower wages and poorer working conditions.
- **Declining Wage Inequality:** While wage inequality has decreased in many countries, particularly in low-income and lower-middle-income countries, significant disparities remain.
- **Rising Labour Income Inequality:** Including non-wage workers in the analysis reveals higher levels of inequality, especially in low-income and middle-income countries.

**PEPPER IT WITH:**  
National Debt. State development, International Lender Organisations.

**International Debt Report 2024**

**News Excerpt:**

The newly published IDR 2024 includes an analysis of end-2023 external debt flows and debt stock positions as well as the macroeconomic and debt outlook for 2024 and beyond, and updates on the debt transparency agenda.

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**More detail about news:**

- The IDR, an annual World Bank publication, provides external debt statistics and analysis for low- and middle-income countries reporting to its Debtor Reporting System (DRS).
  - For over five decades, it has shaped development finance policies by offering timely and comprehensive debt data.
  - The IDS-DSSI database also details deferred debt service by bilateral creditors and projected monthly debt-service payments.
- **Key Points on Debt Servicing and External Debt in LMICs (2023):**
  - **Debt Servicing Costs:** Reached a record US\$1.4 trillion; excluding China, costs rose to US\$971.1 billion (19.7% increase from 2022). Growth driven by high debt levels, interest rates, and currency depreciation against the US dollar.
  - **Role of Multilateral Lenders:** Institutions like the IMF, World Bank, and regional banks became primary financial lifelines, as private borrowing declined due to adverse market conditions and a shift to concessional loans.

- **Net Transfers:** Multilateral creditors provided positive net transfers via low-interest, long-term loans. Private creditors had negative net transfers, with a deficit of US\$13.8 billion in 2023.
- **External Debt Portfolio:** Debt to multilateral creditors rose by 6.8% to US\$1.3 trillion; private creditor debt grew



marginally by 0.8%. For IDA-eligible countries, multilateral debt increased by 10.1%, with the World Bank holding 42.6%.

- **Total External Debt:** LMICs' external debt reached US\$8.8 trillion (2.4% increase); excluding China, it rose by 3.8% to US\$6.4 trillion. Short-term debt grew by 3.4%, long-term by 2.0%.
- **Debt Burdens:** External debt stood at 34.4% of GNI; for IDA-eligible countries, it reached 40.6%, as debt growth outpaced income growth, straining resources for critical sectors.
- **Growth of Multilateral Debt:** Debt to the World Bank and IMF grew by 63.1% since the pandemic, far outpacing private lending. World Bank debt totaled US\$421.8 billion (34% of all multilateral debt).

**PEPPER IT WITH:**  
Average wage rate.  
Income level in state  
wise, Employment rate  
in India.

**Rising Interest Payments:**

Interest payments on public and private debt have increased across all regions due to monetary tightening in recent years.

New loan commitments to LMICs have also become more expensive: Interest rates on new loans from official creditors increased by 2.1 percentage points, reaching 4.09% in 2023. Rates on loans from private creditors rose by 1.37 percentage points, reaching 6.0%, the highest level since 2008.

Interest rates are expected to stabilize as central banks begin to ease their policies.

**World Energy Employment 2024 report**

**News Excerpt:**

The International Energy Agency (IEA) published the third edition of the World Energy Employment (WEE) report in 2024.

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**Executive Summary on Global Energy Employment Trends (2023):**

- **Global Energy Employment Overview:**
  - **Growth:** The energy sector added 2.5 million jobs in 2023, bringing total employment to over 67 million workers.
  - **Growth rate:** Energy employment grew at 3.8%, outpacing the global economy's average growth of 2.2%.

- **Drivers:** Growth was fuelled by record investments across energy sources following the global energy crisis.
  - **Regional Trends: China:** Over 90% of energy job growth in clean energy.
  - **Middle East:** Fossil fuels accounted for 80% of job additions.
- **Clean Energy as a Growth Driver:**
  - **Year-on-Year Growth:** Clean energy employment grew by 4.6%.

**Sector Highlights:**

- **Solar PV:** Added over 500,000 jobs, leading the clean energy growth.
- **Electric Vehicles (EVs) & Batteries:** Gained 410,000 jobs.
- **Wind Energy:** Despite some layoffs, employment increased due to new projects.
- **Challenges:** Sectors faced skill shortages, particularly in high-specialization areas like grids and nuclear power.
- **Fossil Fuel Employment Trends:**
  - **Overall Growth:** Fossil fuel jobs increased by 3%.
  - **Oil & Gas:** Added nearly 600,000 jobs, driven by LNG infrastructure and upstream projects.
  - **Coal:** Employment declined due to improved mining productivity and reduced demand for new coal-fired power plants.
  - **Internal Combustion Engine Vehicles:** Added 440,000 jobs, slightly surpassing EV-related job growth.
- **2024 Outlook for Energy Employment:**
  - **Slower Growth:** Predicted job growth of 3%, down from 3.8% in 2023.

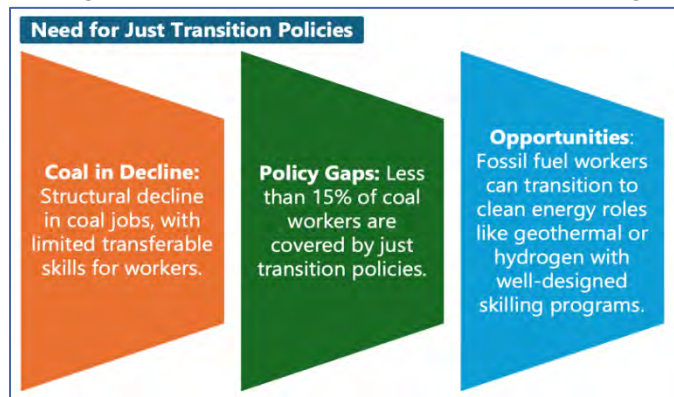
**Key Factors:**

- Tight labour markets, high interest rates, and uncertain energy outlook.
- Clean energy firms are optimistic; fossil fuel firms are cautious.
- **Manufacturing Leads Job Growth:**
  - **Key Contributor:** Responsible for over 40% of energy job additions in 2023.
  - **Investment:** Clean energy manufacturing investment surged by 50%.
    - **Regional Trends: China:** Added 300,000 manufacturing jobs, growing by 9%.
    - **Advanced Economies:** Growth rate of 10%, though with fewer absolute jobs.
- **Challenges for Emerging Economies:**
  - **Limited Success:** Only 25% of clean energy job growth since 2019 occurred in emerging economies outside China, despite representing 60% of the global workforce.

- **Barriers:** Weak manufacturing base, skill shortages, and inadequate infrastructure.

**Success Stories:**

- **India & Southeast Asia:** Represent nearly 15% of global clean energy manufacturing jobs.
- **Upstream Growth:** Emerging economies contributed 80% to job growth in raw materials like critical minerals.
- **Skill Shortages and Workarounds:**
  - **Persistent Issue:** Most energy firms report difficulties in finding qualified workers.
  - **Temporary Solutions:**
    - Upskilling existing trade workers (e.g., plumbers, electricians) for clean energy roles.
    - On-the-job training and government incentives for vocational retraining.
- **Rising Energy Wages:**
  - **Trends:** Wages for energy-specific roles grew by up to 9%, exceeding non-energy job wage growth of 6%.
  - **Clean Energy Premium:** Wage growth in clean energy sectors outpaced fossil fuels, though oil and gas workers continue to earn 15% more on average.



- **Improving Job Quality and Gender Equity:**
  - **Informal Workforce:** Significant informal employment in emerging economies; targeted policies in India and Indonesia aim to formalize this sector.
  - **Gender Balance:** Women make up:
    - 40% of the solar PV workforce, double the share in oil and gas.
    - Less than 3% of trade workers (e.g., roofers, electricians).
- **Addressing Uncertainties:**
  - **Geopolitical Risks:** Uncertainties in global policies could impact energy transition timelines.
  - **Key Policies Needed:** Education, skilling programs, and clear policy frameworks to ensure competitive and inclusive workforce growth.

**PEPPER IT WITH:**  
Unemployment, employment in green energy, Financial facility for Self-employment.

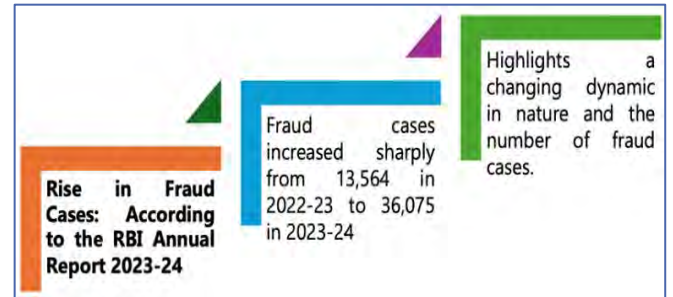
**RBI's new norms may help detect financial frauds**

**News Excerpt:**

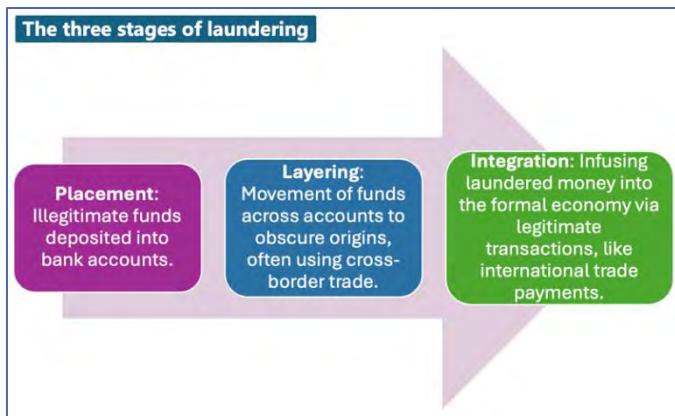
Recently, the Reserve Bank of India issued 'Internal Risk Assessment Guidance for Money Laundering/Terrorist Financing Risks'.

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**Key Points on Fraud Risks and Money Laundering:**



- **Unique Aspects of the New Recommendations:**
  - Emphasize a data-driven, quantitative approach to fraud risk management.
  - Focus on a risk-based framework, addressing frauds in their entirety.
- **Concerns with Money Laundering:**
  - The issue extends beyond the use of banking channels for laundering dirty money:
  - Includes terrorist financing and other illegal activities.
- **Techniques Used in Money Laundering:**
  - **Smurfing:** Breaking large cash deposits into smaller amounts below the regulatory threshold and depositing them into multiple accounts to avoid detection.
  - **Trade-Based Money Laundering:** Using trade flows to manipulate payments, a growing concern for the Financial Action Task Force (FATF).
- **Credit Frauds and Bank Vulnerabilities: Credit frauds are not just about creating non-performing assets (NPAs):**
  - Unscrupulous borrowers may siphon funds for illegitimate activities.
  - This inadvertently makes banks conduits for illegal operations.
  - RBI has expressed significant concern over financial frauds, especially credit frauds.
- **Importance of Financial Institutions:**
  - Without involvement of financial institutions, it is nearly impossible to execute the three stages of money laundering (placement, layering, integration).
  - Thus, banking systems must adopt stricter measures to combat these activities.

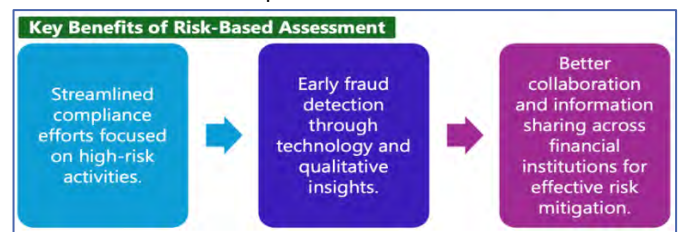


- **Regulatory Challenges and Responses:**
  - **Growing fraud and laundering activities demand:**
    - Robust regulatory frameworks.
    - Use of data analytics and monitoring tools.
    - International cooperation to combat trade-based laundering and cross-border frauds.

**Risk-Based Assessment:**

- **Rationale for Risk-Based Assessment:**
- **Resource Optimization:** Continuous monitoring of early warning systems is resource intensive. A risk-based approach enables banks to allocate resources where risks are higher.
- **Customized Compliance:** Compliance measures are tailored to the risk levels of specific business units. For example:
  - Customers involved in international trade payments face heightened risks.
  - Such customers require additional due diligence, including:
    - Proof of business and Import-Export Code (IEC) documentation.
    - Continuous monitoring of business activities and international transactions.
- **Emphasis on Data-Driven Risk Identification:** Focus on quantifying risks through a structured, data-driven framework.
- **Newly introduced guidelines include:**
  - Weight assignment to various risk categories.
  - Encouragement for banks to use internal data alongside external sources for better risk assessment.
- **Leveraging Internal Data for Early Warnings: Banks possess rich internal data that can be utilized for:**
  - Detecting early warning signals.
  - Generating transaction alerts.
  - Data mining and qualitative analysis are essential for optimal utilization of this data.
- **Use of Technology in Fraud Detection: Natural Language Processing (NLP):**
  - Useful for analyzing documents, such as credit notes, to extract early signals of fraud.

- Especially critical for credit frauds, which often have a gestation period with early, qualitative warnings.
- **Enhanced KYC Mechanism:**
- RBI updated the Master Direction on KYC, emphasizing:
  - **Robust use of the Central KYC Records Registry (CKYCR):**
    - Incremental or new customer information is updated on CKYCR by reporting entities.
    - Other financial institutions dealing with the same customer receive these updates, ensuring better information sharing across banks.
- **Focus Areas on Risk-Based Approach:**
  - **Anti-Money Laundering:** Risk assessment guidance includes measures to combat money laundering, particularly in high-risk areas like cross-border trade and credit frauds.
  - **Internal System Revamp:** Banks are encouraged to overhaul their systems using:
    - Advanced analytics.
    - Shared data pools like CKYCR.



**AGRICULTURE**

**Emerging Technologies in Aquaculture**

**News Excerpt:**

Aquaculture in India has seen remarkable growth and transformation, making the country one of the world's largest fish producers. Currently, India is the second-largest producer of farmed fish globally, contributing significantly to food security, employment and economic growth.

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**Aquaculture in India:**

- **Contribution of Aquaculture to Exports:** Aquaculture significantly contributes to India's agricultural exports, with shrimp farming being a major component.
- **Growing Demand:** Rising population and consumption rates have led to increased global demand for fish as a protein source.
- **Intensification of Aquaculture:** Practices include higher stocking densities and greater use of external inputs like feed and chemicals.

**PEPPER IT WITH:**  
Digital Banking application, KYC, Cyber fraud

- **Innovative Fish Farming Approaches:** Adoption of **Biofloc Technology (BFT) and Recirculating Aquaculture Systems (RAS)** in India:
  - Offers intensified production and sustainability.
  - Helps reduce environmental impact and keeps diseases at bay.
- **Government Support:** The Department of Fisheries, Government of India, promotes these technologies by providing subsidies through national and state-level schemes.
- **Scientific Research and Development:** **ICAR-Central Institute of Freshwater Aquaculture (CIFA) and ICAR-Central Institute of Brackishwater Aquaculture (CIBA)** are researching various aspects of BFT and RAS. Successful implementations have emerged from their engagement with farmers.

### Biofloc Technology (BFT):

- **Definition of BFT:** Biofloc Technology (BFT) is a closed tank-based fish farming system that utilizes beneficial bacteria (floc) to clean water by recycling organic waste.
- **Role of Beneficial Bacteria:** **Heterotrophic bacteria (e.g., Bacillus, Pseudomonas, Nitrosomonas, Nitrobacter, Acinetobacter, Alcaligenes)** convert uneaten feed and fish waste into microbial biomass, which can be consumed by fish or shrimp.
- **Water Quality Management:** Keeps water clean without frequent changes. Reduces dependence on chemicals and antibiotics by maintaining a balanced environment.
- **Nutritional and Cost Benefits:** Fish derive extra nutrients from recycled waste, reducing feed costs. This makes BFT a sustainable, cost-effective, and environmentally friendly method.
- **Aeration System:** The system includes mechanical filtration and aeration to ensure sufficient dissolved oxygen levels, promoting microbial activity and minimizing infection risks.
- **Disease Prevention:** Microbes in the biofloc compete with pathogens for resources, limiting pathogen growth and proliferation.
- **Suitability for Small Farmers:** Can be implemented in small areas or used for backyard farming, making it ideal for farmers with limited land.
- **Challenges:** High initial setup costs may be a barrier for some farmers.

### Recirculating Aquaculture System (RAS):

- **Definition of RAS:** Recirculating Aquaculture System (RAS) is a closed-loop tank-based farming system that recycles water through filtration to remove waste and keep the water safe for fish.
- **Filtration Mechanism:** Includes both mechanical and biological filtration units to clean water and remove harmful waste.

- **Minimal Interventions:** Automated setup enables easy monitoring of water quality, culture health, and disease prevention. Reduces the need for disinfectants or antibiotics due to improved biosecurity.
- **Controlled Environment:** Offers control over critical factors such as temperature, oxygen levels, and water cleanliness, ensuring optimal growth conditions for fish.
- **Flexibility in Setup:** Can be established indoors or in areas without access to natural water sources.
- **Freshwater Conservation:** Promotes water recycling, contributing to efficient use of freshwater resources.
- **Synergy with BFT:** Both RAS and (BFT) help conserve water and reduce environmental impact.

### Challenges and Limitations of BFT (Biofloc Technology):

- **High Initial Investment:** Setup costs range from ₹4-5 lakh, making it financially challenging for small-scale farmers.
- **Need for Continuous Monitoring:** Daily checks are required to maintain water quality and manage the carbon-to-nitrogen ratio to support microbial growth.
- Flocculation levels must be adjusted every 2-3 days.
- **Species-Specific Limitations:** Not all fish breeds thrive in BFT systems. For example:
  - Indian Major Carps like rohu and catla, do not adapt well to BFT in northern India.
  - Success is limited to species like pangasius and catfish.
- **Regional Challenges:**
  - **Uttar Pradesh:** Short fish farming window (7-8 months) due to extremely cold winters.
  - **Odisha:** Farmers use heating rods to counter cold temperatures, requiring additional effort and cost.
- **Abandonment of BFT:** Farmers in Haryana have reverted to pond-based farming due to complexities and challenges associated with BFT.

### Challenges and Limitations of RAS (Recirculating Aquaculture System) in Aquaculture:

- **Higher Costs:** Setup and operational costs are significantly higher than both pond and BFT systems.
- **Power Dependency:** Requires constant power supply with additional costs for backup electricity.
- **Affordability Concerns:** Only farmers who can access subsidies find these systems viable. However, the subsidies are often insufficient or limited in availability across districts.
- **Need for Technical Training:**
  - Farmers require training to manage:
    - Continuous water quality monitoring.
    - Proper maintenance of filters and equipment.
- **Regional Observations:** In Haryana, operational costs and lack of sufficient subsidies hinder adoption. In Andhra Pradesh and Odisha, farmers suggest subsidy programs need expansion to benefit more farmers.

**PEPPER IT WITH:**  
Water-Management,  
Agriculture GDP,  
Aquaculture farming

- **General Observations:**
  - **Potential for Financial Balance:** Despite high initial costs, the higher production rates of BFT and RAS can offset expenses over a few years.
  - **Training and Awareness:** Farmers emphasize the importance of training programs to handle the technical challenges of these systems effectively.

**Way forward:**

<p><b>Market Development:</b> Encourage value addition and processing of aquaculture products to increase their market value. Support the export of high-value aquaculture products to international markets. Promote the consumption of fish and other aquatic products through awareness campaigns and marketing initiatives.</p>	<p><b>Technological Innovations:</b> Develop and promote advanced filtration technologies to improve water quality and reduce the need for water exchange. Invest in automation technologies to reduce labor costs and improve efficiency. Implement strict biosecurity measures to prevent the spread of diseases and maintain healthy fish populations.</p>
<p><b>Government Support and Policy Initiatives:</b> Expand and streamline subsidy programs to make BFT and RAS technologies more affordable for small-scale farmers. Invest in training programs to equip farmers with the necessary skills to operate and maintain these systems. Continue to support research and development efforts to improve the efficiency and sustainability of aquaculture practices. Strengthen extension services to provide technical assistance and guidance to farmers.</p>	
<p><b>Public-Private Partnerships:</b> Foster partnerships between government, industry, and academia to drive innovation and sustainable aquaculture practices. Facilitate knowledge sharing and technology transfer between stakeholders.</p>	<p><b>Sustainable Practices:</b> Promote the use of natural and organic inputs to minimize environmental impact. Develop climate-resilient aquaculture practices to adapt to changing environmental conditions.</p>

supplementation for optimal productivity, which is ensured by the fertiliser industry.

- **Focus on Sustainable Agriculture:** The event underscored the need for balancing soil health with sustainable fertilisation practices, emphasizing long-term agricultural productivity and environmental care.

**Indian soils and the role of the fertiliser industry:**

- **Nutrient Deficiencies in Indian Soils**
  - **Nitrogen (N):** Less than 5% of soil has sufficient nitrogen.
  - **Phosphorus (P):** 40% of soil is sufficient in phosphate.
  - **Potassium (K):** 32% of soils have adequate potash.
  - **Organic Carbon:** Only 20% of soils are sufficient in organic carbon.
  - Micronutrients like sulphur, iron, zinc, and boron are deficient to varying degrees, ranging from moderate to severe.
- **Fertiliser Industry's Contribution to Agricultural Success**

**All is not well with soil**

**News Excerpt:**

December 5th is celebrated annually (World Soil Day) to raise awareness about the importance of soil and the need to manage it sustainably.

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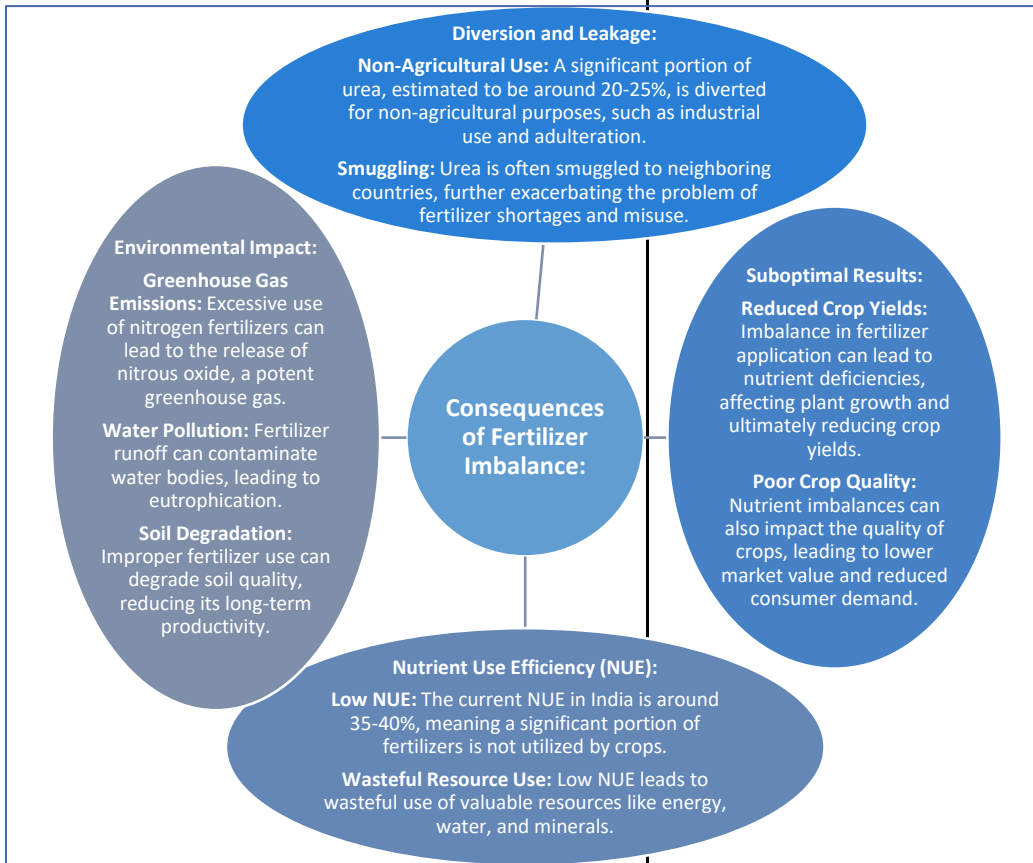
**Importance of Topsoil and Sustainable Soil Management:**

- **Significance of Topsoil**
  - Topsoil, measuring up to 2–3 cm in depth, is critical for agriculture.
  - It takes 1,000 years for nature to create this layer.
  - 95% of global food production depends on healthy topsoil.
- **Theme of World Soil Day (2024):** The theme, "Caring for Soils – Measure, Monitor, and Manage," highlights the importance of addressing soil nutrient deficiencies essential for maintaining healthy soils.
- **Fertiliser Association of India (FAI) Seminar:** The FAI hosted its annual seminar on 'Sustainable Fertiliser and Agriculture' from December 4–6, 2024. Over 1,400 delegates from 20 countries participated in discussions on sustainable agricultural practices.
- **Role of the Fertiliser Industry:** Fertiliser plays a crucial role in maintaining soil health by supplying necessary nutrients. High-yielding crop varieties require nutrient

- India has become a net exporter of agricultural produce, exporting 85 million tonnes of cereals (2020–21 to 2022–23).
- India is the largest rice exporter globally, achieving this even while providing cereals almost free to 813 million people.
- The fertiliser industry ensures the availability of essential nutrients (N, P, K, and micronutrients) either through domestic production or imports.
- **Challenges in Indian Agriculture and Fertiliser Industry**
  - There is a 30-50% gap in agricultural productivity due to imbalanced fertilizer use and suboptimal soil health.
  - Fertiliser subsidies amount to ₹1.88 lakh crore, about 4% of the Union budget, with urea receiving two-thirds of the subsidy.
  - Urea prices are controlled at \$70/tonne, the world's lowest price, remaining constant for over a decade.
- **Imbalanced Fertiliser Use**
  - The Nutrient-Based Subsidy (NBS) introduced in 2010 covers DAP and MOP, but urea was excluded, creating price distortions.
  - Excessive nitrogen (N) usage and insufficient potassium (K) and phosphorus (P) are common:
    - **Punjab:** Uses 61% more N, 89% less K, and 8% less P than recommended.
    - **Telangana:** Uses 54% more N, 82% less K, and 13% less P.

- **Key Issues Needing Address**
  - Reform the fertiliser subsidy policy to balance N, P, K, and micronutrient usage.
  - Improve NUE to reduce waste and environmental pollution.
  - Prevent urea diversion and leakage.
  - Address the long-term sustainability of fertiliser subsidies and enhance the efficiency of fertiliser usage.

- **Soil Health Cards (SHC):** Information on nutrient deficiencies in soils.
- **PM-KISAN Database:** Details of beneficiaries, landholdings, and income status. Land records, crop patterns, bank accounts, and mobile numbers of farmers.
- **Communication Campaign:** The government must clearly communicate the benefits of reform to farmers, ensuring transparency and building



**PEPPER IT WITH:**  
Soil-Health, Crop Yields, Nutrient based subsidies.

- trust.
- **Long-Term Vision:**
    - **Farmers' Gains:** Higher productivity, balanced soil nutrition, and improved profitability.
    - **National Benefits:** Healthier soil and sustainable agriculture.
    - **Global Competitiveness:** The Indian fertiliser industry can grow like the pharmaceutical sector, driving innovations for agricultural health.

**Proposed Solution (Way forward) for Fertiliser Sector Reform:**

- **Deregulation of the Fertiliser Sector:**
  - **Remove Price Controls:** The government should deregulate the fertiliser sector like cement and diesel industries.
  - **Direct Income Transfers:** Farmers could be compensated through digital coupons or direct transfers, enabling them to purchase fertilisers as needed.
- **Expected Benefits of Deregulation:**
  - **Encourage Innovation and Efficiency:** Free market dynamics will promote innovation in fertiliser production and supply.
  - **Focus on Micronutrients:** Promoting micronutrients will enhance productivity and profitability for farmers.
- **Preparations Required for Implementation:**
  - **Data Integration:** Triangulate multiple data points, including Fertiliser sales records.

**EFTA member lobs back India's MFN tax volley**

**News Excerpt:**

Recently, the Switzerland has decided to suspend the Most Favoured Nation (MFN) treatment for India under the two countries' 30-years old double-taxation avoidance agreement (DTAA).

**About MFN Clause:**

The MFN clause is a principle found in international treaties, including tax agreements, that ensures equal treatment for all parties involved. If one country offers favourable tax rates or conditions to another, it must extend those same benefits to all other countries covered by the treaty. This clause is designed to guarantee that no country is treated less favourably than any other in trade or taxation matters.

**The Swiss MFN Clause Termination under the DTAA:**

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- **Announcement Details:** From January 1, 2025, the Most Favored Nation (MFN) clause under the India-Switzerland Double Tax Avoidance Agreement (DTAA) will no longer apply. The decision is based on the Indian Supreme Court's ruling that the MFN clause does not automatically trigger without specific notification under the Income Tax Act.
  - **Swiss Position:** Swiss authorities acknowledged the Indian interpretation of the treaty, stating that reciprocity is lacking. As a result, Switzerland will waive its unilateral application of the MFN clause from January 2025.
  - **Impact on Tax Rates:** Previously, Indian companies benefited from a reduced 5% tax rate on dividends and other incomes due to Switzerland's earlier MFN application. Starting January 1, 2025, the tax rate will revert to the 10% residual rate, increasing tax liabilities for Indian entities.
  - **Implications for Indian Companies:**
    - **Competitiveness Impact:** Indian firms in Switzerland may face higher costs and reduced competitiveness compared to businesses from countries still benefiting from MFN provisions.
    - **Navigational Complexity:** International tax treaty compliance becomes more challenging due to evolving interpretations and stricter enforcement by countries like India.
  - **Broader Implications:** Reflects India's proactive approach to protecting domestic revenues by asserting stricter interpretations of tax treaties. Underscores the importance of aligning treaty partners for predictability, equity, and stability in the international tax framework.
- The Most Favoured Nation (MFN) key features:**
- **Equal Treatment (Non-Discrimination):** At its core, the MFN principle mandates that a country granting MFN status to another must treat that country no less favorably than it treats any other third country. This principle of non-discrimination applies to various areas, including:
    - **Trade:** This is the most common context. It means that if a country lowers tariffs or offers preferential trading terms to one nation, it must extend the same benefits to all other nations to which it has granted MFN status.
    - **Taxation:** In tax treaties, MFN clauses ensure that if a country offers a lower tax rate or more favorable tax treatment to one nation, it must offer the same to other nations with MFN agreements.
    - **Other Areas:** MFN can also apply to other areas covered by treaties, such as investment, intellectual property rights, and even consular services.
  - **Application in Trade Agreements:** In the context of international trade, the MFN clause is a fundamental principle of the World Trade Organization (WTO) agreements. Article I of the General Agreement on Tariffs and Trade (GATT) enshrines the MFN principle, stating that any advantage, favor, privilege, or immunity granted by any Member to any country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other Members.
    - **Tariffs:** If a country reduces tariffs on a particular product imported from one country, it must automatically extend the same tariff reduction to similar products imported from all other MFN partners.
    - **Other Trade Barriers:** MFN also applies to other trade barriers, such as quotas, import licenses, and customs procedures. Any preferential treatment granted to one country in these areas must also be extended to all MFN partners.
  - **Use in Tax Treaties:** MFN clauses in tax treaties aim to prevent tax discrimination between countries. They ensure that if a country agrees to a lower tax rate or more favorable tax treatment with one nation in a similar tax agreement (e.g., a Double Taxation Avoidance Agreement or DTAA), those same terms will automatically apply to countries with MFN clauses in their existing tax agreements.
  - **Example:** If Country A has a DTAA with Country B containing an MFN clause, and then Country A signs a new DTAA with Country C offering a lower withholding tax rate on dividends, that lower rate would automatically apply to dividends paid from Country A to Country B as well.
  - **Non-Retroactivity (and the Importance of Explicit Notification):** While the MFN principle generally implies automatic application of benefits, some legal interpretations, as highlighted by the Indian Supreme Court's ruling, emphasize the importance of explicit notification or domestic legal procedures for the MFN clause to take effect. This means that even if a treaty has an MFN clause, the benefits might not automatically apply unless the country takes specific steps to implement them domestically.
  - **Indian Context:** The Indian Supreme Court has ruled that MFN clauses in tax treaties do not automatically apply unless explicitly notified by the Indian government through a separate notification under the relevant domestic legal framework. This interpretation introduces

**PEPPER IT WITH:**  
Trade to GDP ratio,  
Import-Export,  
DTAA.

a layer of procedural requirement for the MFN clause to be effective.

**Purpose of the MFN Clause:**

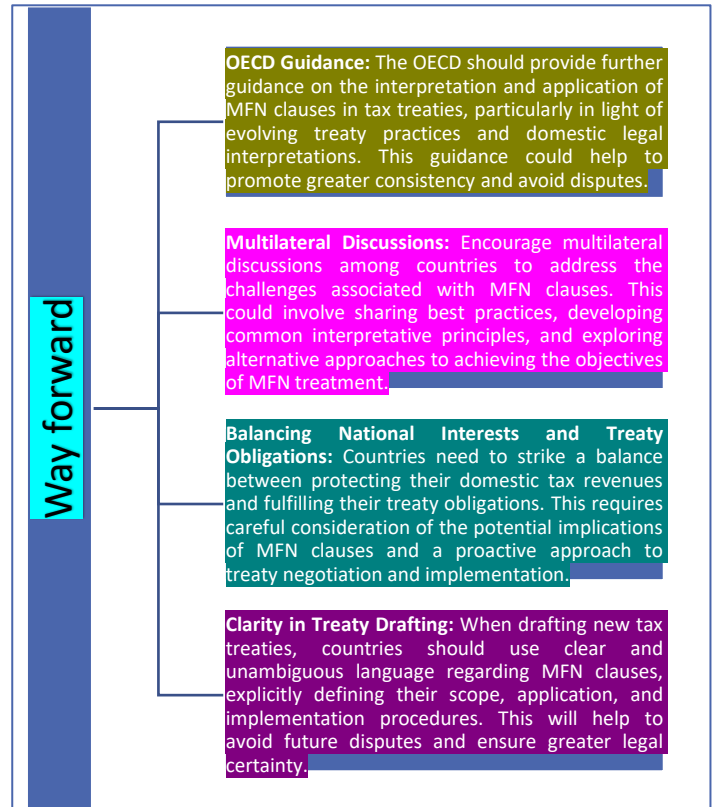
- **Promotes Non-Discriminatory Practices:** It prevents countries from favoring certain trading partners over others, fostering a level playing field for international trade and investment.
- **Facilitates Equal Opportunities:** By ensuring equal treatment, the MFN clause creates equal opportunities for businesses from different countries to compete in international markets.
- **Builds Trust in International Relations:** The MFN principle promotes trust and predictability in international relations, encouraging cooperation and reducing the risk of trade wars or discriminatory practices.
- **Simplifies Trade Negotiations:** By establishing a baseline of equal treatment, the MFN clause simplifies trade negotiations and reduces the need for complex bilateral agreements.

**Issues associated with MFN Clause:**

- **Interpretation Variability:** Divergent interpretations of MFN clauses can lead to inconsistencies in their application. **For instance**, in tax treaties, some countries may automatically apply benefits from treaties with third nations, while others require explicit notification or legislative action. This lack of uniformity can result in disputes and uncertainty.
- **Scope and Limitations:** Determining the extent of benefits under MFN clauses is complex. Questions arise regarding whether MFN treatment applies to substantive provisions, procedural rights, or both. This ambiguity can lead to legal challenges and varied interpretations.
- **Impact on Domestic Policies:** MFN clauses can constrain a country's ability to implement policies tailored to its economic and social needs. By obligating nations to extend benefits universally, MFN clauses may limit the flexibility required to address specific domestic priorities.
- **Challenges in Tax Treaties:** In the realm of tax treaties, MFN clauses can inadvertently erode tax revenues, especially for developing countries. If a country grants favorable tax rates to one nation, MFN clauses may compel it to extend the same rates to others, potentially reducing tax collections.
- **Dispute Resolution Complexities:** The application of MFN clauses has led to disputes, particularly in investment treaties. Investors may invoke MFN clauses to

access more favorable dispute resolution mechanisms from other treaties, complicating the arbitration process and leading to inconsistent outcomes.

- **Evolving International Relations:** Geopolitical shifts and changing economic alliances influence the application of MFN clauses. Nations may reassess their commitments, leading to suspensions or modifications of MFN status, as seen in recent developments between India and Switzerland.



**INTERNATIONAL RELATIONS**

**Syrian Civil War**

**News Excerpt**

After almost **15 years of Syrian civil war**, rebel forces overran the capital, Damascus, forcing Syria's **President Bashar al-Assad to flee** to an undisclosed location.

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**Background: How Did Syria End Up in Civil War?**

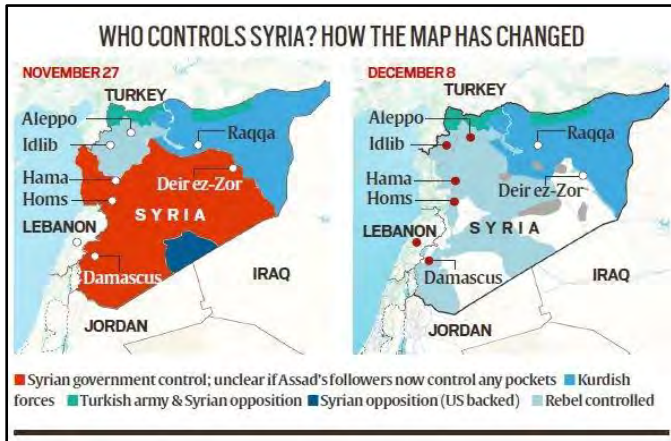
- **Hafez al-Assad (1971–2000)** ruled Syria with **authoritarian** control, consolidating power through military strength and centralised governance while suppressing dissent, including the **1982 Hama massacre**, where thousands were killed. His regime **favoured** the **Alawite minority**, fueling resentment among the Sunni majority.
- **Bashar al-Assad (2000–2024)** initially inspired hopes for reform due to his modern image but failed to deliver inclusive change. Limited economic liberalisation



benefited elites while widespread inequality persisted. His harsh crackdown on the 2011 Arab Spring protests cemented his reputation as a brutal dictator.

- Syria became a **battlefield for proxy wars**, with global powers and regional actors backing **different factions**. This foreign intervention prolonged and complicated the conflict, with no single group able to win decisively.

**Key Players in the Syrian Civil War**



- **Rebel Groups**
  - **Hayat Tahrir al-Sham (HTS):** Founded in 2011 as Jabhat al-Nusra, al-Qaeda's Syrian branch. Rebranded multiple times, it is now the most **powerful Sunni-Islamist rebel faction**. Led by Abu Mohammad al-Jolani, HTS seeks to establish a Sunni-Islamic state.
  - **Syrian Democratic Forces (SDF):** A coalition of Kurdish-led militias, the SDF primarily seeks autonomy and rights for Kurdish regions. While they oppose Assad, their conflict with Turkey-backed factions often overshadows their role in the civil war.
  - **Turkey-Backed Syrian National Army:** Composed of various opposition groups supported by Turkey. Actively opposes both Assad's regime and Kurdish forces.
- **Foreign Powers and Allies**
  - **Pro-Assad Forces:**
    - **Russia:** Entered the war in 2015, providing crucial air support and military aid to Assad. Played a decisive role in turning the tide against the rebels in key battles.
    - **Iran and Hezbollah:** Iran provided financial and military aid, while Hezbollah fighters were instrumental in ground offensives.
  - **Anti-Assad Forces:**
    - **United States:** Supported moderate rebel factions but scaled back its involvement over time.
    - **Turkey:** Backed anti-Assad groups but focused more on countering Kurdish militias, which it views as a security threat.
- **Other Influences:**

- **Israel:** Conducted strikes on Assad's regime, targeting Iranian and Hezbollah positions within Syria.

**Recent Developments**

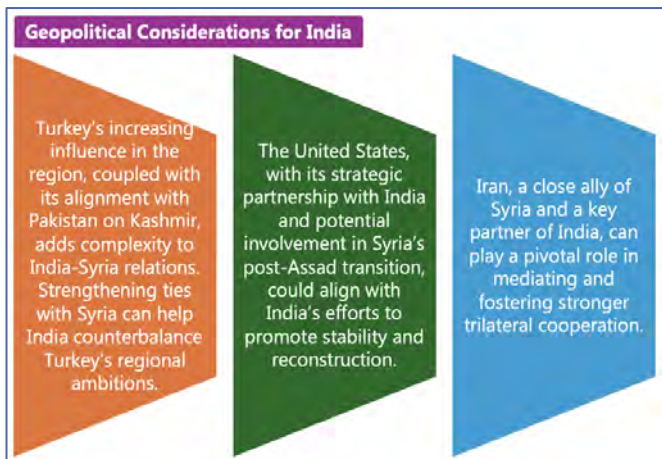
- **Collapse of Assad's Power:** Beginning on November 27, 2024, anti-Assad forces launched a rapid, coordinated offensive. Within less than two weeks, Damascus fell on December 8, forcing Assad to flee. **Hayat Tahrir al-Sham (HTS) now controls Damascus and other key regions.**
- **Loss of External Support:** Assad's forces, lacking critical support, crumbled under the rebel onslaught. Russia, Iran, and Hezbollah were preoccupied with other conflicts:
  - **Russia:** Focused on the ongoing war in Ukraine.
  - **Iran and Hezbollah:** Engaged in conflicts in Gaza and Lebanon.
- **Russia and the United States:** Both have opted to stay out of the current crisis. Russia explicitly ruled out involvement, while incoming U.S. President Donald Trump stated, **"This is not our fight."**
- **Israel:** Israel captured **Mount Hermon**, Syria's tallest mountain, strategically located within a **buffer zone** that had separated Israeli and Syrian forces for five decades.
  - The summit lies in Syrian territory, providing Israel with a **critical advantage** for electronic surveillance, allowing it to monitor deep into Syrian territory and offering **early-warning capabilities** against potential attacks.
- **India's Response to the Escalating Conflict**
  - **Advocacy for Peace:** India has consistently emphasised the need for a Syrian-led, inclusive political process that ensures the nation's unity, sovereignty, and territorial integrity.
  - **Protection of Minorities:** Recognizing the risks posed by ongoing violence, India has called for safeguarding vulnerable communities, including Alawites, Druze, Kurds, and Christians.
  - **Safety Measures:** Amid the worsening crisis, the Indian government issued an advisory urging its citizens in Syria to leave, prioritising their safety.

**India-Syria Bilateral Relations:**

India and Syria enjoy deep-rooted historical and civilizational connections, tracing back to ancient trade routes. Syria was also a key participant in the Non-Aligned Movement (NAM) spearheaded by Nehru.	Stable relations with Syria and other Middle Eastern nations enable India to counter Pakistan's influence in Muslim-majority regions. Notably, Syria has consistently supported India's position on Kashmir, distinguishing itself from many Organisation of Islamic Cooperation (OIC) countries that align with Pakistan.
India has contributed to Syria's development through significant investments in infrastructure projects, such as the Tishreen power plant and the Hama iron and steel plant.	Following the February 2023 earthquake, India extended assistance under Operation Dost, showcasing solidarity and humanitarian commitment.
The 6th Round of India-Syria Foreign Office Consultations, held in New Delhi on November 29, 2024, focused on strengthening bilateral ties, promoting youth development, and fostering multilateral cooperation.	

### Consequences of the Syrian Uprising

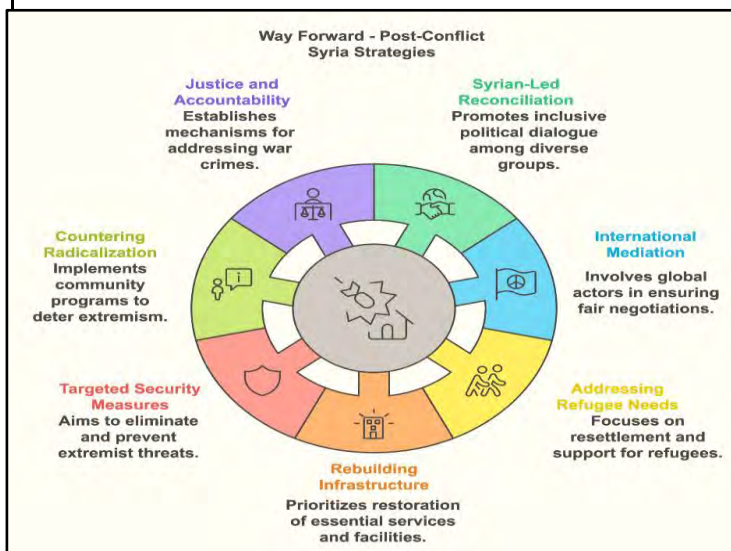
- **Impact on Syria**
  - **Political Collapse:** The uprising dismantled governance, leaving a power vacuum and deepening sectarian divides.
  - **Economic Devastation:** Infrastructure destruction and industrial collapse crippled Syria's economy, with reconstruction costs estimated in billions.
  - **Human Rights Violations:** Widespread atrocities, including chemical weapon use and civilian targeting, drew international condemnation.



- **Regional Implications**
  - **Proxy Battleground:** Syria became a stage for global and regional powers, intensifying the conflict.
  - **Rise of Extremism:** Groups like ISIS flourished, posing threats to regional stability.
  - **Refugee Strain:** Neighboring countries like Turkey, Lebanon, and Jordan faced significant economic and security burdens.
  - **Kurdish Conflict:** Renewed tensions between Turkey and Kurdish groups escalated violence along the border.
- **Global Impacts**
  - **Humanitarian Crisis:** Over 5.5 million refugees fled Syria, creating one of the largest modern refugee crises.
  - **Terrorism and Security Risks:** Extremist factions originating in Syria contributed to global security threats.
  - **Economic Consequences:** Disrupted trade routes and instability impacted global supply chains and oil markets.
- **Social and Cultural Losses**
  - **Heritage Destruction:** Iconic sites like Palmyra and Aleppo suffered irreparable damage.
  - **Lost Generation:** Millions of displaced youth face limited education and employment opportunities.
  - **Societal Fragmentation:** Years of war fractured Syrian society, complicating reconciliation efforts.

- **Global and Institutional Challenges**
  - **Geopolitical Shifts:** The war redefined alliances in the Middle East, with Russia and Iran gaining influence.
  - **Weak International Mediation:** Multilateral institutions like the UN struggled to prevent atrocities or mediate the conflict effectively.
  - **Refugee Policy Crisis:** The conflict highlighted gaps in global policies on refugees and migration.

**PEPPER IT WITH:**  
Middle East Geopolitics, Proxy Conflicts, Countering Extremism.



### India - Bhutan Relations

#### News Excerpt:

The **King of Bhutan**, His Majesty Jigme Khesar Namgyel Wangchuck, and the **Queen** of Bhutan visited India recently.

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#### Key Highlights of the Visit

- **High-Level Discussions:** The King of Bhutan met with PM Modi to discuss various aspects of bilateral cooperation and regional and global issues of mutual interest.
- **India's Commitment to Bhutan's Development:** PM Modi reiterated India's steadfast support for Bhutan's socio-economic development, which aligns with the Royal Government's priorities and His Majesty's vision.
- **13th Five-Year Plan and Economic Stimulus:** Bhutan acknowledged India's enhanced development support under Bhutan's 13th Five-Year Plan (2024–29), and the assistance extended through India's Economic Stimulus Programme.
- **Focus on Gelephu Mindfulness City (GMC):** The King of Bhutan shared updates on the Gelephu Mindfulness City Special Administrative Region, a key initiative for regional prosperity and well-being.

- Bhutan's plans to develop a **1,000-square-kilometre special economic zone** in Gelephu, spearheaded by King Jigme Khesar Namgyel Wangchuck.
- **PM Modi assured continued support** for this visionary project, which aims to **strengthen economic and investment ties** and enhance border area development.
- **Energy Cooperation**
  - **Hydropower Projects:** The leaders expressed satisfaction with the nearing completion of the **1020 MW Punatsangchhu-II hydropower project** and emphasised the need to expedite the Punatsangchhu-I project.
  - **Non-Hydro Renewable Energy:** Progress was reviewed in expanding partnerships in non-hydro renewable energy, leveraging Indian financing and market access for Bhutanese entities.
- **Cross-Border Connectivity and Infrastructure**
  - **Integrated Check Post in Assam:** The inauguration of the Integrated Check Post at Darranga, Assam, was highlighted as a significant step toward boosting tourism and economic activities in eastern Bhutan and the border areas of Assam.
  - **Connectivity Initiatives:** Both sides noted progress in:
    - Cross-border rail links
    - Digital connectivity
    - Infrastructure projects aimed at improving bilateral trade and commerce
- **Collaboration in Emerging Sectors**
  - **Space Technology:** The leaders welcomed advancements in the space sector, particularly in implementing the Joint Plan of Action for cooperation.
  - **STEM Education:** Increased collaboration in education, especially in STEM disciplines, was recognised as a key area of progress.

#### India-Bhutan Bilateral Relations

- **Origins of Bilateral Ties:** Diplomatic relations between India and Bhutan formally began in 1968. They are rooted in the **1949 Treaty of Friendship and Cooperation**, which was modernised in 2007 to align with contemporary requirements.
  - Established in **2003**, the **India-Bhutan Foundation** fosters education, culture, and science exchanges. Pilgrimages to Buddhist sites in India remain a key cultural bond, reflecting shared spiritual heritage.
  - On Bhutan's **114th National Day**, **PM Modi** has conferred the **Order of the Druk Gyalpo**, Bhutan's highest civilian honour, acknowledging his role in strengthening bilateral ties.
- **Commerce and Trade**
  - **Top Trading Partner:** India is Bhutan's largest trading partner, increasing bilateral trade from USD 484 million (2014–15) to **USD 1,615 million (2022–23)**.

- The **2007 India-Bhutan Friendship Treaty** and the **2016 Trade, Commerce, and Transit Agreement** ensure duty-free transit for Bhutanese goods through India.
- **Development Cooperation:** India has supported Bhutan's **Five-Year Plans** since their inception in 1971, significantly contributing to Bhutan's socio-economic development. During Bhutan's **12th Five-Year Plan (2018–2023)**, India provided financial assistance of **Rs. 5,000 crores** for various developmental initiatives.
- **Security:** The **Indian Military Training Team (MTRAT)** is permanently based in western Bhutan and assists and trains the Royal Bhutan Army. India's Border Road Organisation (BRO) has built most roads in Bhutan under the project '**DANTAK**'.
- **Hydropower Collaboration:** Hydropower cooperation remains a cornerstone of India-Bhutan relations, with India assisting in constructing four major hydroelectric projects (HEPs) - **Kurichhu, Tala, Chukha and Mangdechhu**.
- **Space Technology:** The **India-Bhutan SAT**, launched in November 2022, aids natural resource management and includes a digital repeater benefiting amateur radio operators.
- **Fin-Tech Innovations:** Milestones include the introduction of the **RuPay Card** (in 2019 and 2020) and the **BHIM app** (2021), enabling seamless cashless payments and cross-border interoperability.
- **Indian Diaspora's Contribution:** Approximately **50,000 Indians** work in Bhutan, contributing significantly to its economy and various sectors.

#### Challenges in India-Bhutan Relations

- **Chinese Influence:** Bhutan's growing engagements with China, including border discussions, challenge India's strategic interests. The Doklam standoff highlighted India's vulnerability in the region.
- **Balancing Sovereignty:** Bhutan is cautious about maintaining its sovereignty and avoiding over-reliance on India, occasionally creating friction in bilateral dealings.
- **Hydropower Dependency:** Bhutan's economy heavily relies on hydropower exports to India, leading to concerns over economic diversification. Delays in hydropower projects, such as Punatsangchhu-I, strain bilateral cooperation.
- **Trade Imbalance:** Bhutan's trade with India is skewed and highly dependent on Indian imports, which could affect its economic independence.
- **Shift in Bhutanese Attitudes:** A younger generation in Bhutan, influenced by globalisation and social media, sometimes views the relationship with India through a less traditional lens, seeking more autonomy in foreign and economic policies.
- **Environmental Concerns:** Large-scale hydropower projects supported by India have raised environmental concerns in Bhutan, such as deforestation, river disruption, and impact on biodiversity.

**Significance of Bhutan for India**

**Geopolitical and Strategic Importance:** Bhutan acts as a buffer state between India and China, ensuring border security and stability in India's northeastern region, especially in sensitive areas like Doklam. It also supports India in counter-insurgency efforts.

**Hydropower and Energy Security:** Bhutan's projects provide India with renewable energy while driving Bhutan's economic growth, fostering mutual dependence.

**Trade and Connectivity:** India is Bhutan's largest trading partner, and their free trade agreements boost economic integration. Bhutan's participation in regional connectivity projects aligns with India's Act East Policy.

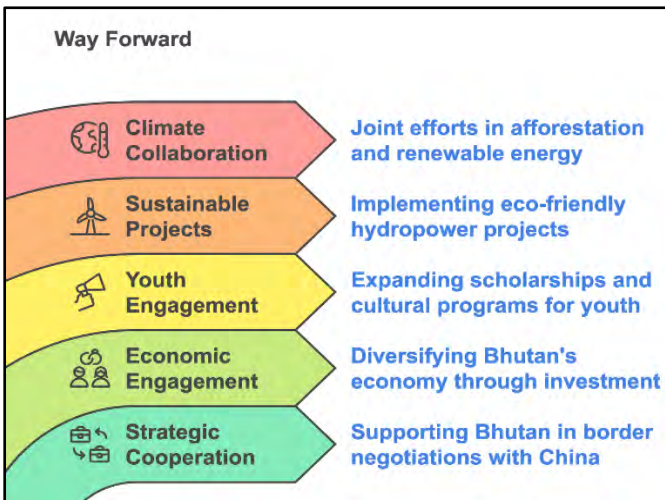
**Cultural Ties:** Shared Buddhist heritage and pilgrimages to Indian religious sites strengthen people-to-people bonds.

**Diplomatic and Environmental Cooperation:** Bhutan supports India in international forums, and its environmental conservation aligns with India's sustainability goals.

**Development Partnership:** India's consistent support for Bhutan's Five-Year Plans highlights mutual trust, with collaboration in infrastructure, education, healthcare, and economic stability.

- The **BBIN Motor Vehicles Agreement**, signed in June 2015 by Bangladesh, Bhutan, India, and Nepal,  **faced objections in Bhutan** over sustainability and environmental concerns. Consequently, Bhutan chose **not to endorse** the plan, prompting the other three nations to proceed with the **BIN-MVA initiative** in 2017.
- **Currency and Financial Stability:** Bhutan's heavy reliance on Indian financial aid and the Indian rupee for liquidity creates economic vulnerability and occasional pressure in bilateral financial arrangements.

**PEPPER IT WITH:** Neighborhood First Policy, Act East Policy, SAARC and BIMSTEC.



**India-Brazil Relations**

**News Excerpt**

Recently, **PM Modi visited Brazil** to attend the **19th G20 Summit** in Rio de Janeiro. India-Brazil relations exemplify the potential of **South-South cooperation** anchored in shared values and strategic interests.

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**India-Brazil Bilateral Relations**

- **Diplomatic Ties:** It began in **1948**, with embassies opened in both countries in the same year. Over decades, the partnership has evolved into a **multidimensional relationship** encompassing trade, investment, defence, energy, science, and culture.
- **Bilateral Mechanisms:** Strategic Dialogue, India-Brazil Business Leaders Forum, Trade Monitoring Mechanism (TMM), Economic and Financial Dialogue, Joint Defence Commission (JDC), and Joint Committee on Science and Technology.
- **Multilateral Platforms:** Active participation in BRICS, IBSA, G4, G20, BASIC, WTO, UNESCO, ISA, and WIPO. These platforms enable countries to address global challenges, advocate for institutional reforms, and promote sustainable development.
- **Trade and Investment:** Trade increased from USD 7.05 billion in 2020 to USD 15.2 billion in 2022, reaching **USD 16 billion in 2023**. India is now Brazil's **5th largest trading partner**.



- **Investment Areas:** Investments span automobiles, IT, mining, energy, biofuels, and footwear, reflecting diversified economic engagement.
- **MERCOSUR PTA (2004):** The Preferential Trade Agreement facilitates trade by **reducing tariffs** and boosting economic ties.
- **Defence and Security Cooperation:** The 2003 Defence Cooperation Agreement established a **Joint Defence Commission (JDC)** to oversee defence relations.
  - **Strategic Dialogue (2006):** Facilitated by National Security Advisors (NSAs), this mechanism addresses global and regional security challenges.
  - **Cybersecurity:** A 2020 MoU between CERT-In and Brazil's counterpart highlights the growing focus on digital security and emerging security challenges.
- **Space Cooperation:** Since 2004, agreements have facilitated data sharing and satellite tracking. The 2021

launch of **Brazil's Amazonia-1 satellite** from India symbolised mutual trust and technical collaboration.

- **Traditional Medicine and Yoga:** The 2020 MoU promotes **Ayurveda, Yoga, and Homeopathy** in Brazil's healthcare policies, reflecting cultural exchange. Brazil has integrated Yoga and Ayurveda into its health initiatives.

**Opportunities for Mutual Growth**

- **Role as Global South Leaders:** India and Brazil share a vision for global leadership, particularly as voices of the Global South. Their partnership emphasises:
  - **Reforming global governance** structures, including the United Nations and WTO.
  - **Addressing shared challenges** like climate change, poverty, and inequality through multilateral action.
  - **Advocating for inclusive growth** and equitable development in the international arena.
- **Energy Security:** Brazil is India's **third-largest crude oil supplier**, highlighting the two nations' energy interdependence. Continued collaboration in the energy sector is pivotal for India's growing energy needs and Brazil's role as a global energy exporter.

**Challenges in India-Brazil Relations**

- Geographical Distance:** High transportation costs, logistical challenges hinder collaboration in trade, defense, agriculture, and energy.
- Diverging Regional Interests:** Brazil prioritizes Latin America, limiting engagement in South Asia and Indo-Pacific, key regions for India.
- Trade Barriers:** Limited trade basket despite USD 16 billion trade (2023). MERCOSUR tariffs, differing standards (pharma, agriculture, biofuels).
- Investment Constraints:** Underutilized potential due to Brazil's regulations and India's policy shifts.
- WTO Disputes:** Brazil challenges India's sugar subsidies. Differing agricultural subsidy regimes create trade friction.
- Limited Defense Cooperation:** Nascent collaboration due to differing procurement and technology-sharing policies.
- Geopolitical Alliances:** Brazil's limited involvement in terrorism or Indo-Pacific security hinders alignment.
- Diverging Climate Priorities:** Misaligned strategies: Brazil focuses on biofuels, India on solar, wind, hydrogen.

- **Brazil's Expertise in Biofuels:** Brazil is a global leader in **ethanol production**, a sector aligned with India's energy transition goals. Pioneering ethanol production since 1975, Brazil has achieved a **27% blending rate** and developed flexible-fuel engine technology.
  - With Brazil's support, **India aims to achieve a 20% ethanol blending target** by 2025-26, up from 15.83% in 2024, promoting green energy.
  - **Global Biofuel Alliance (GBA):** Launched at the 2023 G20 Summit by India, Brazil, and the US to enhance biofuel production and consumption, aligning with sustainability goals.
- **Brazil's Lithium Reserves:** The **Jequitinhonha Valley**, also known as "**Lithium Valley**," houses one of the largest lithium reserves globally. Companies like Sigma Lithium lead the production of high-purity "**green lithium**," which minimises environmental impact.

- **India's EV Push:** India has set ambitious goals for achieving **30% electric vehicle sales by 2030**, making lithium an indispensable resource. A secure lithium supply chain is essential for producing **lithium-ion batteries** for EVs and renewable energy storage systems.
- **Brazil as an Agricultural Powerhouse:** A leading exporter of soybeans, edible oils, and other agro-products, Brazil is vital for India's food security.

**Recent Diplomatic Engagements**

- High-Level Interactions:** There were intensified engagements during the **19th G20 Summit** and other global platforms. Discussions focused on collaboration in energy, biofuels, defence, healthcare, agriculture, and digital technology.
- Global Initiatives:** India supported Brazil's '**Global Alliance against Hunger and Poverty**,' reaffirming their commitment to addressing global inequalities.
- Climate Action:** Joint prioritisation of climate-resilient policies as Brazil prepares to host **COP30 in 2025**.
- UNSC Candidature:** Brazil reaffirmed its support for India's bid for a non-permanent seat in the United Nations Security Council for 2028-2029, reflecting trust and alignment on global issues.

**Way Forward:**

- **Space/Aerospace Technology:** India and Brazil share a strong history of space collaboration, with the potential for deeper ties in rocket launches, satellite communication, and payload development.

**PEPPER IT WITH:**

South-South Cooperation, BRICS and IBSA, WTO Disputes, MERCOSUR PTA.

- Leveraging **Brazil's aviation expertise**, particularly through companies like Embraer, India can co-develop aircraft to bolster its defence aviation sector.
- **Joint Defence Manufacturing:** Building on ventures like the Jindal-Taurus collaboration, India and Brazil can expand joint defence production to include armoured vehicles, naval systems, and more.
- **Multilateral Forums:** Platforms like **IBSA** enable India and Brazil to strengthen leadership in the Global South while balancing China's influence within **BRICS**, promoting a more equitable geopolitical approach.
- **Secure Lithium Supply Chain:** Develop long-term agreements for lithium procurement from Brazil's **Jequitinhonha Valley** to support India's electric vehicle and renewable energy storage ambitions.
  - Explore **joint lithium mining and battery production ventures** to ensure sustainability and affordability.
- **Promote Renewable Energy Partnerships:** Collaborate on biofuels and ethanol production, leveraging Brazil's expertise to help India achieve its ethanol blending targets.

- Work jointly in **solar, wind, and green hydrogen projects** to align renewable energy strategies and meet global sustainability goals.

## 19th G20 Rio Summit 2024

### News Excerpt

The **19th G20 summit** recently concluded in **Brazil** with the adoption of the **Rio de Janeiro Declaration**. The summit's **theme** was 'Building a Just World and a Sustainable Planet'.

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### About G20

- The G20 is a **forum** comprising **finance ministers** and **central bank governors** from **19 individual countries** the **European Union (EU)** and African Union, established in **1999**.
  - It was elevated to a **Heads of State/Government forum** in **2008** to address the global financial crisis.
- As a **non-legislative** body, its agreements and decisions have **no binding legal impact** but significantly influence global policies and cooperation.
- **Members:**
  - **Countries:** Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom, and the United States and the African Union.
  - **European Union:** Represents the collective interests of its member states.
  - **Special Invitees:** Guest nations and international organisations, such as the United Nations and the World Bank, regularly participate in summits.
- **Key Objectives:**
  - Drive global **economic growth** and ensure financial stability.
  - Advocate for **climate action** and equitable development policies.
  - Coordinate international efforts to manage **financial and health crises**, such as the 2008 and COVID-19 pandemic.
  - Enhance **multilateral cooperation** in trade, investment, and technological innovation.

### Key Highlights of the G20 Rio de Janeiro Declaration

- **Global Hunger and Poverty Alliance:** Brazil's presidency proposed a Global Alliance Against Hunger and Poverty aimed at mobilising resources and knowledge to combat hunger and poverty.
  - The initiative, supported by **82 countries**, targets helping **500 million people by 2030**, marking a key success for the G20's social agenda.
- **Taxation of Billionaires:** A landmark move saw the endorsement of measures to tax **ultra-high-net-worth individuals**. Brazil spearheaded discussions on a global

tax for the super-rich, though debates about national sovereignty and tax principles persisted.

- **Financial Reforms and MDB Cooperation:** The summit reaffirmed the importance of **reforming Multilateral Development Banks (MDBs)** to better address global challenges like climate change and poverty.
  - Strengthened cooperation within MDBs was agreed upon to ensure efficient resource mobilisation for impactful projects.
- **Inclusion of SDG 18:** A new **Sustainable Development Goal 18** was adopted, prioritising **ethnic-racial equality** to combat **systemic discrimination** and promote the **inclusion** of marginalised groups.
  - This aligns with the broader global development agenda of equity and sustainability.
- **Climate Finance Commitment:** The G20 acknowledged the need to scale climate finance **from "billions to trillions"** but failed to outline specific funding sources.
  - Support was extended to **COP29 in Azerbaijan**, with calls for enhanced financing to aid developing nations in adapting to climate change, though concrete financial mechanisms remain unresolved.
- **Energy Transition and Fossil Fuel Subsidies:** Emphasis was placed on investing in **renewable energy** and **clean technologies**, but there was no commitment to phasing out fossil fuel subsidies, deviating from previous COP28 pledges..
- **Global Governance and Social Inclusion:** The summit highlighted the need for reforms in global governance to tackle global inequalities.
  - The **G20 Social Summit declaration** focused on combating hunger, poverty, and inequality while advocating for climate action, sustainable development, just transitions, and inclusive decision-making.
- **Ukraine and Middle East Conflicts:** The G20 advocated for a comprehensive, just, and lasting peace in Ukraine, emphasising **diplomacy and peace talks**.

### How India Leveraged G20 to Assert Global Leadership

- **Strengthening Strategic Independence:** India leveraged its role to balance relationships between global power blocs while preserving its strategic independence.
  - Initiatives like the **Global Biofuel Alliance** showcased India's leadership in sustainable energy and climate security.
  - Successfully addressing sensitive issues, including the **Russia-Ukraine conflict** and **China's territorial ambitions**, highlighted India's diplomatic finesse.

- **Advancing Economic and Trade Interests:** Through G20, India actively shaped global economic policies, aligning with its goal of becoming a \$5 trillion economy.
  - The unveiling of the **India-Middle East-Europe Economic Corridor (IMEC)** offered a faster, strategic alternative to China's BRI.
  - India's **digital infrastructure** achievements, like **UPI**, were endorsed as transformative models for developing countries.
- **Promoting Sustainable Development and Climate Action:** India championed the **Global South's** development rights while advancing its own climate agenda through initiatives like **LiFE** (Lifestyle for Environment).
- The **International Solar Alliance (ISA)** gained broader G20 support, reinforcing global renewable energy efforts.
- **Projecting Cultural Heritage and Soft Power:** India used G20 as a stage to highlight its cultural richness and modern achievements, notably through the "**Culture Unites**" initiative.
- **Diplomatic Achievements:** India emerged as a bridge between developed and developing nations during its 2023 G20 presidency.
  - The inclusion of the **African Union** as a permanent member under India's leadership highlighted its commitment to global representation.
  - Securing the unanimous **Delhi Declaration** amidst geopolitical tensions underscored India's diplomatic prowess.

**PEPPER IT WITH:**  
 Multilateral Forums,  
 Global Economic Equity,  
 MDBs Reform, Taxation  
 of Billionaires.

Way Forward for G20	
<b>Inclusivity and Representation</b>	Engage underrepresented regions, non-member states, and civil society for global problem-solving.
<b>Climate Action</b>	Mobilize climate finance, phase out fossil fuel subsidies, expand renewables, and build climate-resilient infrastructure.
<b>Economic Resilience</b>	Reform MDBs, promote digital infrastructure (e.g., UPI), bridge the digital divide, and implement global tax equity.
<b>Peace and Conflict Resolution</b>	Mediate conflicts, strengthen humanitarian efforts, and support post-conflict rebuilding.
<b>Social Equity</b>	Integrate SDG 18 (ethnic-racial equality) and enhance initiatives like the Global Alliance Against Hunger and Poverty.
<b>Institutional Efficiency</b>	Monitor declarations, expand focus on AI, cybersecurity, and green technology sectors.
<b>Cultural Exchange</b>	Foster goodwill through health, education, and governance knowledge-sharing to build partnerships.

### India-Guyana Relations

#### News Excerpt

PM Modi visited the Caribbean country of **Guyana**, the **first visit** by an Indian PM in **56 years**. During this visit, PM Modi co-chaired the second India-CARICOM Summit.

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#### Key Highlights of the Visit

- **PM Modi Conferred with Guyana's Highest Honour:** The President of Guyana awarded PM Modi the **Order of Excellence of Guyana**, the nation's highest national honour. This

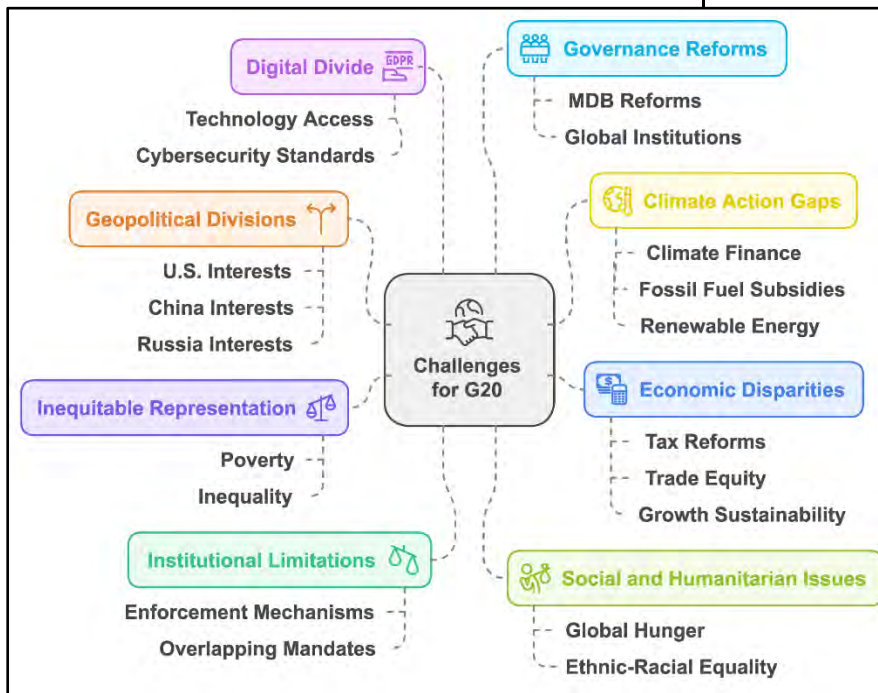


recognition makes PM Modi the fourth foreign leader to receive this prestigious award.

- **Strengthening Bilateral Ties:** India and Guyana signed **10 Memoranda of Understanding (MoUs)**, reinforcing cooperation in diverse fields:

- **Health and Pharmaceuticals:** Collaboration on regulating and supplying affordable medicines, extending benefits to CARICOM countries. India committed to establishing a **Jan Aushadhi Kendra in Guyana** to enhance access to affordable medications.

- **Hydrocarbons:** Partnership in crude oil sourcing, natural gas,



infrastructure development, and the entire hydrocarbon value chain.

- **Agriculture:** Joint efforts in research and development, knowledge exchange, and food security initiatives. India supported Guyana's agricultural sector by providing **millet seeds** to bolster food security.
- **Digital Transformation:** Training programs, capacity building, and collaboration in public administration and governance.
- **Banking and Payments:** Introduction of India's **UPI**-like real-time payment system to Guyana.
- **Defence and Capacity Building:** India pledged further investment in skill development and capacity building in Guyana, particularly in the defence sector. Earlier this year, India gifted **two Dornier aircraft** to strengthen Guyana's defence capabilities.
- **Expanding Collaboration to New Frontiers:** Both leaders identified fresh areas for cooperation:
  - Education and Human Capital Development
  - Technology Transfer and Food Processing
  - Ayurvedic Medicine and Vaccine Production
- **Symbolic Initiatives:** PM Modi participated in a ceremonial tree planting under the **Ek Ped Ma Ke Naam** initiative, symbolising environmental conservation and India-Guyana friendship.

**India-Guyana Bilateral Relations**

- **Historical and Diplomatic Ties:** India established diplomatic relations with Guyana in 1965, upgrading its mission to a **High Commission** in 1968. Guyana reopened its mission in India in 2004 after a 14-year closure due to economic challenges, reaffirming bilateral cooperation.
- **Economic and Trade Relations:** Total trade in 2023-24 stood at USD 105.97 million, with Indian companies exploring opportunities in **biofuels, energy, minerals, and pharmaceuticals**. The **Joint Business Council**, a partnership between FICCI and the Georgetown Chamber of Commerce, promotes trade and investment cooperation. Guyana is a key partner in the **International Solar Alliance (ISA)** and a founding member of the Global Biofuel Alliance.
- **Development Cooperation:** India has extended concessional **lines of credit (LoC)** exceeding **USD 150 million** for projects like sugar plant modernisation, solar lighting, road development, and healthcare upgrades. Major ongoing projects include a solar power plant, ocean ferry acquisition, and aircraft supply from HAL. Guyana joined the **Coalition of Disaster Resilient Infrastructure (CDRI)** in 2024.
- **Educational and Technical Assistance:** Over 900 Guyanese nationals have benefited from India's Indian Technical and Economic Cooperation (**ITEC**) programs, and 600+ scholars from Indian Council of Cultural

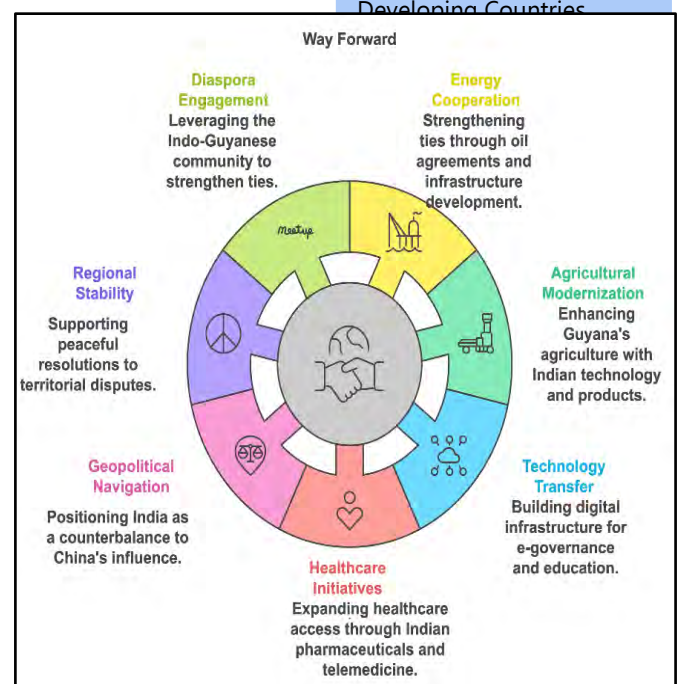
Relations (**ICCR**) scholarships in diverse fields such as IT, energy, and finance.

- **Cultural and People-to-People Ties:** With **43.5%** of its population of **Indian descent**, Guyana has one of the oldest Indian diasporas, preserving cultural practices, music, and festivals. The **Swami Vivekananda Cultural Centre** (established in 1972) promotes **yoga, Indian classical arts**, and cultural exchange.

**Challenges in India-Guyana Relations**

- **Energy Cooperation Complexities:** Logistical issues, underdeveloped infrastructure, and reliance on operators like ExxonMobil complicate India's efforts to import crude oil from Guyana.
- **Geopolitical Dynamics:** China's growing influence in Guyana's infrastructure and energy sectors challenges India's strategic and economic interests, requiring enhanced engagement. However, local scepticism toward Chinese practices offers India opportunities to strengthen ties.
- **Territorial Disputes:** Guyana's border conflict with Venezuela over the Essequibo region risks regional instability, potentially affecting investments and bilateral projects.
- **Economic Diversification Needs:** Guyana's oil-dependent economy requires diversification. India can play a key role in sectors like agriculture, healthcare, and technology, but efforts must align with Guyana's priorities.
- **Infrastructure and Capacity Constraints:** Guyana's limited infrastructure and

**PEPPER IT WITH:**  
Diaspora Diplomacy, Latin America, Development Assistance Model, Small Developing Countries



human resource capacities hinder bilateral initiatives, necessitating India's capacity-building and infrastructure development support.



## 2nd India-CARICOM Summit

### News Excerpt

PM Modi **co-chaired** the second India-CARICOM Summit in **Guyana** alongside **Grenada's PM** (the current Chair of CARICOM) and other CARICOM leaders.

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### About CARICOM (Caribbean Community)

- The Caribbean Community (CARICOM) is a **regional organisation** established in **1973** when **four founding members**—Barbados, Guyana, Jamaica, and Trinidad and Tobago—signed the Treaty of Chaguaramas.
- **Aim:** Its primary objective is to promote **economic integration** and cooperation among its members while advancing shared goals in **foreign policy, human development, and regional security.**
- **Membership:** Comprises **21 countries**, including
  - **15 Member States** (Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Lucia, St Kitts and Nevis, St Vincent and the Grenadines, Suriname, and Trinidad and Tobago) and
  - **6 Associate Members** (Anguilla, Bermuda, British Virgin Islands, Cayman Islands, Curacao, and Turks and Caicos Islands).
- **Population:** Home to approximately 16 million people, with a predominantly young demographic (60% under the age of 30).
- **Cultural Diversity:** Encompasses a rich blend of ethnicities, including African, Indian, European, Chinese, Portuguese, and Indigenous backgrounds.
- **Geographical Spread:** Located predominantly in the Caribbean Sea within the Atlantic Ocean.

### Significance of CARICOM for India

**Defence Exports:**  
HAL delivered two Dornier 228 planes to Guyana, marking a milestone in defence collaboration.

**Gateway to Latin America:**  
CARICOM countries provide India with a platform to deepen its trade and diplomatic ties with the broader LAC region.

**Strategic Expansion:**  
CARICOM nations are diversifying their geopolitical ties, aligning with India's ambition to strengthen its presence in Latin America and the Caribbean (LAC).



- **Partnership in Multilateral Forums:** Many CARICOM countries, like Antigua and Barbuda, support India's position in international forums, including backing India's bid for permanent membership in the United Nations Security Council (UNSC).
- **South-South Cooperation:** CARICOM nations actively participated in India's 3rd Voice of Global South Summit, 2024, underscoring shared priorities in development and global governance.

### Strategic and Economic Partnerships

- **Climate Action and Energy Security**
  - **Shared Climate Concerns:** India and CARICOM face climate change challenges, such as rising sea levels and extreme weather.
    - India's COP-26 efforts resonate with CARICOM's demand for increased climate finance for mitigation and adaptation.
  - **International Solar Alliance (ISA):** CARICOM countries, such as Suriname, have joined the ISA, which India co-founded. The alliance fosters collaboration on solar energy.

- Initiatives like **One World One Sun One Grid** (OWOSOG) offer global solar energy integration opportunities.
- **Disaster Resilience:** CARICOM nations partner with India in frameworks like the Coalition for Disaster Resilient Infrastructure (CDRI) to enhance disaster preparedness.
- **Digital Health:** India's digital health platforms, such as CoWIN and National Digital Health Mission (NDHM), can guide CARICOM countries in addressing climate-induced health challenges and strengthening their healthcare systems.
- **Energy and Biofuel Cooperation:** India's biofuel research partnership with Brazil could be extended to CARICOM nations, fostering joint solutions for renewable energy and biofuel production.
- **Cultural and Diaspora Links:** CARICOM countries, like Trinidad and Tobago, are home to a significant Indian diaspora, strengthening cultural and people-to-people ties.
- **Development Assistance and Strengthened Partnerships:** India's initiatives, including the USD 1 million contribution to the CARICOM Development Fund, underline its commitment to supporting regional growth.
  - High-level visits and sustained development assistance have solidified India's relationship with CARICOM nations, laying the groundwork for future collaborations.

**Way Forward:**

PM Modi outlined a **seven-pillar framework** using the acronym **C-A-R-I-C-O-M** to deepen India's engagement with the Caribbean. The pillars aim to transfer resources, expertise, and technology from India to CARICOM nations, reinforcing India's leadership in the Global South.

- **C – Capacity Building:**
  - 1,000 IT scholarships for CARICOM nations.
  - Expanding the technology centre in Belize to include all CARICOM members.
  - Proposals for a regional forensic centre and online training for civil servants.
- **A – Agriculture and Food Security:**
  - Sharing Indian agricultural technology, including drones and millet cultivation, to improve nutrition and food security.
- **R – Renewable Energy and Climate Change:**
  - CARICOM nations are invited to join global initiatives like the International Solar Alliance, Coalition for Disaster Resilient Infrastructure, and Global Biofuel Alliance.
- **I – Innovation and Technology:**

- Introducing India's digital solutions, such as UPI for digital payments and eMarketplace for small businesses, to boost CARICOM economies.
- **C – Cricket and Culture:**
  - Scholarships for coaching women in cricket (11 per CARICOM country).
  - Proposals for cultural exchanges, Festivals of India, and Bollywood film festivals.
- **O – Ocean Economy and Maritime Security:**
  - Supporting CARICOM as a "large ocean country" with maritime development and security resources.
  - Assistance in combating piracy, drug trafficking, and human smuggling.
- **M – Medicines and Healthcare:**
  - Offering affordable healthcare solutions, including telehealth and cancer treatment technologies, and adopting Indian Pharmacopeia to lower medicine costs.
  - Proposals to replicate India's Janaushadi Scheme for affordable medicines in CARICOM countries.

**PEPPER IT WITH:**  
Global South, Latin America and Caribbean (LAC), Small Island Developing States.

**India-Nigeria Relations**

**News Excerpt**

PM Modi's recent visit to Nigeria, the **first** by an Indian Prime Minister in **17 years**, underscores the strategic importance India places on its relationship with Nigeria and the broader African continent.

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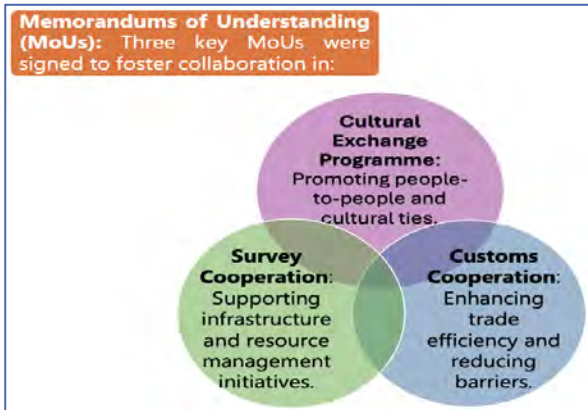
**Key Highlights of PM Modi's Visit to Nigeria**

- **Grand Commander of the Order of the Niger:** Prime Minister Narendra Modi was conferred Nigeria's **second-highest national honour**, the Grand Commander of the Order of the Niger, making him the first foreign leader to receive the accolade since Queen Elizabeth II in 1969.
- **Strengthening Strategic Partnership:** Six agreements were reached during the visit, further solidifying the India-Nigeria strategic partnership and expanding cooperation across diverse sectors.
- **Humanitarian Assistance:** PM Modi announced **20 tonnes of relief supplies** to support Nigerians affected



by recent floods, emphasising India's solidarity with Nigeria in times of crisis.

- **Sectoral Growth Opportunities:** Discussions between PM Modi and President Bola Ahmed Tinubu identified opportunities for collaboration in:



- **Defence and Security:** Joint ventures in defence production and capacity-building.
- **Technology and Education:** Enhancing skill development and technological innovation.
- **Energy and Manufacturing:** Leveraging Nigeria's growing manufacturing sector and India's expertise for joint ventures and technology transfer.
- **India-Africa Forum Summit:** India's long-overdue **India-Africa Forum Summit**, last held in 2015, is expected to convene early next year. This will provide a renewed platform to advance the **India-Nigeria agenda** and strengthen India's engagement with Africa.

**India-Nigeria Bilateral Relations**

- **Historical Foundations:** India-Nigeria relations began in 1958 with the establishment of India's Diplomatic House in Lagos, two years before Nigeria's independence in 1960.
  - The relationship was elevated to a **Strategic Partnership** in **2007**, focusing on defence, energy, and trade.
- **Cultural and Educational Exchange:** Indian teachers and doctors significantly contributed to Nigeria's early post-independence development. Today, the **60,000-strong Indian expatriate community** in Nigeria, the largest in West Africa, continues to strengthen bilateral ties.
  - Nigeria is also a significant beneficiary of the **Indian Technical and Economic Cooperation (ITEC)** program, which provides scholarships and training opportunities.
- **Trade and Investment:** Nigeria, the **"Giant of Africa,"** is India's largest trading partner in Africa and a critical supplier of crude oil, meeting 11–12% of India's needs.
  - In 2023-24, bilateral trade reached **\$7.89 billion**, encompassing crude oil, natural gas, pharmaceuticals, and renewable energy.

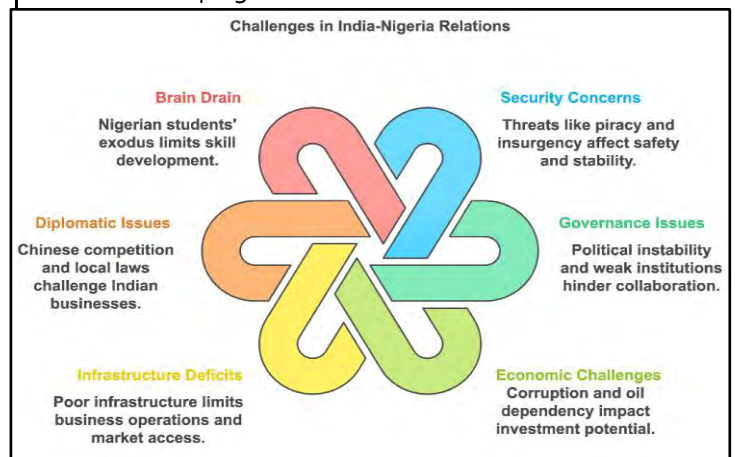
- Over **200 Indian companies** have invested **\$27 billion** in Nigeria, making them the second-largest employers after the federal government.
- **Development Assistance:** India has provided **\$100 million in concessional loans** and supported capacity-building initiatives in Nigeria to create jobs and enhance expertise.
  - Key achievements include establishing Nigeria's **National Defence Academy** in Kaduna and the **Naval War College** in Port Harcourt.
- **Security Cooperation:** Both nations share concerns over **terrorism, piracy, separatism, and drug trafficking**.
  - Recent engagements, such as the Second Strategic and Counter-Terrorism Dialogue, have strengthened collaboration to address these challenges.

**Nigeria's Regional and Global Role:**

- **Leadership in Africa:** As Africa's **largest and most populous** economy, Nigeria is a cornerstone of the continent's political and economic landscape.
  - It is a founding member of the **African Union (AU)**, which achieved a significant milestone by becoming a **permanent member of the G20** under India's presidency in 2023.
  - Nigeria's active leadership in the **Economic Community of West African States (ECOWAS)** also underscores its influence in fostering regional stability and economic integration.
- **Championing the Global South:** Nigeria and India share a common vision for advancing the interests of the **Global South**.
  - Platforms like the **Voice of the Global South (VoGS)**, championed by India, enable nations like Nigeria to shape global governance discussions on critical issues such as **food security, energy, and health**.
  - This partnership emphasises shared priorities and collective action to address the unique challenges of developing nations.

**PEPPER IT WITH:**

South-South Cooperation, Energy Security, Pharmaceutical and IT Exports.



- **Countering China's Influence in Africa:** India's strategic engagement with Nigeria aligns with its broader efforts to counter **China's expanding influence** in Africa.
  - China, Africa's largest trading partner, has annual trade volumes exceeding **\$200 billion** and substantial investments in infrastructure through the **Belt and Road Initiative (BRI)**.
  - In contrast, India fosters **sustainable investments, capacity building, and cultural exchange**, offering a more inclusive and equitable partnership model. This approach strengthens Nigeria-India ties and ensures long-term benefits for the African continent.

- **Source of Data:** Findings are based on a study conducted by the **National Centre for Coastal Research (NCCR)**. The study monitored shoreline changes from 1990 to 2018 using satellite imagery and field surveys.
- **Implication of Findings:** The erosion in Dakshina Kannada reflects broader environmental imbalances. These trends underline the need for holistic and urgent interventions across India's coastline to mitigate further damage.

**A slow-paced disaster:**

- Following the findings of the survey, **the Indian National Centre for Ocean Information and Services (INCOIS) has prepared Multi-Hazard Vulnerability Maps (MHVM)** at a 1:25,000 scale for India's mainland.
- These maps use data from extreme water levels, shoreline changes, sea level rise, and high-resolution terrain mapping to identify areas vulnerable to disasters like tsunamis and storm surges.
- The NCCR study showed that 17.74 km (48.4 per cent) of Dakshina Kannada's 36.66 km coastline was eroded from 1990 to 2018.
- **Udupi district** experienced 34.7 per cent erosion (34.96 km of 100.71 km), while Uttara Kannada reported the lowest erosion at 12.3 per cent (21.64 km of 175.65 km).

**The erosion of coastal lands is attributed to a combination of natural and human-induced factors:**

- **Rising sea levels:** Driven by climate change, higher sea levels amplify storm surges and coastal flooding.
- **Sand mining and infrastructure projects:** Unregulated sand extraction and construction of ports, seawalls, and breakwaters disrupt sediment flow, accelerating erosion in vulnerable areas.
- **Mangrove depletion:** The loss of natural barriers like mangroves leaves the coastline exposed to wave action.
- **Cyclonic activity:** The region has seen an increase in cyclonic events, further destabilising coastal systems.
- **Economic and social fallout:** The erosion poses severe threats to livelihoods, particularly for fishing communities dependent on coastal stability. Infrastructure such as roads, housing and ports faces significant damage, while biodiversity hotspots, including estuaries and mangroves, are at risk of collapse.

**Mitigation Efforts in Karnataka:**

- **Government Initiatives**
  - **Shoreline Management Plan:** Developed under the Coastal Regulation Zone (CRZ) Notification, 2019, focusing on sustainable coastal management.
  - **K-SHORE Project:** Funded by the World Bank to strengthen coastal resilience and the economy.
  - **Aims to:**
    - Protect against natural disasters.

**Way Forward**

- **Strengthen Security Cooperation:** Enhance counter-piracy and counter-terrorism efforts, ensure diaspora safety, and increase joint maritime security initiatives.
- **Diversify Trade and Investments:** Expand trade beyond oil to include pharmaceuticals, IT, agriculture, and manufacturing. Improve ease of doing business and invest in local industries to align with Nigeria's policies.
- **Develop Infrastructure:** Promote public-private partnerships (PPPs) in transport, energy, and ICT while providing technical and technological support.
- **Expand Energy Collaboration:** Invest in Nigeria's gas infrastructure, explore LNG exports and collaborate on renewable energy projects, especially solar.
- **Strengthen People-to-People Ties:** Enhance education, skill development, and cultural exchanges through Indian institutions and scholarships.
- **Foster Multilateral Cooperation:** Advocate for global governance reforms and collaborate on climate action through platforms like the International Solar Alliance.
- **Address Trade Imbalance:** Promote Nigerian exports like cocoa and cashews and invest in value-added production to balance trade.
- **Bolster Governance Support:** Provide training to improve Nigerian governance and regulatory frameworks while supporting anti-corruption initiatives.
- **Enhance Strategic Alliances:** Deepen defence and South-South cooperation to support regional and global stability.

**ENVIRONMENT**

**Coastal crisis: 33.6% of India's coastline is threatened by erosion**

**News Excerpt:**

In the ongoing Winter Session of the Parliament, the Union Environment Ministry presented data that highlighted the issue of coastal erosion in India.

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**Extent of Coastal Erosion in Karnataka and India:**

- **National Overview of Coastal Erosion**
  - 33.6% of India's coastline is affected by erosion.
  - 26.9% of the coastline is experiencing accretion (growth).
  - 39.6% of the coastline remains stable.
- **Situation in Karnataka:** Karnataka's coastline fares better than the national average, with 50% remaining stable. However, Dakshina Kannada district shows significant erosion issues: Approximately 17.74 km of the coastline in Dakshina Kannada is impacted, threatening human habitats and ecosystems.

- Safeguard livelihoods through sustainable practices.
- Address marine plastic pollution, an increasing problem along Karnataka's beaches.
- **Recommendations by Experts**
  - **Integrated Measures:** Isolated efforts are inadequate. A multi-pronged approach is essential, including:
    - **Ecosystem Restoration:** Mangrove replantation and sand dune protection.
    - **Regulation of Sand Mining:** Stricter enforcement to prevent over-extraction.
    - **Innovative Solutions:** Deployment of artificial reefs and eco-friendly breakwaters.
    - **Community Involvement:** Promote community-driven conservation programs. Use real-time erosion monitoring enabled by artificial intelligence (AI) for proactive management.
- **Academic Perspective**
  - **Natural Phenomenon:** Sea erosion, as per marine geologists from Mangalore University, is a natural process involving water, wind, and sand. It helps maintain the delicate balance of coastal ecosystems.
  - **Impact of Man-made Structures:** Structures built on beaches or in the sea disrupt this balance. The sea adapts by finding alternative pathways, potentially worsening erosion elsewhere. Insight provided by Dr. K. S. Jayappa and K. R. Subramanyam emphasizes the necessity of respecting natural processes in coastal development.

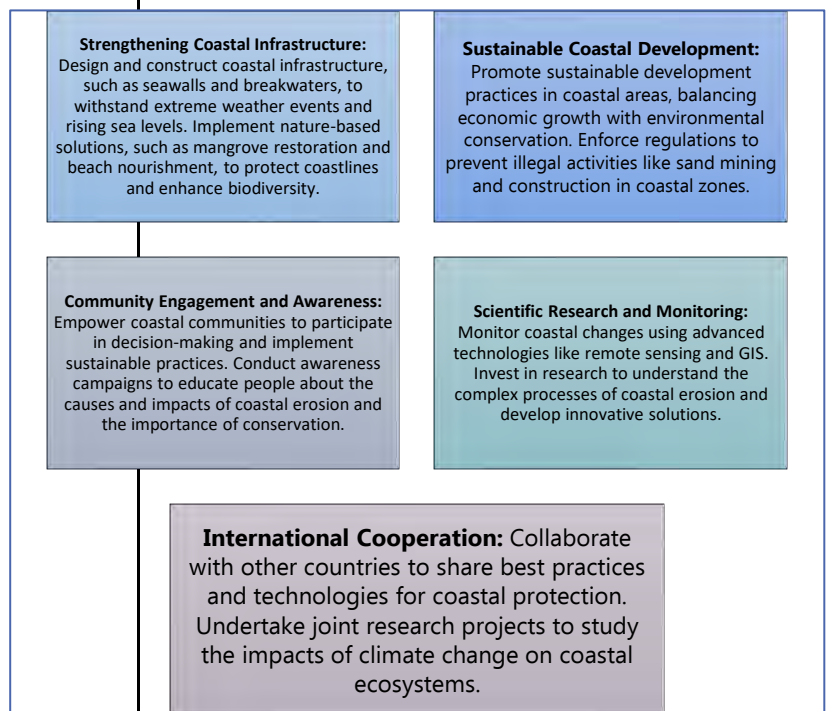
**Much Needed Paradigm Shift: Key Points**

- **Ineffectiveness of Traditional Measures:** Traditional strategies like constructing concrete sea walls, dumping boulders, and building coastal structures have failed to prevent coastal erosion. These methods have been employed by the government for over 30 years but with limited success.
- **Recommendations by Engineers:** Engineers from the Minor Irrigation Department have advised: Restricting human habitation in vulnerable stretches such as Kotepura. Extending the same caution to locations like Udyavara (Udupi taluk), Kodi Bengre (Kundapur taluk), Mazhali (Uttara Kannada), and Canacona & Porvorim (Goa). However, political interests have overshadowed these expert warnings, hindering proactive action.
- **Extent of Coastal Erosion in Karnataka - Coastal erosion is observed in several areas, including:**
  - Kotepura near Ullal.

- Padukere near Udupi.
- Rabindranath Tagore Beach (Karwar).
- Ganesh Bagh Beach (Ankola).
- **Government's Expenditure and New Strategies:** The Karnataka government has spent over ₹200 crore in the past 25 years on erosion control.
- **A new approach under consideration includes** Building structures to enable beach re-formation. Undertaking sand replenishment and shoreline nourishment along 40 km of coastline in patches.
- **Alternative Solutions Suggested by Environmentalists:** Environmental activists propose reallocating funds to: Develop a safe township located away from the coast, beyond the Coastal Regulation Zone (CRZ) limits. This would ensure the safety of coastal residents, especially during monsoon seasons, providing a more sustainable and secure alternative.

**PEPPER IT WITH:**  
Indian Coast Line, CRZ, Sea Trade, Coastal community habitation.

**Way forward:**



**Fossil Fuel Non-Proliferation Treaty**

**News Excerpt:**

Should fossil fuels be regulated the way nuclear weapons are? A group of governments and civil society organisations believe so and are pushing the idea of a fossil fuel non-proliferation treaty (FF-NPT).

**Background:**

**The Fossil Fuel Non-Proliferation Treaty (FF-NPT):**

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- **Purpose and Vision:** Inspired by the success of treaties addressing nuclear threats, the FF-NPT seeks to address the global challenges posed by fossil fuels.
- **Aims to:**
  - Phase out fossil fuel production.
  - Support economies, workers, and communities dependent on fossil fuels in diversifying away.
  - Guarantee 100% renewable energy access globally.
  - Ensure a just transition that is inclusive and equitable.
- **Criticism of the Paris Agreement:** The FF-NPT initiative highlights a critical gap in the Paris Agreement, which does not explicitly reference or constrain fossil fuel production.
- **Origins and Stakeholder Support:** Conceptualized during the finalization of the Paris Agreement. Garnered support from diverse stakeholders, including:
  - Former UN Secretary-General Ban Ki-Moon.
  - Indigenous communities of the Amazon.
  - Small Island Developing States (SIDS) severely impacted by climate change.
- **Recent Developments (COP29):** 10 additional countries entered discussions about FF-NPT this year, though their identities remain undisclosed. Endorsed by 13 Small Island Developing States (e.g., **Vanuatu, Tuvalu, Tonga, Fiji, Solomon Islands**), which are among the most vulnerable to climate change despite minimal contribution to global emissions. Colombia, a major coal producer and exporter, endorsed the treaty in December 2023 during COP28.
- **Support from Financial Institutions:** The Global Alliance for Banking on Values, a network of 70 sustainable banks, collectively endorsed FF-NPT through 25 of its members. Marked the first collective endorsement from the financial sector.

**Key Points on Fossil Fuel Non-Proliferation Treaty: About the Fossil Fuel Non-Proliferation Treaty (FF-NPT):**

- **Objective:** Proposes legally binding commitments for nations to:
  - End fossil fuel extraction.
  - Gradually phase out existing fossil fuel production.
  - Manage a just transition towards renewable energy.
- **Three Pillars of FF-NPT:**
  - **Non-Proliferation:** A global cooperation model to halt the expansion of coal, oil, and gas production.
  - **Fair Phase-Out:** Equitable plans to wind down fossil fuel production. Prioritizes nations with historical responsibility for emissions and capacity to transition faster, while empowering others to follow.
  - **Just Transition:** Accelerates renewable energy adoption and economic diversification. Ensures no worker, community, or country is left behind during the transition.

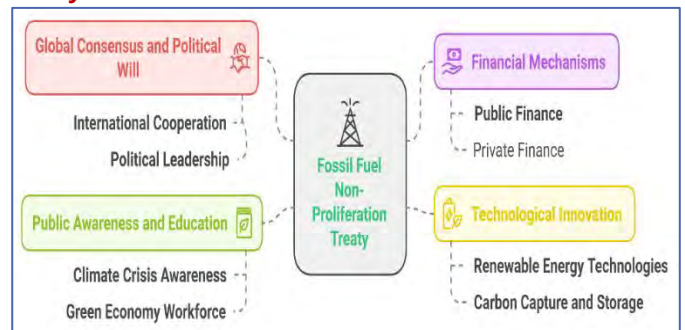
- **Conceptualization and Launch:** Conceived in 2016 and officially launched in 2019.
- **Challenges in Finance:** Faces obstacles due to insufficient financial support for poorer and climate-vulnerable nations. Funding is critical for these nations to transition away from fossil fuels and to address climate change impacts.
- **Role in Supporting Climate Agreements:** Aligns with the Paris Agreement by contributing to:
  - New Collective Quantified Goal (new financial targets for climate actions post-2025).
  - Nationally Determined Contributions (countries' climate action plans).
  - Just Transition Work Programmes.

**India's Position on the Fossil Fuel Non-Proliferation Treaty (FF-NPT):**

- **Engagement with India:** Harjeet Singh, Global Engagement Director for the **Fossil Fuel Non-Proliferation Treaty (FF-NPT) Initiative**, mentioned that there has not been extensive engagement with India yet. The initial focus has been on smaller, fossil-fuel dependent countries in Asia, Africa, and Latin America. Going forward, the FF-NPT initiative plans to engage larger fossil fuel-dependent countries like India and Indonesia.
- **India's Potential Role:** India stands to benefit from the treaty and should consider joining the global initiative. India's involvement is crucial due to its large fossil fuel dependency and role in global emissions.
- **Fossil Fuel Emissions in India:** The Global Carbon Project's report estimates that India's fossil fuel emissions are projected to rise by 4.6% in 2024, signaling an increase in its contribution to global emissions.

**PEPPER IT WITH:**  
 Indian power sector  
 Energy sources  
 Government initiative for fossil fuel

**Way Forward:**



**COP29 Declaration on Green Digital Action**

**News Excerpt:**

The **Coalition for Digital Environmental Sustainability (CODES)**, co-championed by the

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International Science Council (ISC), has joined a broad group of industry leaders, governments, and civil society organizations in endorsing the **COP29 Declaration on Green Digital Action**, launched at the **first-ever Digitalisation Day at COP29**.

#### **Digitalisation and Climate Action Framework:**

- **Integration of Climate Goals with Digital Technologies:** Recognizes the role of digital technologies in achieving climate action and adaptation goals aligned with:
  - UNFCCC
  - Paris Agreement
  - 2030 Agenda for Sustainable Development
  - Pact of the Future
- **Positive Impact of Digital Innovations:** Highlights that digital tools can reduce GHG emissions across sectors and aid in climate adaptation when effectively used and governed.
- **Concerns About Environmental Costs of Digital Technologies:** Acknowledges adverse impacts from the life cycle of digital technologies:
  - High energy and water consumption (e.g., data centres, AI systems).
  - Carbon footprint from manufacturing devices.
  - Pollution and unsustainable disposal of obsolete tools and infrastructure.
- **Need for Robust Data on ICT Climate Impacts:** Stresses the importance of accurate data on GHG emissions and energy use by the ICT sector to set effective climate targets.
- **Addressing the Digital Divide:** Identifies digital inequalities as barriers to equitable and inclusive climate action: Disparities in digital access, resources, and capacities can deepen global inequalities.
- **Misinformation Challenges:** Expresses concern over the impact of disinformation and misinformation on:
  - The credibility of scientific knowledge about climate change.
  - Public awareness, mobilisation, and collective action.
- **Inclusive Digitalisation for Sustainability:** Reaffirms the need to bridge digital divides to:
  - Achieve global sustainability.
  - Ensure inclusion of vulnerable groups (e.g., Indigenous Peoples, women, children, persons with disabilities).
- **Collaboration Among Stakeholders:** Emphasizes stronger collaboration between:
  - Governments
  - Private sector
  - Academia
  - Civil society and others

- Promotes partnerships to leverage digitalisation for effective climate action.

#### **Objectives and Mandates for Leveraging Digital Technologies for Climate Action:**

- **Using Digital Technologies for Climate Action:** Encourage sustainable digital tools to reduce GHG emissions, improve energy efficiency, and support climate-resilient communities. Enhance climate monitoring, forecasting, and emergency preparedness using digital solutions like mobile early warning systems. Improve digital technologies for energy modelling, grid resilience, and clean energy adoption.
  - **Building Climate-Resilient Digital Infrastructure:** Design digital systems that withstand climate impacts to ensure critical digital systems remain operational under adverse conditions.
  - **Minimizing Digitalisation's Climate Impact:** Formulate policies to achieve net-zero emissions in digital technologies. Power digital systems with clean energy and promote energy-efficient practices. Address emissions from supply chains, extend product lifecycles, and enhance e-waste management. Develop metrics to monitor ICT climate impacts effectively.
  - **Promoting Digital Inclusion and Literacy:** Ensure accessibility of digital tools for Least Developed Countries and Small Island Developing States. Strengthen digital skills and literacy, especially for youth and women. Support startups, SMEs, and research institutions working on sustainable digital solutions.
  - **Data-Driven Climate Decision-Making:** Use methodologies to estimate the net climate impact of green digital solutions. Implement systems to track and standardize climate-related data and ensure regulatory adherence.
  - **Encouraging Sustainable Innovation:** Mobilize climate funds for research, innovation, and adoption of sustainable digital technologies. Protect intellectual property rights while promoting open access to green technologies. Foster collaboration to integrate climate considerations into technological development.
  - **Sustainable Consumer Practices:** Educate consumers about sustainable digital consumption practices to promote environmentally responsible behaviors.
  - **Facilitating Knowledge Exchange:** Develop platforms for sharing best practices in climate-related digital applications among nations. Foster international collaboration to replicate successful policy and technological initiatives, ensuring diverse global contexts are addressed.
- #### **Implementation Framework for Integrating Digital and Low-Emission Transition Pathways:**
- **Alignment of Policies:** Incorporate digital and low-emission transition pathways into national strategies to

ensure alignment and mutual support among digital, energy, and climate policies.

- **Integration into National Climate Strategies:** Embed digital environmental sustainability objectives into national climate strategies and policies, creating a cohesive framework for addressing climate challenges.
- **Investing in Sustainable Digital Technologies:** Focus on environmentally sustainable digital technologies, ensuring investments drive positive environmental outcomes.
- **Science-Based Methodologies:** Utilize science-based methodologies to demonstrate the net positive contributions of digital solutions in addressing climate goals.
- **Enhancing Climate Solutions with Digital Technologies:** Leverage digital tools as enablers of climate solutions through:
  - Technology Needs Assessments.
  - Technology Action Plans.
  - Technical assistance provided by the Climate Technology Centre and Network (CTCN).
- **Support for Nationally Determined Contributions (NDCs):** Strengthen the role of digital technologies in developing, updating, and implementing NDCs under the Paris Agreement.

**Conclusion:**

The COP29 Declaration on Green Digital Action recognizes the dual role of digital technologies in both driving climate change and providing solutions. The declaration emphasizes the importance of a balanced approach, leveraging digital innovations to accelerate climate action while minimizing their environmental impact.

**Private sector urged to act as world faces \$23 trillion loss from land degradation**

**News Excerpt:**

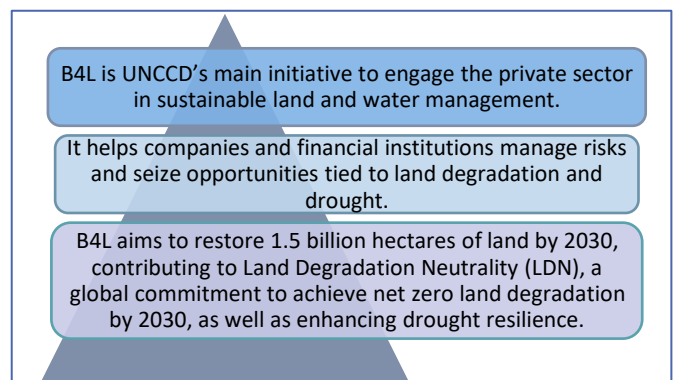
The private sector has been urged to make the sustainable management of land a key part of corporate and financial strategy going forward, as the world risks losing half of global GDP - estimated at \$23 trillion - due to degradation.

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**Key Points from the UN Convention to Combat Desertification (UNCCD) Conference:**

- **Focus of the Conference:** The UNCCD conference in Riyadh, Saudi Arabia, centers on issues related to drought, land degradation, and restoration efforts.
- **Rising Incidence of Droughts:** Since 2000, the frequency and intensity of droughts have increased by nearly 30%, posing threats to agriculture and water security globally.

- **Extent of Land Degradation:** Approximately 40% of the world's land is degraded, leading to reduced biological or economic productivity.
- **Implications of Drought and Land Loss:**
  - **These issues affect:**
    - **Climate:** Accelerating adverse environmental impacts.
    - **Biodiversity:** Threatening ecosystems and species survival.
    - **Livelihoods:** Undermining income sources for individuals and communities.
    - **Businesses:** Negatively impacting enterprises, large and small.
- **Economic Impact:** Global land degradation could lead to a loss of \$23 trillion in economic output by 2050. Mitigation efforts would cost around \$4.6 trillion, significantly less than the projected losses.
- **Role of the Private Sector:** According to UNCCD Executive Secretary Ibrahim Thiaw, the private sector has a critical role in promoting the sustainable use of land and contributing to restoration and preservation initiatives.
- **About Business 4 Land (B4L):**



**The Business 4 Land Forum at COP16:**

- **Momentum for Sustainable Land Management:** The forum emphasized integrating sustainable land management into corporate and financial strategies. COP16 is the largest global event focusing on land degradation and restoration, with a strong presence of business leaders indicating growing recognition of the urgency to preserve land health.
- **Business Transition to Sustainability:** Ibrahim Thiaw, Executive Secretary of UNCCD, stressed that adopting nature-positive operations, supply chains, and investments is critical not only for environmental health but also for long-term profitability and business resilience.
- **Three Key Areas for Action by Businesses:**
  - **Operations and Value-Chain Transformation:** Businesses should incorporate sustainability into

**PEPPER IT WITH:**  
UNFCCC, Paris agreement, National Climate Policies



strategies by addressing impacts on land, soil, and water.

- **Finance for Land Restoration:** Mobilizing resources for land restoration is essential, and investments exacerbating degradation should be avoided.
- **Advocacy and Collaboration:** Businesses are urged to build alliances with governments and civil society to push for enabling policies and collective action.
- **Economic Opportunities in Sustainability:**
  - Companies can benefit economically by transforming value chains to adopt sustainable practices.
- **Pledged International Funding:** Early successes at COP16 include \$12 billion pledged for land restoration efforts:
  - Arab Coordination Group pledged \$10 billion.
  - OPEC Fund and Islamic Development Bank each committed \$1 billion to the Riyadh Global Drought Resilience Partnership.
  - Saudi Arabia allocated \$150 million to operationalize the initiative.
- **Collaboration for Sustainable Food Systems:** Henri Bruxelles, Chief Sustainability Officer of Danone, stressed the need for cross-sector collaboration to address:
  - Climate and water challenges.
  - Food security and nutrition.
  - Securing the livelihoods of farming communities to build a sustainable food system.

## ICJ begins hearing on landmark climate change case

### News Excerpt:

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Recently, the ICJ began hearings in a case that seeks its advisory opinion on the obligations of countries on climate change under existing international laws, and the legal consequences of those obligations.

### Annual Climate Talks in Baku: Key Outcomes and Developments

- **Disappointment for Developing Nations**
  - **Climate Finance Shortfall:** The agreement at the conference pledged to mobilize only \$300 billion annually in climate finance for developing countries. This falls significantly short of the \$1.3 trillion demanded by developing nations, based on assessments of their actual requirements.
  - **Neglect of Emission Reduction Commitments:** Developed countries have continued to neglect their responsibilities regarding emission reductions. This lack of action undermines global efforts to combat climate change effectively.
- **Response by Developing Nations**
  - **Seeking Justice at the ICJ:** Frustrated by insufficient action, developing nations, particularly small island states, have approached the International Court of Justice (ICJ).
  - **A case has been filed seeking an advisory opinion on:** The obligations of countries on climate change under current international laws. The legal consequences for countries failing to meet those obligations.
    - **Potential Impact of the ICJ Case:** The case may shape future climate-related lawsuits worldwide. It could also influence negotiations at subsequent annual climate summits.

### Case on Climate Obligations at ICJ: Key Points

- **Background of the Case**

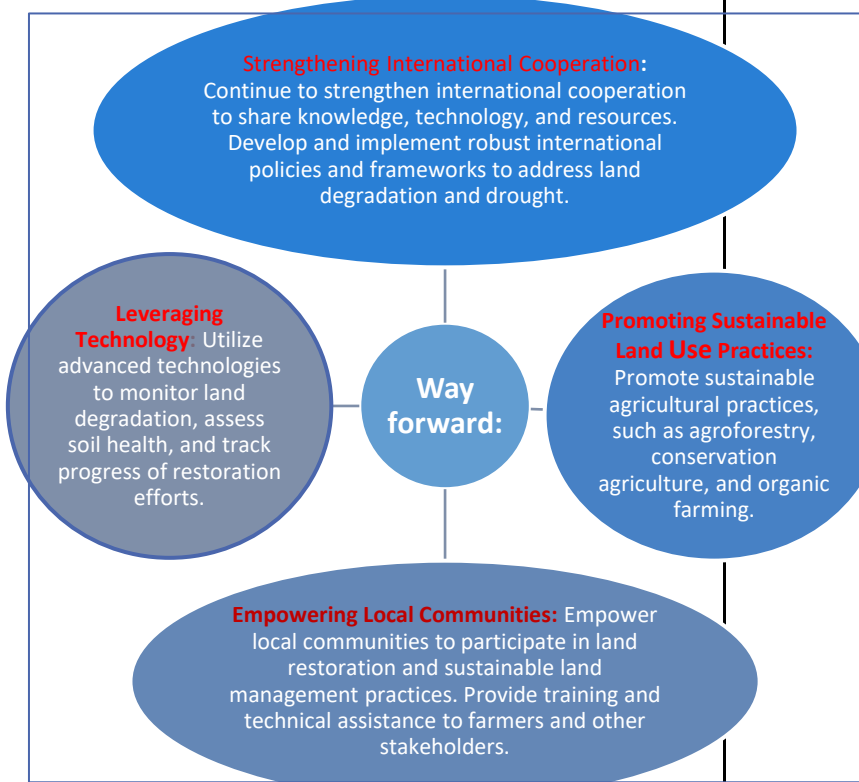
- **Initiative by Vanuatu:** Vanuatu,

a small Pacific Island nation highly vulnerable to rising sea levels, initiated the proposal. The country faces existential threats due to climate change impacts.

- **UNGA Resolution:** In March 2023, the United Nations General Assembly (UNGA) adopted a resolution seeking an advisory opinion from the International Court of Justice (ICJ). The resolution, co-sponsored by 132 countries, was originally proposed by Vanuatu in September 2021.

- **Focus of the Resolution**

**PEPPER IT WITH:**  
Land Pattern, UNCCD  
Land degradation



- **Key Questions for the ICJ:** The resolution seek the ICJ's opinion on two primary issues:
  - **Obligations of Countries:** What are the obligations of states under international laws to protect the climate system?
  - **Consequences of Harm:** What are the legal consequences for states that harm the climate system under these obligations?
- **Relevant International Laws:** The resolution highlights several international legal instruments, including:
  - **Exclusive Climate Laws:**
    - The 1994 UN Framework Convention on Climate Change (UNFCCC).
    - The 2015 Paris Agreement.
  - **Other Legal Frameworks:**
    - UN Convention on the Law of the Seas.
    - Convention on Biological Diversity.
    - Convention to Combat Desertification.
    - Universal Declaration on Human Rights.
    - International Covenant on Civil and Political Rights.
    - UN Charter.
- **Significance of the Case**
  - **Legal Impact:** The ICJ's advisory opinion will clarify the climate obligations of countries under various international laws. It could influence the legal framework for climate-related actions globally.
  - **Support from Developing Nations:** The case reflects the growing demand from vulnerable countries for justice and accountability on climate responsibilities.

### Significance of ICJ Hearings on Climate Obligations: Key Points

- **Advisory Nature of ICJ Opinion:** The ICJ's opinion will be advisory, as per the UNGA resolution, and not legally binding. Despite this, the ruling could have far-reaching implications for climate accountability and negotiations.
- **Current Obligations under UNFCCC**
  - **The UN Framework Convention on Climate Change (UNFCCC)** assigns climate responsibilities based on historical emissions.
  - **Approximately 40 developed nations**, historically responsible for maximum emissions, are obligated to: Reduce emissions. Provide financial and technological assistance to developing nations.
  - **Failure of Developed Nations: Many developed nations have:** Neglected their obligations under the UNFCCC. Managed to transfer part of their climate burden onto developing nations.
  - **Potential Impact of ICJ Ruling:** The ICJ's ruling could expand the basis of climate obligations to include several international legal frameworks, beyond the UNFCCC and Paris Agreement.

- **This could influence:** Climate negotiations by strengthening arguments for accountability. Small island states' demands for compensation for climate-related damages.
- **Precedent for Climate Lawsuits:**
  - **The ICJ's ruling may set a global precedent for the rising number of climate-related lawsuits:** Over 2,600 lawsuits have been filed globally by 2023. These lawsuits often seek to hold governments and corporations accountable for climate impacts.
- **Examples of Landmark Judgments**
  - **European Court of Human Rights (2023):** Held Switzerland accountable for failing to meet greenhouse gas emission targets, violating citizens' human rights.
  - **India's Supreme Court (2024):** Expanded the scope of fundamental rights to life and equality to include freedom from adverse climate impacts.
- **Momentum for Climate-Specific Legislation:** Many countries are now enacting climate-specific laws, reflecting a shift toward legal accountability in tackling climate change. ICJ's opinion could strengthen the legal foundation for such initiatives worldwide.

**PEPPER IT WITH:**  
CDB ,UDHR, Climate justice, Climate Obligations.

### Record Representations in the ICJ Climate Case: Key Points

- **Record Submissions:**
  - Over 90 written submissions have been received by the ICJ from countries and international organisations.
  - At least 97 countries and a dozen international organisations are scheduled to participate in the hearings.
- **Participation of Major Nations:** Countries with limited acceptance of ICJ's authority, such as India, China, and the United States, are participating.
- **United States' Statement:** The US State Department issued a statement welcoming the ICJ hearings:
  - Stated that diplomatic efforts remain the best way to address climate change.
  - Acknowledged the opportunity to share its legal views during the hearings.
  - Emphasised the importance of the 2015 Paris Agreement as a framework for collective global cooperation on climate change.
- **Broader Significance:** The unprecedented level of engagement reflects the global significance of the case. It highlights the collective interest of nations in shaping the legal narrative on climate obligations.

### Conclusion:

The ICJ case on climate change marks a significant milestone in international climate law. It has the potential to redefine the legal obligations of nations towards climate action and

set a precedent for future climate-related legal battles. The case underscores the growing recognition of the urgent need for climate justice and the role of international law in addressing this pressing issue.

### On stubble burning and satellite data

#### News Excerpt:

The air quality in the national capital has been struggling to recover from the lows to which it dropped right after Deepavali despite the implementation of GRAP stage IV measures, the active intervention of the Supreme Court, and stop-gap measures by the Delhi government.

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#### More detail about news:

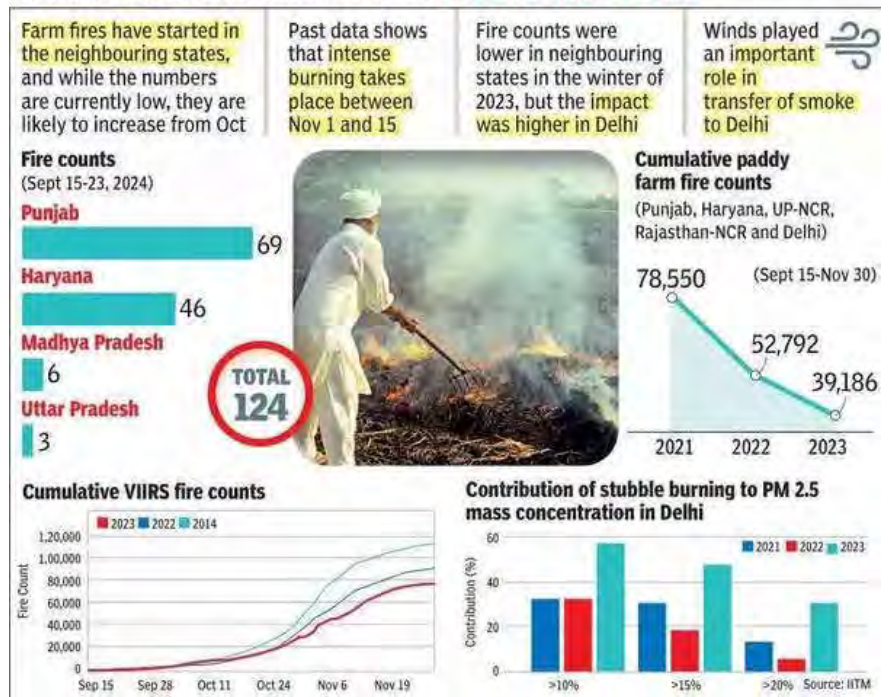
- Many fingers are currently pointed at the farm fires in the surrounding states, where farmers are burning paddy stubble in time for the wheat-sowing season.
- While these fires aren't solely responsible for Delhi's plight, a controversy over measuring their prevalence illustrates the amount of attention they're receiving.

#### How Fires Are Counted:

- **Crop Residue Burning in Punjab and Haryana:** Farmers burn paddy stubble after harvesting rice in November to prepare for the next sowing season due to time and cost constraints. This burning generates toxic particulate matter that affects air quality, particularly in the National Capital Region (NCR) due to prevailing winds.
- **Satellite Tracking of Fires:** The large geographical spread of the fires makes satellites the best tools for tracking them. The Indian government uses data from **NASA's Aqua and Suomi-NPP satellites.**
- **NASA Aqua Satellite:** Launched in 2002, Aqua is in its twilight stage of operation. Equipped with the **MODIS (Moderate Resolution Imaging Spectroradiometer)** instrument to monitor changes in the lower atmosphere over land. Aqua observes fires during its 1:30 PM (day) and 1:30 AM (night) local time overpasses.
- **NASA Suomi-NPP Satellite:** Launched in 2011, it is equipped with the **VIIRS (Visible Infrared Imaging Radiometer Suite)** instrument, a technical successor to MODIS. Suomi-NPP also carries the **Ozone Mapping and Profiler Suite**, which tracks aerosol loads in the atmosphere, helping identify smoke and its contribution to air pollution.

- **Fire and Smoke Detection:** Both **MODIS and VIIRS capture visible and infrared images of the Earth.** These instruments detect fires and smoke during their specific overpass windows centered around their observation times.
  - **Aerosol and Pollution Mapping:** The data collected by the Ozone Mapping and Profiler Suite on Suomi-NPP enhances understanding of aerosol distribution from fire-related emissions.
  - **Significance:** Satellite monitoring provides real-time data on the extent of fires and their contribution to air pollution, aiding in policy-making and mitigation efforts.
- New Controversy Regarding Farm Fires and Satellite Monitoring**
- **NASA Scientist's Observation:**
    - fires in 2024 appeared to be the lowest in the last decade and speculated two reasons:
    - Effective ground efforts to curb stubble burning.
    - Burning activity occurring after the Aqua and Suomi-NPP satellites' overpass time (around 1:30 PM).
  - **Potential Evidence of Night-Time Fires:** While

### DELHI WORST AFFECTED FROM NOV 1-15



- comparing data from Aqua and Suomi-NPP with South Korea's **GEO-KOMPSAT 2A satellite (Cheollian 2A)**, launched in 2018. GEO-KOMPSAT 2A, a geostationary weather satellite, monitors continuously, unlike Aqua and Suomi-NPP's fixed overpass times.
- **Thickening Smoke Cover:** Visuals collected from the three satellites suggested that smoke density increased after Aqua and Suomi-NPP completed their overpass, implying that farmers might be burning stubble later in the day.

- **Aerosol Discrepancy:** Aerosol levels in the atmosphere were similar to previous years, despite Aqua and Suomi-NPP detecting fewer fires.

**The controversy surrounding farm fire data discrepancies has highlighted issues in monitoring and reporting:**

- **Creation of CAQM:** The Commission for Air Quality Management (CAQM) was established in 2020 to tackle air quality issues in the National Capital Region (NCR) and nearby areas.
- **Claims of Farmers Burning After Satellite Overpass:** Officials from the Haryana Space Applications Centre (HSAC) and the National Remote Sensing Centre (NRSC) alleged that farmers intentionally burn stubble after satellite overpass times (1:30 PM) to evade detection..
- **CAQM's Public Stance:** Despite internal knowledge of this practice, the CAQM has publicly claimed a reduction in farm fires, defending its data using different formulae for estimation.
- **Broader Implications:** The discrepancies raise questions about the reliability of satellite monitoring and official claims. It underscores the need for ground-level verification and transparency in data collection and reporting to address air quality challenges effectively.

**Government Response to Stubble Burning Discrepancy:**

- **Creation of CAQM:** The Commission for Air Quality Management (CAQM) was designed with statutory powers to enforce compliance and sanction non-compliant actors.
- **Supreme Court Criticism:** Over the years, the Supreme Court has criticized CAQM for failing to effectively mitigate air pollution caused by stubble burning.
- **Union Agriculture Minister's Statement:** On October 26, 2024, Union Agriculture Minister Shivraj Singh Chouhan claimed that the number of stubble-burning incidents had decreased this year, which has faced scrutiny in light of conflicting data.
- **Challenges with Monitoring:** While acknowledging the need for better data, CAQM has emphasized its proactive steps, including engaging with stakeholders to curb stubble burning and improve monitoring protocols.

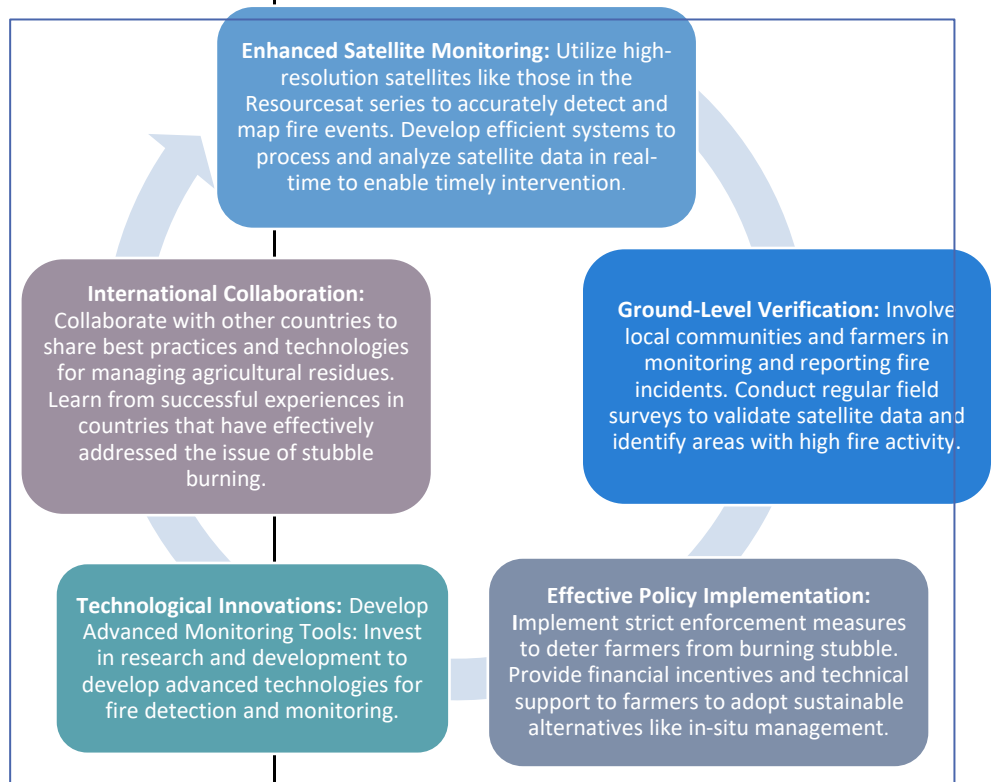
**Potential Role of Indian Satellites in Monitoring Stubble Burning**

- **ISRO's Assessment:** The CAQM informed the Supreme Court on November 21, 2024, that ISRO plans to assess

the usability of data from various satellites to track farm fires. According to the affidavit, ISRO experts believe that data from multiple satellites, including INSAT-3DR (India), GEO-KOMPSAT 2-AMI (South Korea), Meteosat-9 (Europe), Feng Yun-4A/4B (China), and HIMAWARI-8 (Japan), cannot effectively account for fire counts.

- **Current Limitations:** Despite the advanced capabilities of the RESOURCESAT-2A satellites, the data resolution still may not be precise enough to effectively monitor individual farm fires over large areas. The ongoing assessment of data usability will determine whether these satellites can help in better monitoring and fire detection for stubble burning in the future.

**Way forward:**



**SCIENCE & TECHNOLOGY**

**AI and International Trade**

**News Excerpt**

The **WTO's** report, "**Trading with Intelligence: How AI Shapes and is Shaped by International Trade,**" highlights AI's potential to enhance **trade efficiency**. However, it warns that the **concentration of AI** development in major economies like the US and China is **widening the divide** between countries.

**Key Highlights of The Report Significance of AI in Trade**

- **Enhancing Global Supply Chains:** AI algorithms improve efficiency by forecasting demand, managing inventory, and optimising shipping routes. Real-time

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tracking of goods minimises delays and reduces costs, enabling smoother international logistics.

**Automating Customs and Trade Regulations:**

AI automates customs processes, expediting clearance, detecting fraudulent transactions, and ensuring compliance with trade regulations. For example, Automated risk assessment tools are widely used by customs agencies globally.

**Advanced Trade Data Analysis:** AI analyses trade data to predict market trends, identify opportunities, and assess risks in global markets. These insights allow businesses to adapt to dynamic trade environments and improve strategic planning.

**Transforming E-Commerce and Cross-Border Trade:** AI personalises customer experiences, enables targeted marketing, and enhances payment security for cross-border transactions. Language translation and localisation tools powered by AI break barriers for international customers.

**Ensuring Quality Standards in Trade:** AI systems ensure products meet international quality standards and certifications, reducing trade barriers.

**PEPPER IT WITH:**

Global Supply Chain Optimization, Customs Automation, Smart Contracts.

**Challenges and Risks of AI in Trade**

- Regulatory Fragmentation:** Differing AI policies across nations (e.g., US, China, EU) create inconsistencies, disrupting global trade.
- Intellectual Property Rights (IPR):** Current frameworks (TRIPS, Berne Convention) restrict authorship to humans, requiring clear regulations on AI-generated content ownership.
- Subsidy Gaps:** WTO rules cover goods but lack provisions for AI-driven services, leaving regulatory gaps in subsidies.
- Digital Divide:** Unequal access to AI widens trade disparities between developed and developing countries.
- Cybersecurity Threats:** Increased digitization heightens risks of cyberattacks, jeopardizing data security and trade integrity.
- Job Displacement:** AI automation risks job losses in traditional trade sectors, highlighting the need for workforce reskilling.

**Key Policy Interventions**

- Global Initiatives:**
  - OECD AI Principles (2019):** First intergovernmental standard providing policy recommendations on AI ethics and governance.
  - UNESCO Recommendation on the Ethics of AI (2021):** Addresses ethical risks associated with AI use.
  - Bletchley Declaration (2023):** A UK-led initiative to promote AI safety and international collaboration.
- Regional Frameworks:**
  - EU AI Act:** A comprehensive legal framework fostering AI innovation while upholding human rights and democracy.

**Way Forward**

**AI-Driven FTAs:** Future trade agreements should include provisions for AI cooperation, cross-border data sharing, and digital infrastructure development.

**AI in Trade Negotiations:** Governments can use AI for policy simulations and scenario planning to improve decision-making.

**Global AI Standards:** Unified regulations and ethical frameworks are critical to balancing innovation with risk while ensuring equitable benefits.

**AI for Emerging Economies:** AI can transform developing nations by enhancing agricultural exports, reducing SME reliance on intermediaries, and streamlining trade policies to lower non-tariff barriers and boost competitiveness.

**India Signs the Final Act of the Riyadh Design Law Treaty**

**News Excerpt**

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Saudi Arabia hosted the **Diplomatic Conference** to Conclude and Adopt a Design Law Treaty. Later, in November 2024, the **WIPO member states approved** the 28th WIPO Treaty - the Riyadh Design Law Treaty.

**AI's Role in Reducing Trade Barriers**

- Language Translation:** AI-powered tools facilitate seamless multilingual communication, enabling trade between countries with language differences.
- Smart Contracts:** AI and blockchain technologies automate trade agreements, improving transparency and reducing reliance on intermediaries.
- Logistics Management:** AI optimises logistics, making international markets accessible to small and medium-sized enterprises (SMEs).

**About Intellectual Property Rights (IPRs)**

- These are the **rights given to persons** over the **creations of their minds**. They usually give the creator an exclusive right to use his/her creation for a certain period.
- There are **various types of IPRs**, such as patents, trademarks, copyrights, industrial designs, etc.

**About Industrial Design**

- An **industrial design** is a unique ornamental creation that, when applied to or incorporated into a product, enhances its **visual appeal**. This distinctiveness can arise from elements such as shape, lines, contours, configurations, colour, texture, or material.
- As a form of **intellectual property (IP)**—intangible creations of the human mind with economic value—designs contribute significantly to a product's identity and appeal.
- Industrial designs are **applied across diverse industries**, including packaging, furniture, clothing,

electronic devices, medical equipment, handicrafts, and jewellery.

- They serve as valuable business assets by **boosting a product's market value** and offering a competitive edge. Attractive designs influence consumer choices, which is crucial in driving market success.
- To secure protection, designers must adhere to the filing procedures established by the **country's intellectual property (IP) office** where protection is sought. Notably, **design rights are territorial**, meaning the rights granted are confined to the jurisdiction where the design is registered.
- In India, the registration and protection of industrial designs are governed by the **Designs Act 2000**. This act provides the legal framework to safeguard and enforce these rights, ensuring that creators benefit from their innovative efforts.

- **Support for Developing Countries:** Technical assistance will be available to developing and least-developed countries to support the implementation of

**India's Initiatives in Safeguarding IPR**

**National IPR Policy 2016:** It encompasses all IPRs into a single vision document, setting in place an **institutional mechanism** for implementing, monitoring, and reviewing IP laws. The policy **encourages innovation and creativity** by providing stronger protection and incentives for inventors, artists, and creators.

**Cell for IPR Promotion and Management (CIPAM):** This cell has been established to coordinate the implementation of the National IPR Policy.

**National Intellectual Property Awareness Mission (NIPAM):** This is a flagship program that imparts IP awareness and basic training in educational institutes.

**Scheme for Facilitating Startups Intellectual Property Protection (SIPP):** This scheme was introduced to foster innovation and entrepreneurship by providing a supportive ecosystem for startups to protect and manage their IP assets.

**About World Intellectual Property Organisation (WIPO)**

WIPO is a specialised agency of the United Nations created in 1967. It has 193 member states. India joined WIPO in 1975.

It aims to encourage creative activity and promote intellectual property protection worldwide.

It provides services for protecting IP, offers a forum for IP-related issues, and supplies data and information to guide global decision-making.

the Treaty, fostering inclusivity in global design protection.

- **Cultural Sensitivity:** The Treaty connects design protection with safeguarding traditional knowledge and cultural expressions, recognising their value in design eligibility.

**India's Role in Global Design Protection**

- **Tripling of Design Registrations:** Over the past decade, registrations in India have tripled.
- **120% Growth in Domestic Filings:** Domestic applications have surged

**Key Points of the Riyadh Design Law Treaty:**

- **Objective:** The treaty's primary goal is to make the **design registration process** more **accessible** for designers, particularly Small & Medium Enterprises (SMEs), and to encourage innovation in global design industries.
  - The treaty requires the participation of **15 contracting parties** for it to come into effect.
- **Predictable Framework:** The treaty establishes a standardised approach to design protection, reducing complexity and administrative costs across member countries.
- **Flexible Representation:** Applicants can represent their designs in various ways, including drawings, photographs, or videos, depending on the country's requirements.
- **Multiple Designs in a Single Application:** Under certain conditions, applicants can include multiple designs in a single application, saving both time and costs.
- **Grace Period:** A 12-month grace period after the first design disclosure ensures that applicants can retain protection, even after their designs are publicly disclosed.

**Significance of the Treaty for India**

India's growing **design industry**—evidenced by a **36.4% rise** in industrial design applications in 2023—could greatly benefit from the **simplified registration process**.

The ability to protect designs across multiple countries with a **single application** could significantly **reduce costs and administrative hurdles** for Indian applicants, particularly those in SMEs.

India offers only a **six-month grace period** for industrial designs disclosed at government-notified exhibitions, with prior notice to the Controller of Designs. The **12-month grace period** under the treaty would provide **additional flexibility** for designers.

The treaty's provisions **complement India's initiatives**, such as the **Startup India program** and **Startups Intellectual Property Protection (SIPP)** scheme, which empower startups and SMEs.

in the last two years.

- **25% Year-on-Year Growth:** Last year's significant rise in design applications underscores the growing awareness of IP rights.

**Conclusion:** The Riyadh Design Law Treaty simplifies international design registration, benefiting SMEs and fostering innovation. India's participation, alongside its burgeoning design sector, strengthens global IP protection and promotes equitable access to design rights.

## Establishing India's AI Safety Institute

### News Excerpt

The **Ministry of Electronics and Information Technology (MeitY)** began **discussions** with industry experts about establishing an **AI Safety Institute** under the IndiaAI Mission.

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### Global Context

- Global Digital Compact:** At the United Nations Summit of the Future, the Global Digital Compact was adopted, with a focus on:
  - Multi-stakeholder collaboration:** Encouraging participation from governments, private entities, and civil society.
  - Human-centric oversight:** Ensuring that AI technologies align with societal values and ethical standards.
  - Inclusive participation of developing countries:** Avoiding a monopoly of AI governance by technologically advanced nations.

**Rationale for an AI Safety Institute**

- Strengthening Domestic AI Capabilities:** The institute will focus on research, testing, and standardising AI systems tailored to India's unique socio-economic and technological needs.
- Leveraging India's Advantages:** With a strong IT sector, a growing AI talent pool, and lower operational costs, India can lead cost-effective AI safety research. Its demographic diversity allows for robust testing of AI models for bias and inclusivity.
- Global Contribution:** By engaging in frameworks like the Bletchley Process, India can represent developing countries in global AI safety and governance efforts.

- The Bletchley Process:** The Bletchley Process underscores the establishment of a global network of AI Safety Institutes through international summits such as:
  - U.K. Safety Summit (November 2023)
  - South Korea Safety Summit (May 2024)
  - Summit in France (2024)
- International Models of AI Governance**
  - European Union (EU):** The EU's AI Act proposes strict regulations for high-risk AI systems. However, such prescriptive measures can stifle innovation and deter information sharing.
  - China:** China's Algorithm Registry enforces AI oversight but risks minimal compliance due to fear of regulatory sanctions.
  - The U.S. and U.K.:** These countries have established AI Safety Institutes that act as technical bodies rather than regulators. Their focus on multi-stakeholder collaboration and proactive risk assessments offers a model for India.

### Key Priorities for the AI Safety Institute

- Independent Technical Role:** The institute should operate as a technical research and testing body, distinct from rulemaking and enforcement authorities. Its core functions would include:
  - Conducting risk assessments of AI systems.
  - Testing AI models for bias, discrimination, and societal risks.
  - Developing standards and best practices for AI deployment.

**Challenges in Establishing India's AI Safety Institute**

- Limited Institutional Capacity:** India lacks dedicated institutions and expertise to assess AI safety effectively. Concerns from MeitY's March 2024 AI Advisory highlighted gaps in the government's ability to evaluate novel AI systems.
- Diversity and Inclusion:** Addressing biases in AI systems for India's socio-cultural diversity is complex. The digital divide could hinder equitable participation in AI governance.
- Competing Governance Models:** Varying global approaches (EU's strict regulation, China's compliance-driven model) pose challenges in aligning India's strategy while retaining its unique needs.
- Data and Privacy Concerns:** India's diverse datasets are limited for robust bias and inclusivity testing. Balancing data access with privacy protections is critical.

- Human-Centric Risks:** The institute should focus on risks most relevant to the Global South, including:
  - Bias and Discrimination:** Addressing algorithmic biases that disproportionately affect marginalised communities.
  - Social Exclusion:** Preventing AI-driven technologies from widening inequalities.
  - Gendered Risks:** Analyzing the impact of AI on gender equity.
  - Labour Markets and Privacy:** Studying the implications of AI on employment and personal data security.
- Integration with Global Frameworks:** Partner with international AI Safety Institutes to exchange knowledge and resources. Leverage the Bletchley Network for access to cutting-edge research and technical expertise.
 

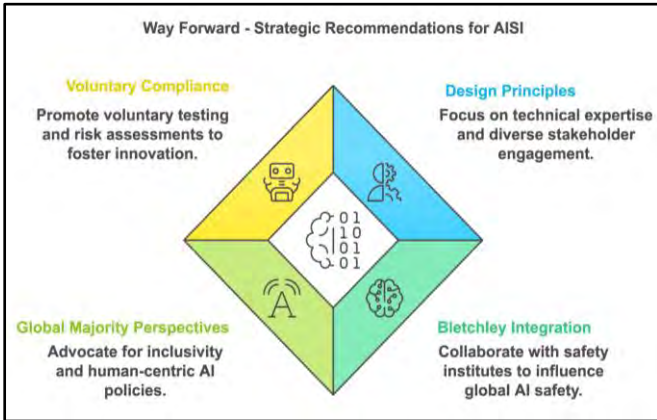
**PEPPER IT WITH:** AI Oversight, Data Localization, Digital Infrastructure.

**Interventions By India in AI**

- India's National Strategy for Artificial Intelligence** prioritises transparency, inclusivity, and ethical AI practices.
- MeitY's AI Advisory (March 2024):** The advisory proposed regulatory controls, such as government approvals for public rollouts of AI systems. However, it faced criticism for:
  - Insufficient technical evidence:** The advisory lacked clarity on conducting safety evaluations.

- **One-size-fits-all approach:** Treating all AI deployments uniformly, regardless of their risks or applications.
- Initiatives like the **RAISE summit** bring together stakeholders to discuss and promote responsible AI deployment, highlighting the importance of collaboration.
- Institutions like **IITs and IISc** lead in AI research, ensuring that ethical considerations are integrated into AI development.

**Way Forward:**



**Willow Quantum Chip**

**News Excerpt**

**Google** recently unveiled the Willow, its **latest quantum chip**, marking a milestone in the development of quantum computing.

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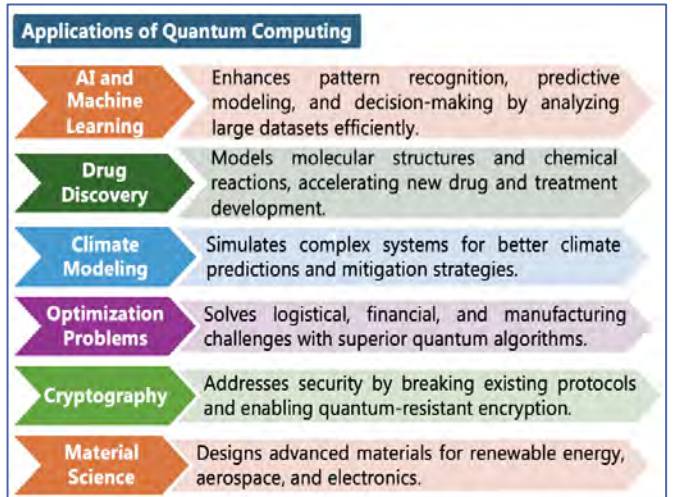
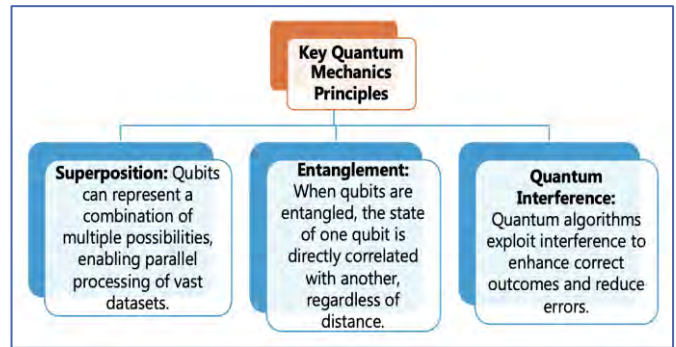
**About Willow Quantum Chip**

- **Superconducting Transmon Qubits:** It is operated using superconducting transmon qubits. These tiny electrical circuits function like artificial atoms and are engineered to exhibit quantum behaviour at near-absolute-zero temperatures.
- **Error Reduction:** Willow's architecture exponentially reduces errors, addressing a longstanding challenge in quantum computing. It also pioneers new techniques in quantum error correction, an area researchers have pursued for decades.
- **Increased Qubit Count:** While exact numbers remain undisclosed, Willow surpasses its predecessor, Sycamore, which had 53 qubits. The higher qubit count enables it to perform more complex computations.
- **Integrated Components:** Single and two-qubit gates, qubit reset, and readout components ensure seamless performance without lags, maintaining the stability required for precise operations.
- **Benchmark Achievement:** Willow performed a computation in under 5 minutes that would take the world's fastest supercomputers 10 septillion (10<sup>25</sup>)

years to complete—a time frame longer than the universe's age.

**About Quantum Computing**

- Quantum computing leverages the **principles of quantum mechanics to perform calculations** beyond the capabilities of classical computers.
- Unlike traditional computing, which uses bits to represent information as **0s or 1s**, quantum computing uses **qubits**. Qubits can exist in multiple states simultaneously.



**Challenges in Quantum Computing**

- **Quantum Errors:** Qubits are highly sensitive to environmental factors such as temperature and radiation, leading to noise and decoherence.
- **Scalability:** Building large-scale quantum computers capable of maintaining the stability of numerous qubits simultaneously is a daunting technical challenge.
- **Short Qubit Lifespan:** The fragile nature of quantum states limits the duration of computations, necessitating innovations in quantum stability.
- **Ineffective Security Protocols:** Quantum systems require robust encryption mechanisms to protect data against potential vulnerabilities.

**PEPPER IT WITH:**

Advanced Computing Technologies, Logistics Optimisation, Supercomputers.



- **Shortage of Skilled Professionals:** The field demands a workforce proficient in quantum mechanics and computing, highlighting the need for education and training programs.

**India's Initiatives in Quantum Technology**

- **National Quantum Mission:** This mission aims to scale up scientific and industrial research and development, creating a vibrant ecosystem for quantum technology in India. It seeks to position India as a global leader in the quantum domain.
- **Quantum Enabled Science & Technology (QuEST):** Focused on foundational research, QuEST is designed to develop essential quantum capabilities and lay the groundwork for advanced technologies.
- **Quantum Frontier Mission:** A strategic initiative under the Prime Minister's Science, Technology, and Innovation Advisory Council (**PM-STIAC**), this program drives advancements in quantum research and promotes collaboration between academia, industry, and government.

**Way Forward:**



**ANI vs OpenAI**

**News Excerpt**

The globally contested **legal battle** on **training large language models (LLM)** using **copyrighted content** recently reached India. **Asian News**

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**International (ANI)**, an Indian news agency, filed a copyright infringement **suit** in the **Delhi High Court** against **Open AI**, an artificial intelligence research organisation.

**Legal and Regulatory Issues Highlighted**

- **Liability of AI Platforms:** The case raises critical questions about whether AI platforms can be liable for copyright infringement when using publicly available content for training.
- **Fair Use Doctrine:** Indian courts must decide whether AI training falls under **fair use** or whether copyright laws require adaptation to address AI-specific challenges.
- **Territoriality and Data Sovereignty:** OpenAI's international operations complicate the application of

**Core Allegations by ANI Against OpenAI**

- Unauthorised Use:** OpenAI allegedly used ANI's copyrighted content to train its AI models without permission, violating India's Copyright Act.
- Verbatim Reproduction:** ChatGPT is claimed to generate responses identical or similar to ANI's original articles, breaching copyright laws.
- False Attribution:** ANI accuses ChatGPT of fabricating statements and interviews, harming its reputation and spreading misinformation.
- Ineffective Opt-Out Policy:** ANI argues that OpenAI's opt-out mechanism fails, as its content is still accessible through third-party sites.

**OpenAI's Defense**

- Jurisdiction:** OpenAI claims Indian courts lack jurisdiction as they operate globally without offices or servers in India.
- Industry Practices:** It argues that using publicly available data for AI training is standard practice and qualifies as fair use, as the data is transformed for new applications.
- Actions Taken:** OpenAI states it blocked ANI's content from future training after receiving a legal notice in September 2024.
- Public Data Usage:** It asserts that its training data is publicly available, eliminating the need for explicit permission.

Indian copyright law, raising questions about jurisdiction, data storage, and sovereignty.

**Global Context**

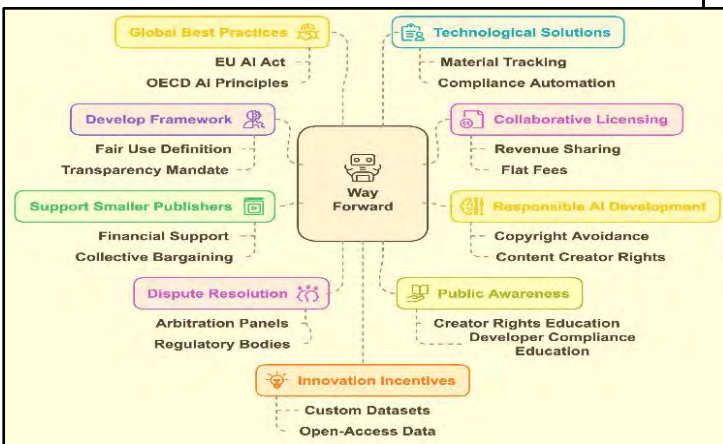
- In the **US**, OpenAI faces similar lawsuits from organisations like The New York Times and Universal Music Group.
- The **EU** is actively working on regulations through the **AI Act** and **Copyright Directive**, which aim to ensure ethical AI development while protecting intellectual property.
- Globally, the **OECD AI Principles** advocate for international cooperation to balance innovation with protecting creators' rights.

**Impact on AI Development and Media Partnerships**

- **Setting Precedents:** The court's decision could create a legal framework for AI companies' responsibilities toward content creators, influencing future disputes in India and internationally.
- **Encouraging Licensing Models:** This case could lead to formalised partnerships, encouraging media organisations to negotiate licensing agreements with AI firms to use their content.
- **Increased Scrutiny for Startups:** Heightened legal scrutiny might lead startups to adopt cautious approaches, potentially slowing innovation and increasing compliance costs.
- **Market Entry Barriers:** Established AI firms with access to vast datasets may gain an unfair advantage, making it harder for new entrants to compete.
- **Transparency and Accountability:** Regulations could mandate greater transparency in AI data usage, requiring companies to disclose their sources and allowing content creators to opt-out.

**Broader Issues in AI and Copyright Law**

- **Ownership and Authorship Challenges:** AI's ability to autonomously generate creative works raises questions about copyright ownership. Current Indian laws, like the Copyright Act of 1957, do not explicitly recognise AI as an inventor or owner, creating legal ambiguities.
- **Data Mining and Copyright Infringement:** Training AI on copyrighted material without explicit permission is a contentious issue globally. The EU's **Copyright Directive** allows text and data mining (TDM) for research but provides mechanisms for copyright holders to opt-out.
- **Fair Use Complexity:** Determining fair use for AI-generated content is challenging due to the lack of clear guidelines. Each case requires evaluating factors such as the purpose of use, the nature of the copyrighted work, and its market impact.



- **Safeguarding India's Maritime Interests:** Ongoing efforts to ensure the safety of India's 11,098 km coastline and vital trade routes.
- **Coastal Security:** Focus on preventing threats like illegal fishing, smuggling, and human trafficking.
- **Inter-Agency Coordination:** Enhancing collaboration with various stakeholders.
- **Technology and Infrastructure:** Implementation of cutting-edge technologies, development of surveillance systems, and strengthening of coastal security infrastructure.
- **Operational Capabilities Highlighted:**
  - Advanced vessel fleet and specialized response units.
  - Extensive surveillance systems for maritime safety and security.
- **Committee Feedback:**
  - **Achievements Recognized:** Members commended the ICG for its proactive role in ensuring maritime security.
  - **Progress Acknowledged:** Significant advancements in infrastructure, inter-agency coordination, and use of modern technologies were lauded.

**Roles and Responsibilities of the Indian Coast Guard:**

● **Coastal Security**

- **Anti-Piracy and Anti-Smuggling Operations:** The ICG actively patrols India's vast coastline and maritime zones to deter and apprehend pirates and smugglers. They employ advanced surveillance techniques and rapid response capabilities to thwart illegal activities.
- **Coastal Surveillance:** The ICG maintains a vigilant watch over the coastline to prevent infiltration by terrorists, smugglers, and other illicit actors. They use a combination of ships, aircraft, and advanced surveillance systems to monitor coastal waters and detect suspicious activities.
- **Search and Rescue Operations:** The ICG conducts search and rescue operations to save lives at sea. They respond to distress calls from fishermen, sailors, and other maritime users, providing timely assistance and medical aid.
- **Maritime Law Enforcement**
  - **Enforcing Maritime Laws:** The ICG enforces a wide range of maritime laws, including the Fisheries Act, Customs Act, and the Prevention of Marine Pollution Act. They inspect vessels, apprehend violators, and impose penalties to ensure compliance with maritime regulations.
  - **Combating Illegal Fishing:** The ICG actively combats illegal, unreported, and unregulated (IUU) fishing, which depletes marine resources and harms the marine ecosystem. They patrol fishing grounds, apprehend illegal fishing vessels, and seize illegal catches.
- **Marine Environmental Protection**

**INTERNAL SECURITY**

**Parliamentary committee reviews Indian Coast Guard's role in security**

**News Excerpt:**

A meeting of the Parliamentary Standing Committee on Defence was held in Chennai to review the working of the Indian Coast Guard (ICG) in ensuring coastal security along India.

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**Highlights of the Parliamentary Standing Committee Meeting on Defence:**

- **Purpose of the Meeting:** Review the functioning of the Indian Coast Guard (ICG) in ensuring coastal security along India's vast maritime boundaries.
- **Leadership and Attendees:** The meeting was chaired by MP Shri Radha Mohan Singh, who led a delegation of Members of Parliament. Senior officials from the Ministry of Defence (MoD) and the Indian Coast Guard were present.
- **ICG Representation:** Director General S Paramesh, PTM, TM, represented the ICG and provided a detailed overview of its capabilities and operations.
- **Discussion Points:**

- **Pollution Control:** The ICG responds to oil spills, chemical spills, and other marine pollution incidents. They deploy specialized equipment and personnel to contain and clean up spills, minimizing environmental damage.
- **Conservation of Marine Ecosystems:** The ICG contributes to the conservation of marine ecosystems by patrolling marine protected areas, preventing illegal fishing, and monitoring marine pollution. They also collaborate with other agencies to protect endangered species and their habitats.
- **Supporting Other Agencies**
  - **Cooperation with the Indian Navy:** The ICG works closely with the Indian Navy to ensure maritime security and address threats to India's maritime interests. They coordinate operations, share intelligence, and conduct joint exercises to enhance their capabilities.
  - **Assistance to Fishermen:** The ICG provides various services to fishermen, including search and rescue, medical assistance, and weather information. They also conduct awareness campaigns to promote safe fishing practices and marine conservation.

### Challenges Faced by the Indian Coast Guard

- **Resource Constraints**
  - **Limited Budget:** Despite increased allocations, the ICG often faces budgetary constraints that limit its capacity to acquire modern vessels, aircraft, and advanced surveillance systems. This can hinder its ability to respond effectively to emerging threats and challenges.
  - **Shortage of Personnel:** The vast coastline of India requires a significant number of personnel to effectively monitor and protect it. However, the ICG often faces a shortage of trained personnel, especially in specialized areas like marine engineering, electronics, and law enforcement.
  - **Aging Infrastructure:** Some of the ICG's vessels and equipment are aging and require modernization. This can impact operational efficiency and the ability to respond to emergencies.
- **Maritime Security Threats**
  - **Piracy and Terrorism:** While piracy has declined in recent years, there is still a risk of attacks, especially in the Indian Ocean region. Terrorist groups may also attempt to exploit maritime routes for illicit activities.
  - **Smuggling and Trafficking:** The ICG faces challenges in combating the smuggling of drugs, arms, and other contraband. Smuggling networks often use sophisticated methods to evade detection, requiring constant vigilance and advanced technologies.

- **Illegal Fishing:** Illegal, Unreported, and Unregulated (IUU) fishing poses a significant threat to marine ecosystems and the livelihoods of coastal communities. The ICG needs to intensify its efforts to curb IUU fishing and protect marine resources.

- **Environmental Challenges**

- **Marine Pollution:** Oil spills, plastic pollution, and other forms of marine pollution can have devastating consequences for marine ecosystems. The ICG plays a crucial role in responding to such incidents and mitigating their impact.
- **Climate Change:** Rising sea levels, increasing ocean temperatures, and more frequent extreme weather events pose significant challenges to coastal communities and maritime infrastructure. The ICG needs to adapt to these changing conditions and develop strategies to mitigate their impact.

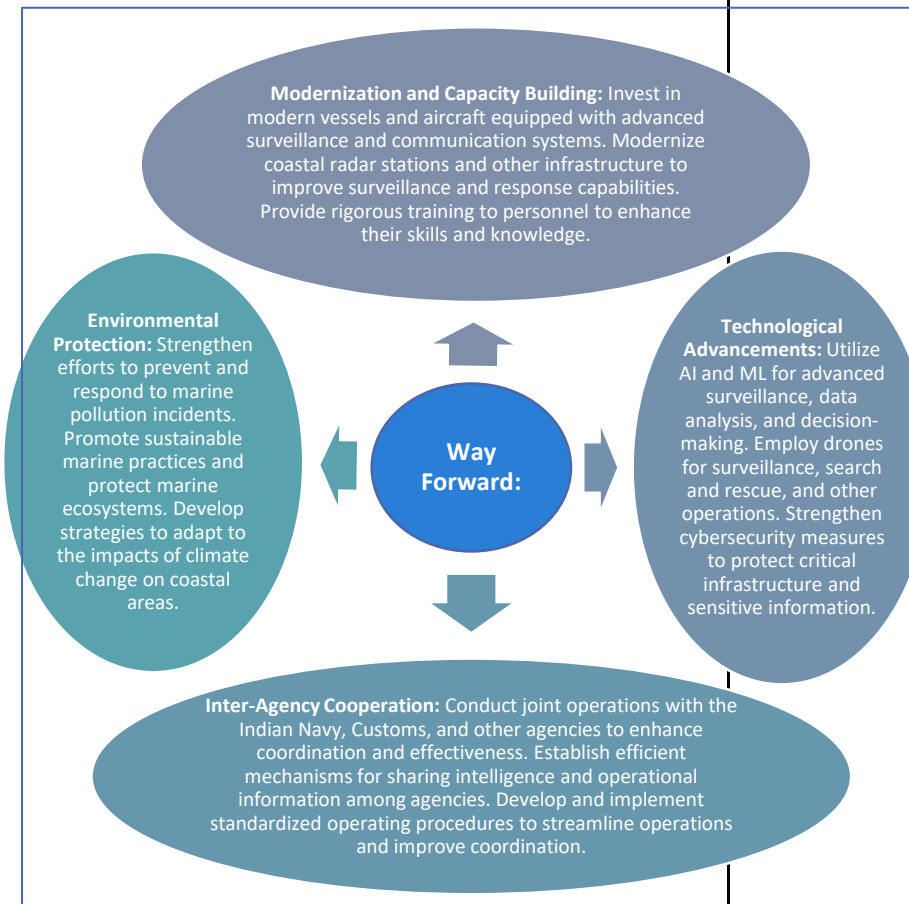
**PEPPER IT WITH:**  
Indian Navy, Coastguard,  
Border Security, Customs.

- **Technological Challenges**

- **Rapid Technological Advancements:** The rapid pace of technological advancements, particularly in areas like artificial intelligence, machine learning, and autonomous systems, presents both opportunities and challenges. The ICG needs to stay updated with the latest technologies to maintain its operational effectiveness.
- **Data Analysis and Intelligence:** The increasing volume of data generated by various sensors and surveillance systems requires sophisticated data analysis tools and techniques. The ICG needs to invest in data analytics capabilities to derive actionable insights from this data.

- **Coordination and Inter-Agency Cooperation**

- **Coordination Challenges:** Effective coordination among multiple agencies involved in maritime security, such as the Navy, Customs, and Coast Guard, is crucial. However, challenges in communication, information sharing, and standardized procedures can hinder effective cooperation.
- **Sharing of Intelligence:** Timely and accurate sharing of intelligence information among different agencies is essential for effective operations. The ICG needs to strengthen its intelligence-sharing mechanisms and improve coordination with other intelligence agencies.



include a **model anti-terrorism squad (ATS) and special task forces (STF) for states/UTs.**

● **Current Status of Counter-Terror Units:**

- 18 States/UTs have dedicated ATS/STF/Counterterrorism (CT) units and 13 States/UTs have ATS/STF/CT units notified as police stations.
- 6 States/UTs have SOPs for counter-terrorism operations as well as designated courts for terrorism-related cases.

● **Proposed Structure of Anti-Terror Units:** Each unit should be headed by an Inspector General (IG) or senior officer. The team should include:

- **At least 2 DIG-level officers.**
- **At least 4 SP-rank officers with specific responsibilities:**
  - SP-1: Intelligence and Operations.
  - SP-2: Investigations and Prosecutions.
  - SP-3 & DIG: Administration and Logistics.
  - SP-4: Research Analysis and Training.

● **Inter-Agency Coordination:** The

MHA is preparing SOPs for intelligence processing and enhancing coordination between Central and State agencies.

- **Discussion Points in ATC:** Reviewed the structure, hierarchy, work distribution, and orientation of anti-terror units in states/UTs. Highlighted the need for robust operational frameworks across the nation.
- **Vision for Counterterrorism:** Aimed at creating a unified, efficient framework to address terrorism through common platforms and structures in all States/UTs.

**India's Counter-Terrorism Efforts:**

- **Recognizing Sacrifices and Achievements:**
  - **Honoring Sacrifices:** Since India's independence, 36,468 policemen have sacrificed their lives for internal security and border protection. 11 medal winners were felicitated during the event.
  - **Achievements Since 2014:** Under PM Narendra Modi's leadership, a strong anti-terror "ecosystem" has been established. **Zero Tolerance** Against Terrorism has been adopted as a national and global policy. Significant 70% reduction in terrorist incidents over the last decade.
- **Strategic Measures and Policy Initiatives:**
  - **National Counter-Terrorism Policy:** Soon to be introduced by the Ministry of Home Affairs (MHA) to address terrorism and its supporting ecosystem comprehensively. Encourages a **"Whole of**

**What is MHA's plan for the proposed national counter-terrorism policy for all states?**

**News Excerpt:**

Earlier this month, Union Home Minister Amit Shah had said the Centre will soon bring a national counter-terrorism policy and strategy.

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**Key Points of National Counter-Terrorism Policy and Strategy:**

- **Uniform Specialized Terror Units:** All States and Union Territories (UTs) are to establish uniform specialized terror units with adequate personnel strength.
- **Dedicated Units: Each unit should include:**
  - Prison Monitoring Unit
  - Language Expert Unit
  - Deradicalization Unit
  - Financial Intelligence Unit
- **Upgraded Equipment and Training:** States and UTs must procure NSG-recommended weapons. A standardized training module set by NSG is proposed for all units.
- **Proactive Counter-Terror Approach:** Union Home Minister Amit Shah emphasized a proactive counter-terrorism strategy during the Anti-Terror Conference-2024 (ATC). The national counter-terrorism policy will

- Government** approach with integrated action from local to national levels.

  - Enhanced Legal Framework:** 2019 Amendments to NIA Act: Enabled investigations abroad and added new offences. UAPA Amendments (2019): Empowered authorities to designate individuals/organizations as terrorists and seize properties. Defined terrorism for the first time under new criminal laws.
  - Focus Areas:** Combat terror financing, radicalization, smuggling, and narcotics. Address emerging challenges like cryptocurrencies.
  - Multi-Agency Coordination:** Improvements in the functioning of the Multi-Agency Centre (MAC) for intelligence sharing. Establishment of a National Memory Bank and central intelligence database.
- Technological and Organizational Enhancements:**

  - Technological Integration: Deployment of NATGRID, NCORD, NIDAAN, and MANAS databases with AI support.** Use of tech solutions across all levels of police and investigative agencies.
  - Organizational Reforms:** Declared 15+ organizations as Terrorist Groups, with 7 more recently added. Strengthened NIA investigations with a near 95% conviction rate under UAPA cases. Emphasized skill development for young officers through advanced technological training.
- Challenges and Vision:**

  - Challenges in Combating Terrorism:** Terrorists operate across boundaries, necessitating interstate and international collaboration. Urgency in addressing gaps in counter-terror systems and resource utilization.
  - Future Vision:** Create a modern criminal justice system with effective implementation of new laws across prisons, forensics, courts, and police. Promote a "Duty to Share" culture for intelligence rather than a "Need to Know" approach. Foster national unity against terrorism with state governments actively participating.

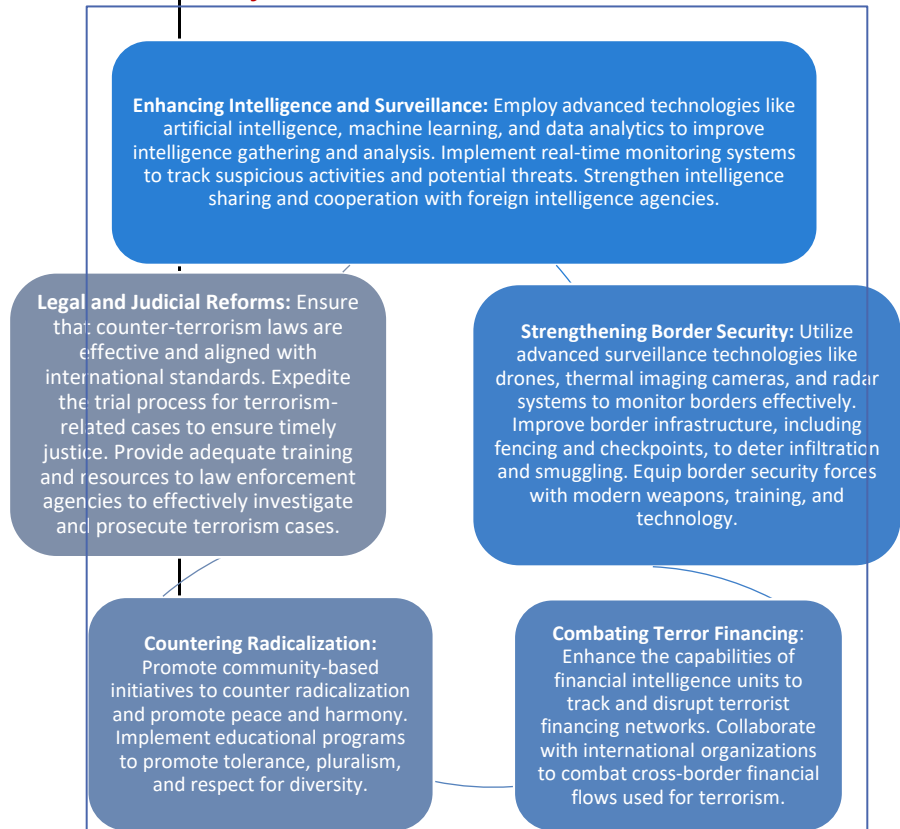
**Challenges in India's Counter-Terrorism Efforts:**

- Cross-Border Terrorism:** Groups like Lashkar-e-Taiba and Jaish-e-Mohammed continue to operate from Pakistani soil, launching attacks in India, particularly in Jammu and Kashmir.
- Domestic Terrorism:** Groups like the Indian Mujahideen have carried out attacks within India, often targeting religious and political figures.

- Terror Financing:** Terrorist organizations often rely on informal financial networks, such as hawala, to fund their activities.
- Intelligence and Surveillance:** Gathering timely and accurate intelligence is crucial for preventing attacks. Rapid technological advancements can be used by terrorists to evade detection and launch attacks.
- International Cooperation:** Terrorist organizations often have global networks, making international cooperation essential to counter their activities.
- Counter-Terrorism Legislation and Implementation:** Ensuring that counter-terrorism laws are effective and not misused is crucial. Strengthening the capacity of law enforcement agencies to investigate and prosecute terrorism cases.

**PEPPER IT WITH:**  
Internal Security, Counter insurgency operations, NSG, UAPA.

**Way forward:**



**GEOGRAPHY**

**Cyclone Fengal**

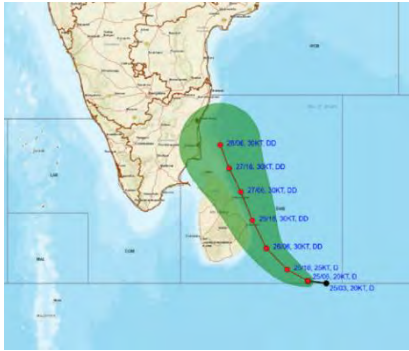
**News Excerpt:**

The Ministry of Home Affairs has approved the release of ₹944.80 crore to Tamil Nadu from the State Disaster Response Fund (SDRF) for providing relief to the people affected by Cyclone Fengal.

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**Cyclone Fengal - Key Points:**

- **Landfall and Location:** Cyclone Fengal crossed the coast near Puducherry on Saturday, November 30, 2024. The advance spiral bands of the cyclone started crossing the coast by 7 p.m., with the landfall process taking 3–4 hours.
- **Weather Conditions:** The cyclone brought heavy rainfall and strong winds to north Tamil Nadu's coastal districts, including Chennai. Wind speeds during the cyclone reached up to 90 km per hour.
- **Seasonal Activity:** Cyclone Fengal is the second cyclone to form over the Bay of Bengal during this season.
- **Forecast:** The Regional Meteorological Centre (RMC), Chennai, predicted heavy rainfall to continue through December 1, 2024. Rain intensity will depend on cloud cover.
- **Major Affected areas:** Krishnagiri and Villupuram in north Tamil Nadu, close to where Fengal made landfall, were among the worst affected areas between November 29 and December 1. Mailam village in Villupuram received 510 mm of rainfall in 24 hours. Puducherry received 490 mm of rainfall in a day, breaking the previous record of 211 mm set on October 31, 2004.



allocation for the general category States and Union Territories, and 90% for the special category States/Union Territories (Northeastern States, Sikkim, Uttarakhand, Himachal Pradesh, and Jammu and Kashmir).

- According to Section 46 of the Disaster Management Act, 2005, the “NDRF supplements the State Disaster Response Fund (SDRF) in case of a disaster of severe nature, provided adequate funds are not available in the SDRF”. The States have to submit utilisation certificates, pending which no further allocation is made.

**PEPPER IT WITH:**  
Tropical Cyclone, Disaster Management, NDMA.

**Why was Fengal so destructive:**

- According to the IMD, this happened primarily due to the movement of Cyclone Fengal. From its genesis to landfall, Fengal moved at a slow pace. On occasions, it moved at speeds slower than 6 kmph while at sea.
- Fengal also remained stationary for nearly 12 hours soon after making landfall close to Puducherry. Maintaining its intensity as a cyclone, the storm caused heavy rainfall and rough windy conditions over the region.
- Usually, after landfall, cyclones weaken as they hit obstructions and experience friction from buildings and trees.
- In the case of Fengal, as the storm stayed stationary, the destruction was far more pronounced, leading to numerous deaths.

**Way forward:**

**The different categories of cyclones:**

- The India Meteorological Department (IMD) categorises cyclones based on the associated wind speeds.
- These categories are low pressure (< 31 kmph), depression (31-49 kmph), deep depression (50-61 kmph), cyclonic storm (62-88 kmph), severe cyclonic storm (89-117 kmph), very severe cyclonic storm (118-221 kmph), and super cyclone (222 kmph).

**How did Fengal compare to past cyclones:**

- Over the years, Indian coasts have witnessed several severe storms which led to large-scale devastation.
- Associated maximum wind speeds went up to 260 kmph (Odisha super cyclone, October 1999), 215 kmph (Cyclone Phailin, May 2013), and 185 kmph (Cyclone Amphan, May 2020).
- Therefore, compared to many earlier storms, Cyclone Fengal was a low-intensity storm.

**Main Disaster fund:**

- The SDRF is the main fund available with the State governments for their response to notified disasters. The Centre contributes 75% of the SDRF

**Early Warning Systems:** Invest in advanced technology and infrastructure to improve the accuracy and timeliness of weather forecasts and early warning systems. Conduct regular awareness campaigns to educate people about the risks associated with cyclones and how to respond effectively.

**Infrastructure Resilience:** Build resilient infrastructure, including roads, bridges, and buildings, to withstand extreme weather events. Implement effective coastal zone management plans to protect coastal areas from erosion and storm surges.

**Effective Disaster Response:** Establish well-trained and equipped emergency response teams to respond promptly to disasters. Improve communication channels to ensure effective coordination between different agencies and timely dissemination of information to the public. Develop comprehensive evacuation plans to ensure the safety of people in vulnerable areas.

**Climate Change Adaptation:** Incorporate climate change considerations into development planning to build resilience to future extreme weather events. Promote ecosystem-based approaches to climate adaptation, such as mangrove restoration and afforestation.

**International Cooperation:** Collaborate with other countries to share best practices and lessons learned in disaster management. Conduct joint research on climate change and its impact on extreme weather events.

## DISASTER MANAGEMENT

### Twin negligence: On the Jhansi hospital fire

**News Excerpt:**

The fire in the neonatal intensive care unit of the Maharani Laxmi Bai Medical College in Jhansi district, Uttar Pradesh, where 10 newborns died recently, underscores the fatal intersection of severely neglected sectors in government budgeting and planning — health care and fire safety.

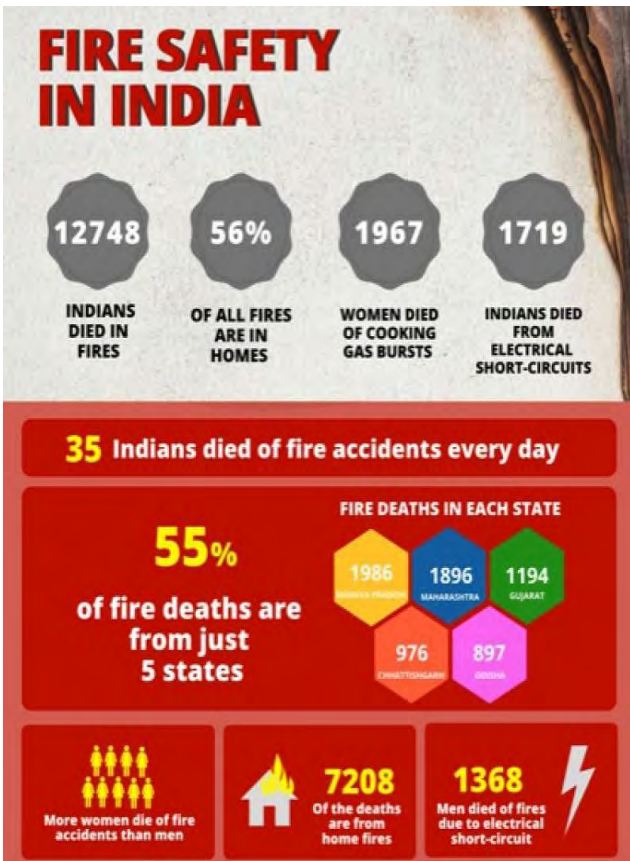
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**More detail about news:**

- The neonatal care unit in Jhansi was operating at almost three times its capacity — there were 49 babies for incubators meant only for 18. Hospital staff have said that this number sometimes goes up to 60.
- This must not surprise given that in 2021, the doctor-patient ratio in U.P. was 1: 2,158. A point to be noted is that India’s doctor-patient ratio for 2024 is 1:836, which is well within the World Health Organization recommendation of 1:1,000.

**Recent incident:**

- **Establishment and Role:** The Jhansi hospital, established in 1968, serves as the primary healthcare facility for Bundelkhand, a region covering 10 districts across Uttar Pradesh (U.P.) and Madhya Pradesh (M.P.). Bundelkhand is known to be an economically impoverished region, making the hospital critical for its population.



- **Patient Load:** The hospital handles a patient flow of over 5,000 dailies, reflecting its importance in addressing the healthcare needs of the region.
- **Infrastructure Issues:** Despite its significance, several wings of the hospital remain in a dilapidated condition, highlighting infrastructural challenges.
- **Recent Incident and Investigations:** Following a recent incident, the U.P. The government, led by Chief Minister Yogi Adityanath, has announced multi-level investigations to determine the cause.
  - Initial reports indicate that the incident may have been triggered by an electric short-circuit, which was further exacerbated by oxygen cylinders in the care unit.

**Fire incident in UP:**

- **Fire Fatalities in U.P.:** In 2022, 101 people lost their lives in 106 incidents caused by electrical short circuit-induced fires in Uttar Pradesh (U.P.). U.P. ranked fourth highest in fire-related fatalities, following Odisha, Maharashtra, and Bihar.
- **Editorial Highlight on Fire Safety:** An editorial titled “Insidious, incendiary”, published this year, emphasized India’s chronic disregard for fire safety norms.
- **The editorial noted:** Fire services in India are poorly organized. The demand for fire safety measures has significantly increased in recent years.
  - However, the development of fire services has not kept pace with these rising requirements.
- **Declining Healthcare Allocation in Union Budgets:** Allocation to healthcare in India’s Union **Budgets:**
  - FY2022 and FY2023: 2.2% of the total budget.
  - FY2024: Declined to 1.75%, reflecting a reduced focus on healthcare.
- **Comparison with Peer Developing Countries:** India’s public health expenditure as a share of GDP in 2021: 3.3%, lower than the global average for developing countries (2%-5% of GDP). Brazil and South Africa allocate approximately 10% and 8% of GDP to public health, respectively.

**PEPPER IT WITH:**  
Fire safety guideline, NDMA, SDMA, safety norms.

- **Way Forward: Addressing Systemic Failures in Healthcare and Fire Safety:**
  - **Strengthening Healthcare Infrastructure:**

- **Adequate Funding:** Increase public health expenditure to improve infrastructure, equipment, and staffing levels in public hospitals.
- **Capacity Building:** Invest in training healthcare professionals and upgrading facilities to meet the growing healthcare needs.
- **Regular Inspections:** Implement regular inspections of healthcare facilities to ensure compliance with safety standards and emergency preparedness.
- **Prioritizing Fire Safety:**
  - **Strict Enforcement of Fire Safety Norms:** Enforce stringent fire safety regulations in all public buildings, including hospitals.
  - **Regular Fire Safety Audits:** Conduct regular fire safety audits to identify and rectify potential hazards.
  - **Fire Safety Training:** Provide comprehensive fire safety training to staff and patients.
  - **Emergency Response Plans:** Develop and implement effective emergency response plans to handle fire emergencies promptly.
- **Improving Governance and Accountability:**
  - **Transparent Procurement:** Ensure transparent and efficient procurement processes to avoid corruption and delays in the delivery of essential medical equipment and supplies.
  - **Accountability Mechanisms:** Hold government officials accountable for lapses in public service delivery.
  - **Citizen Participation:** Encourage public participation in monitoring healthcare facilities and reporting issues.
- **Learning from Past Mistakes:**
  - **Thorough Investigation:** Conduct a thorough investigation into the Jhansi hospital fire to identify the root causes and implement corrective measures.
  - **Implementing Recommendations:** Implement the recommendations of previous inquiries and reports to prevent similar incidents.

agricultural lands. They are also known as wildland fires or bushfires.

- **Scope of Study:** The study includes fires in forests, grasslands, vegetated areas, agricultural lands, and wildfires.
  - Led by Yuming Guo, Monash University, it provides a detailed analysis of health risks, particularly from PM2.5 fine particulate matter released during such fires.
- **Global Mortality Statistics:** Between 1993-2010, over 1.53 million deaths globally were linked to air pollution from landscape fires.
  - Deaths were primarily due to respiratory cases (220,000 annually) and cardiovascular diseases (450,000 annually) caused by fire-induced air pollution. Low-income countries experienced 4x higher mortality rates compared to high-income nations.

**Key highlight of Study:**

- **India-Specific Impacts:** 25.54 lakh deaths in India over 20 years were attributed to diseases caused by landscape fire air pollution. Significant mortality due to air pollution was observed in western North America, India, and Congo, among others.
- **Key Pollutants and Effects:** Fine particles like PM2.5 and ozone travel thousands of kilometers, affecting populations far from the fire source. These emissions include black carbon, a significant contributor to global warming.
- **Socioeconomic and Geographic Trends:** Lower-income countries showed higher rates of respiratory disease and fire-related deaths. Cardiovascular deaths due to fire pollution are increasing globally by 1.67% annually.
- **Contributing Factors:** Agricultural burning and disposal of farm waste through fires often spread to forests. Climate change exacerbates fire frequency and severity, creating a feedback loop with ecosystem disruptions.
- **Preventive Measures:** Maharashtra has initiated measures like appointing fire watchers in forested areas. Awareness campaigns are conducted to curb agricultural burning during winter seasons.
- **Future Risks:** The global health burden from fire pollution is expected to rise with increasing fire incidents linked to a warming climate. The study highlights the need for global action on reducing emissions and addressing socio-economic disparities.
- **Expert Insights:** Prakash Doraiswamy emphasized the local and regional air quality impacts of large-scale fires and their long-term climate implications. Such fires contribute significantly to climate change and require both local awareness and global cooperation to mitigate their effects.

**New study: more than 1.5 million die each year from wild/bush fire pollution**

**News Excerpt:**

According to a new study published in Lancet magazine, Pollution caused by landscape fires, including incidents like agricultural burning in northern India during winters, could have claimed more than 1.2 lakh deaths in India every year on an average in the 20-year period between 2000 and 2019.

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**About Landscape Fires:**

- A landscape fire is a fire that burnt in natural or cultural landscapes, such as forests, grasslands, shrubs, and



## Effects of Landscape Fires:

### • Positive Effects:

- **Species Regeneration:** Fire helps certain plant species regenerate, as some seeds require exposure to heat to germinate. For instance, trees like pine and eucalyptus release seeds during or after a fire.
- **Habitat Protection and Restoration:** Fires clear dense undergrowth, allowing sunlight to reach the forest floor. This encourages the growth of grasses and shrubs, which can benefit herbivores and ground-nesting birds. Controlled burns (prescribed fires) are used to manage ecosystems and maintain habitats for specific species.
- **Nutrient Recycling:** Fires return nutrients to the soil by burning plant material, enriching the land for future plant growth.
- **Pest and Disease Control:** Fires can reduce the spread of pests and diseases by destroying infected plants and trees.
- **Ecosystem Adaptations:** Many ecosystems, such as savannas and Mediterranean forests, have adapted to periodic fires, making these events essential for their sustainability.

### • Negative Effects:

- **Loss of Biodiversity:** Uncontrolled fires can destroy rare and endangered plant and animal species, disrupting ecosystems. Fires can fragment habitats, making it harder for wildlife to migrate and find food or mates.
- **Air Pollution:** Wildfires release large amounts of carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), and fine particulate matter (PM<sub>2.5</sub>), which contribute to poor air quality and health issues. The smoke can travel long distances, impacting urban areas far from the fire source.
- **Soil Degradation:** Intense fires can sterilize the soil, killing microorganisms that are essential for soil health. Loss of vegetation increases soil erosion, leading to sedimentation in water bodies.
- **Economic Losses:** Wildfires strain local and national economies due to the cost of firefighting, rebuilding, and healthcare.
- **Contribution to Climate Change:** Fires emit greenhouse gases like CO<sub>2</sub>, contributing to global warming. The destruction of forests reduces the planet's capacity to absorb CO<sub>2</sub>, compounding the problem.
- **Human Health Risks:** Prolonged exposure to smoke can exacerbate respiratory and cardiovascular conditions, particularly among vulnerable populations like children, the elderly, and those with preexisting conditions.

### Indian Initiative for wild/bush fire pollution:

- **National Action Plan on Climate Change (NAPCC):** Focuses on sustainable agricultural practices and afforestation to reduce the risk of wildfires and mitigate air pollution.
- **National Policy on Forest Fire:** Introduced to systematically manage forest fires, enhance early warning systems, and involve communities in fire prevention.
- **Forest Fire Prevention and Management Scheme (FFPM):** The Ministry of Environment, Forest and Climate Change (MoEFCC) funds states to implement measures like fire-line cutting, firefighting equipment, and capacity building for local communities.
- **Air Quality Monitoring Initiatives:**
  - **National Air Quality Index (AQI):** Monitors air pollution levels across cities, including pollutants from wildfires.
  - **National Clean Air Programme (NCAP):** Targets the reduction of PM<sub>2.5</sub> and PM<sub>10</sub> levels, partly caused by fires.
- **Promotion of Alternatives to Stubble Burning:** Subsidies for machinery like Happy Seeders and Super Straw Management Systems to prevent farm fires. Campaigns for awareness and adoption of no-burn practices, particularly in northern India.
- **Satellite-Based Monitoring:** Use of ISRO and Forest Survey of India tools to detect forest fires in real-time and provide actionable intelligence.
- **Community Involvement:** Fire watchers and village-level committees are engaged in fire prevention and early response.

### Global-Level Efforts Involving India

- **United Nations REDD+ Program:** Encourages Forest conservation and sustainable management to mitigate emissions from forest degradation and fires.
- **Paris Agreement Commitments:** India's efforts to reduce greenhouse gas emissions include controlling black carbon emissions from fires.
- **Partnerships with Global Agencies:** Collaborates with organizations like the World Resources Institute and UNEP to address air quality challenges and manage landscape fires sustainably.

**PEPPER IT WITH:**  
Air pollution, National  
Pollution Control  
Initiatives, Fire  
Regulation Authority

### Global and Other Country Examples

- **Australia's Controlled Burn Program:** Pre-emptive burning to minimize large-scale wildfires.
- **California's Forest Resilience Program:** Integrates technology and community engagement for wildfire management.
- **EU's Copernicus Program:** Uses satellite imagery to track fires and air quality impacts globally.

**Way Forward: Mitigating the Impact of Landscape Fires:**

- **Global Action:**
  - **International Cooperation:** Strengthen international cooperation to address transboundary air pollution and climate change.
  - **Global Monitoring Systems:** Develop and implement robust global monitoring systems to track fire activity and air quality.
  - **Financial Support:** Provide financial assistance to developing countries to implement fire prevention and management strategies.
- **National-Level Strategies:**
  - **Improved Fire Management:** Enhance forest management practices, including controlled burns and firebreaks, to reduce the risk of large-scale wildfires.
  - **Community Engagement:** Empower local communities to participate in fire prevention and management efforts.
  - **Technology and Innovation:** Utilize advanced technologies, such as remote sensing and drones, to monitor fire activity and deploy resources effectively.
  - **Policy and Regulatory Framework:** Strengthen regulations and policies to address agricultural burning and other human-induced fire activities.

between four revered cities in India: **Haridwar, Ujjain, Nashik, and Prayagraj**, each situated along the banks of the holiest rivers—the **Ganges, Shipra, Godavari, and the confluence of the Ganges, Yamuna, and the mythical Sarasvati**.

- This grand event transcends religious practices, encompassing a rich blend of astronomy, astrology, socio-cultural traditions, and spiritual enlightenment.
- Millions of devotees, ascetics, and seekers gather to partake in the sacred rituals, including the holy bath at the Triveni Sangam, believing it to cleanse their sins and lead them toward spiritual liberation.
- The Maha Kumbh Mela not only represents India's deep-rooted heritage but also showcases the timeless human quest for inner peace, self-realization, and collective unity.

**Key Rituals and Practices:**

- **Shahi Snan:**
  - **Maha Kumbh Mela and Bathing Ceremony:** The Maha Kumbh Mela is a major spiritual event where the bathing ceremony (**Shahi Snan**) is the most significant ritual. It is held at the Triveni Sangam, the confluence of the Ganges, Yamuna, and Sarasvati rivers in Prayagraj. **Pilgrims believe immersing themselves in the sacred waters cleanses them of all sins, offering liberation from the cycle of rebirth and the potential for Moksha (spiritual liberation).**
  - **Spiritual Practices During the Mela:** Along with the bathing ritual, pilgrims participate in **worship along the riverbanks and attend discourses by sadhus and saints**, which deepen the spiritual experience.
  - **Shahi Snan (Royal Bath):** Shahi Snan, also known as **Rajyogi Snan**, is the central highlight and marks the official commencement of the **Maha Kumbh Mela**. On these dates, the procession is led by the saints, their followers, and the different Akharas, who perform this grand bathing ritual as a sign of spiritual reverence.
  - **Significance of Shahi Snan:** It is believed that participating in Shahi Snan allows individuals to receive the blessings of virtuous deeds and the wisdom of the saints who have participated in the ritual over the years. The immersion in the sacred waters during this event is a means of receiving divine purification and spiritual enlightenment.
- **Aarti:** The mesmerizing Ganga Aarti ceremony on the riverbanks is an unforgettable sight for the participants. The Ganga Aarti attracts thousands of devotees, evoking profound devotion and reverence for the sacred river.
- **Kalpavas:** Kalpavas is a sacred focused on intense spiritual discipline, austerity, and reaching higher levels of consciousness.
  - **The term "Kalpavas" comes from Sanskrit, where "Kalpa" means cosmic aeon (a period of time),**

**ART AND CULTURE**

**Maha Kumbh Mela 2025**

**News Excerpt:**

In 2025, from **January 13 to February 26**, Prayagraj will once again become the heart of this magnificent celebration, drawing millions of pilgrims and visitors to witness a profound display of devotion, unity, and the vibrant expression of India's spiritual heritage.

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**About Maha Kumbh Mela:**



- The Maha Kumbh Mela, celebrated as the world's largest spiritual gathering, is a breathtaking convergence of faith, culture, and ancient tradition.
- Rooted in Hindu mythology, this sacred festival unfolds four times over a course of **twelve years**, rotating

- and "Vas" means dwelling, symbolizing a period dedicated to spiritual practice.
- **Lifestyle and Practice:** Pilgrims who choose to participate in Kalpavas lead a life of simplicity, renouncing worldly comforts, and dedicating themselves to daily rituals such as: Meditation, Prayers, Scripture study.
  - This practice encourages deep spiritual focus and personal transformation.
  - **Satsangs (spiritual discourses)** are also an essential part of Kalpavas, offering pilgrims an opportunity for intellectual and devotional growth.
  - **Spiritual Impact:** The immersive nature of Kalpavas fosters a deepened sense of devotion and leads to spiritual transformation, allowing participants to grow in their understanding of spiritual truths and refine their connection to the divine.
  - **Role within the Larger Pilgrimage:** Kalpavas serves as a profound aspect of the larger pilgrimage experience, focusing not just on the physical act of bathing in the sacred waters but on the internal purification and spiritual elevation that comes from dedication to discipline and self-reflection.
  - **Prayers and Offerings during Maha Kumbh Mela:**
    - **Dev Pujan:** Dev Pujan is a sacred ritual performed by devotees to honor deities believed to visit the Triveni Sangam during the Kumbh Mela. This practice signifies the divine presence at the holy site.
    - **Shraadh:** Shraadh refers to the offering of food and prayers to ancestors, symbolizing respect and remembrance for departed souls. It is believed to bring peace to the souls of the ancestors and purify the devotee's spiritual journey.
    - **Veeni Daan:** Veeni Daan involves the offering of hair to the Ganges as a form of surrender and purification. This ritual is seen as an act of humility and devotion, symbolizing the renunciation of vanity and ego.
    - **Satsang:** Satsang is the practice of associating with truth, where devotees gather to listen to spiritual discourses by saints, scholars, and religious leaders. These teachings encourage self-realization and inspire individuals to pursue higher spiritual goals.
    - **Philanthropy:** Acts of philanthropy are highly valued during the Kumbh Mela and include donations like:
      - Gau Daan (donation of cows)
      - Vastra Daan (donation of clothes)
      - Dravya Daan (donation of money)
      - Swarn Daan (donation of gold)
    - These charitable acts are considered meritorious and believed to generate spiritual merit for the donor, contributing to their journey towards Moksha (liberation).
  - **Deep Daan:** Devotees float thousands of **lighted earthen lamps (Diyas)** on the flowing waters of the Triveni Sangam as an offering of gratitude. These lamps,

often crafted from wheat flour and filled with oil, create a celestial glow that reflects divine brilliance, symbolizing spirituality and devotion.

- **Prayagraj Panchkoshi Parikrama:** The historical ritual of circumambulating Prayagraj has been revived to reconnect pilgrims with ancient practices. This journey encompasses sacred landmarks like the **Dwadash Madhav and other significant temples**, offering spiritual fulfillment while preserving cultural heritage.

#### Attractions of Kumbh Mela 2025:

- **Triveni Sangam:** The Triveni Sangam is the confluence of the Ganga, Yamuna, and Saraswati rivers in Prayagraj. This sacred site offers pilgrims a deeply spiritual experience, with millions gathering
- **Historical Landmarks:**
  - **Ashoka Pillar:** An ancient historical monument featuring inscriptions from the reign of Emperor Ashoka, reflecting India's rich civilization.
  - **Colonial-era Architecture:** Structures like the University of Allahabad Building and Swaraj Bhawan, offering insights into the grandeur of British-era architecture.
- **Cultural Heritage:** The city's bustling streets and local markets provide visitors with a vibrant experience of Prayagraj's culture, art, and cuisine. It reflects the city's deep-rooted traditions and lively atmosphere.
- **Educational Institutions:** Allahabad University: Often referred to as the "Oxford of the East," this prestigious institution has played a significant role in shaping India's intellectual landscape.
- **Akhara Camps:** The Akhara camps at the Kumbh Mela offer spiritual seekers, sadhus, and ascetics a space for philosophical discussions, meditation, and sharing wisdom. These camps provide a unique opportunity for deeper spiritual exchanges.

#### Conclusion:

The Maha Kumbh Mela is far more than a religious congregation; it is a vibrant celebration interwoven with faith, rituals, and spiritual enlightenment that captures the essence of India's cultural and spiritual heritage. It serves as a profound reflection of the nation's deep-rooted ethos, showcasing the enduring connection between humanity and the divine. Through age-old rituals such as sacred bathing in holy rivers, fasting, charity and heartfelt devotion, this grand festival offers participants a path to Moksha.

## Guru Tegh Bahadur Ji's Martyrdom Day

### News Excerpt:

Guru Tegh Bahadur Martyrdom Day is observed every year on 24 November.

### More detail about news:

- **November 24 is commemorated as the Shaheedi Divas of Guru Tegh Bahadur**, the ninth guru of the Sikhs, who was executed by Aurangzeb in 1675.

- At the site of Guru Tegh Bahadur's execution stands **Gurdwara Sis Ganj Sahib in Delhi's Chandni Chowk.**

#### About Guru Tegh Bahadur Ji:

- **Birth and Family:** Born on April 21, 1621, in Amritsar, Punjab. Parents: Mata Nanki and Guru Hargobind, the sixth Sikh Guru. Guru Hargobind was known for introducing the concept of warrior saints and raising an army against the Mughals.
- **Early Life and Education:** Initially called Tyag Mal due to his ascetic nature. Received education under Bhai Gurdas, learning Gurmukhi, Hindi, Sanskrit, and Indian religious philosophy. Trained in swordsmanship, archery, and horse-riding by Baba Budha.
- **Military Bravery:** At the age of 13, displayed remarkable bravery and skill in a battle against a Mughal chieftain. His valiant efforts in the battle earned him the title Tegh Bahadur (Brave of the Sword).
- **Marriage and Settlement:** Married Mata Gujri in 1632 in Kartarpur. Subsequently moved to Bakala, near Amritsar.



#### The Ninth Sikh Guru - Guru Tegh Bahadur:

- **Guru Har Rai's Succession:** After Guru Ram Das, the guruship became hereditary in the Sikh tradition. Guru Har Rai, the son of Guru Hargobind, succeeded the Guruship at the age of 14 in 1644 and remained in the position until his death in 1661 at the age of 31.
- **Succession of Guru Har Krishan:** Guru Har Krishan, the five-year-old son of Guru Har Rai, succeeded him in 1661 but passed away in 1664 before reaching the age of eight. Before his passing, Guru Har Krishan indicated that his successor would be found in Baba Bakala, referring to Guru Tegh Bahadur, his grand uncle.
- **Guru Tegh Bahadur's Establishment in Kiratpur Sahib:** After being recognized as the Guru, Guru Tegh Bahadur moved to **Kiratpur Sahib. In 1665**, invited by Raja Bhim Chand of Kahlur, Guru Tegh Bahadur purchased land at Makhawal village, which he renamed **Chak Nanki (now Anandpur Sahib) in honor of his mother, Mata Nanki.**

#### The Guru's Times:

- **Aurangzeb's Rule:** Aurangzeb was the ruling Mughal emperor during Guru Tegh Bahadur's time. Under Aurangzeb's regime, there were forced conversions to Islam, often as a result of government orders or coercion. Individuals accused of crimes were sometimes offered pardon in exchange for converting to Islam.
- **Guru Tegh Bahadur's Conflict with Authorities:** When he began challenging traditional practices such as worshipping at the graves of pirs and faqirs. He strongly preached against these practices and advocated for followers to live without fear (nirbhau) and without hatred or envy (nirvair).
- **Guru's Sermons:** Guru Tegh Bahadur delivered his teachings in a combination of Sadukhri and Braj languages, making his message accessible to a wide

range of people from Sindh to Bengal. His use of metaphors resonated deeply with the people across North India, further spreading his messages of faith, equality, and courage.

#### Guru Tegh Bahadur's Travels Beyond Punjab:

- **Headquarters at Anandpur Sahib:** After establishing his headquarters in Anandpur Sahib in 1665, Guru Tegh Bahadur spent over a year there before embarking on extensive travels.
- **Travels Across India:** The Guru traveled for about four years, reaching as far as Dhaka in the east and Puri in Odisha. He also visited key religious and cultural centers, including Mathura, Agra, Benares, Allahabad, and Patna.
- **Patna and Family:** In Patna, Guru Tegh Bahadur left his wife Mata Gujri and her brother in the care of local devotees. Guru Gobind Singh, the 10th Sikh Guru, was born in Patna in 1666.
- **Peace Effort with the Ahom King:** While traveling back from Dhaka, Guru Tegh Bahadur was approached by Raja Ram Singh for assistance in brokering a peace agreement with the Ahom king. The peace accord was commemorated at Gurdwara Dhubri Sahib on the banks of the Brahmaputra.

#### Guru Tegh Bahadur's Martyrdom:

- **Kashmiri Brahmin's Request for Protection:** Kirpa Das, a Kashmiri Brahmin, approached Guru Tegh Bahadur for protection after facing threats from local chieftains in Kashmir who ordered him to convert to Islam or face retribution. Guru Tegh Bahadur assured Das and his group of protection.
- **Aurangzeb's Response:** Aurangzeb, the Mughal Emperor, viewed this as a direct challenge to his authority. According to Sri Gur Bilas Patshahi Dasmī, a biography of Guru Gobind Singh by Kavi Sukha Singh, Guru Tegh Bahadur went to Delhi, revealed his identity, and was arrested by the Mughal authorities.
- **Execution Order:** Aurangzeb ordered public execution of **Guru Tegh Bahadur** on November 11, 1675, after the Guru refused to convert to Islam. Guru Tegh Bahadur was tortured and beheaded at Chandni Chowk in Delhi along with three companions: Bhai Mati Das, Bhai Sati Das, and Bhai Dyala ji.
- **Gurdwara Sis Ganj:** A Gurdwara known as Sis Ganj was built on the site of the Guru's execution in 1783.
- **Confusion Regarding Martyrdom Date:** Initially, November 11 was observed as the date of Guru Tegh Bahadur's martyrdom. However, due to the introduction of the **Nanakshahi calendar to standardize Sikh history dates, some scholars now observe the martyrdom on November 24.**

**Conclusion:** Guru Tegh Bahadur's life and martyrdom symbolize the ultimate sacrifice for religious freedom and the protection of the right to practice one's faith. His unwavering courage and commitment to his principles continue to inspire millions of people worldwide.

## PRE-SHOTS

### POLITY

## Supreme Court Issues Guidelines on Death Penalty Execution & Mercy Petitions

### News Excerpt

The **Supreme Court (SC)** recently issued detailed **guidelines** to ensure the efficient execution of **death sentences** and the timely processing of **mercy petitions**.

#### Understanding the Death Penalty and Mercy Petition

- **Death Penalty:** The death penalty, also referred to as **capital punishment**, is the **most extreme** form of punishment under the judicial system. It entails the **execution** of an individual by the state as a consequence of being convicted for particularly **heinous crimes**.
- **Mercy Petition:** A mercy petition is a **formal plea** filed by a person who has been sentenced to death or imprisonment, **appealing for mercy**. This request is addressed to the **President of India** or the **Governor of a state**, depending on the **specific jurisdiction** of the case. It serves as a **final opportunity** for the convict to seek relief by invoking the constitutional powers of the executive.

**Article 72:** The **President** shall have the power to grant **pardons, reprieves, respites or remissions** of punishment or to **suspend, remit or commute** the sentence of any person convicted of any offence:

In all cases where the punishment or sentence is by a **Court Martial**.

In all cases where the punishment or sentence is for an offence against any law relating to a matter to which the **executive power of the Union** extends.

In all cases where the sentence is a **sentence of death**.

**Article 161:** It provides that the **Governor of a State** shall have the power to grant **pardons, reprieves, respites or remissions** of punishment or to **suspend, remit or commute** the sentence of any person convicted of any offence against any law relating to a matter to which the executive power of the State extends.



In **2021**, the Supreme Court ruled that a **State Governor** has the authority to grant pardons to prisoners, including those sentenced to death, even if they have not completed the minimum **14 years** of imprisonment.

#### Key Guidelines on Death Penalty and Mercy Petitions

- **Creation of Dedicated Cells:** States and union territories are required to establish specialised cells within their Home or Prison Departments for the prompt handling of mercy petitions.
  - These cells will be led by **designated officers** whose contact information must be shared with all prisons.
  - An official from the **Law or Justice Department** will oversee legal compliance within these cells.

- **State Government Responsibilities:** State governments must **promptly apply** for an execution warrant once the death penalty becomes final and enforceable.
- **Execution Warrant Protocol:** A mandatory gap of **at least 15 days** must be observed between the issuance of an execution warrant and its implementation.
  - Convicts should be informed of their **right to legal representation**, and they must be immediately **provided with copies** of the warrant and the associated orders.
  - **Legal assistance** should be made available without delay if requested by the convict to challenge the warrant.
- **Maintenance of Death Sentence Records:** Sessions Courts must maintain detailed records of all death sentence cases and ensure these cases are promptly **listed on the cause list** after receiving orders from the High Court or Supreme Court.
  - Notices must also be issued to **State Public Prosecutors** or **investigating agencies** to verify the status of any pending appeals, review petitions, or mercy pleas.
- **Efficient Information Sharing:** Prison authorities must **promptly submit** mercy petitions along with **critical details** like the convict's personal background, incarceration history, and relevant legal documents to the dedicated cells.
  - **Additional records** such as police reports, FIRs, trial evidence, and court judgments **must be forwarded** to the cell officer and the Home Department Secretary.
  - Mercy petitions must be immediately forwarded to the Governor's or President's Secretariat for further action without unnecessary delays.
- **Use of Electronic Communication:** To expedite the process, all communication, except for highly confidential matters, should be conducted electronically **via email**.

## Launch of 'Anna Chakra' and SCAN Portal

### News Excerpt

The Union Minister of Consumer Affairs, Food and Public Distribution launched **two innovative tools**, '**Anna Chakra**' and the **SCAN** (Subsidy Claim Application for NFSA) portal, to enhance the **efficiency and transparency** of the **Public Distribution System (PDS)** in India.

#### About Anna Chakra

- Anna Chakra, developed by the **Department of Food and Public Distribution** in collaboration with the **World Food Programme (WFP)** and **IIT-Delhi's Foundation for Innovation and Technology Transfer (FITT)**, is an advanced tool designed to enhance the logistics efficiency of India's massive Public Distribution System.

- It utilises **advanced algorithms** to identify **optimal transportation routes**, ensuring seamless movement of food grains from **production hubs to Fair Price Shops (FPSs)**.

**Key Features**

- Enhanced Supply Chain Efficiency:** The tool optimises the PDS's logistics network, involving farmers, warehouses, transporters, and FPSs. This benefits 81 crore beneficiaries under India's food security program.
- Cost Savings:** Route optimisation is expected to save approximately ₹250 crores per annum by reducing logistics costs. The QKM metric (quantity in quintal x distance in kilometres) has been reduced by 58 crore QKM across 30 states.
- Environmental Impact:** The initiative lowers the carbon footprint by reducing fuel consumption and transportation time, contributing to environmental sustainability.
- Infrastructure Coverage:** Covers 4.37 lakh Fair Price Shops and 6,700 warehouses involved in the PDS supply chain.
- Technological Integration:** Integrated with the Freight Operations Information System (FOIS) portal of Indian Railways through the Unified Logistics Interface Platform (ULIP).
  - The **PM Gati Shakti platform** incorporates the geolocations of FPSs and warehouses, enabling better monitoring and route planning.

**About SCAN Portal**

- The SCAN (Subsidy Claim Application for NFSA) portal is a **digital single-window platform** for states to submit, scrutinise, and approve subsidy claims.
- It **aims to streamline and automate** the settlement of **food subsidy claims** under the National Food Security Act.

**Key Features**

- Single-Window Functionality:** Provides a centralised platform for states to submit subsidy claims efficiently. Facilitates real-time tracking of claim approvals and settlements.
- End-to-End Workflow Automation:** This ensures complete digital processing of subsidy release and settlement using rule-based systems.

**Significance of the Initiatives**

- For Beneficiaries:** Ensures timely delivery of food grains under PDS, improving accessibility to affordable food for 81 crore NFSA beneficiaries.
- For the Government:** Achieves annual cost savings of ₹250 crores, reduces fuel consumption, enhances transparency in subsidy disbursement, and strengthens monitoring and accountability.
- For Sustainability:** Reduces transportation emissions, aligning with India's environmental goals, and makes the PDS more eco-friendly.

- Expedited Settlement:** The portal simplifies the claim approval process, enabling faster settlement of subsidies and ensuring timely fund release to states.

**Community, Individual Rights Accorded to Tribal Settlements in Anamalai Tiger Reserve**

**News Excerpt**

The **District Level Committee (DLC)** has approved both **community and individual forest rights** under the **Forest Rights Act (FRA), 2006**, for the Nagaroothu I, Nagaroothu II, and Chinnarpathi tribal settlements in the **Anamalai Tiger Reserve (ATR)**, Tamil Nadu.

**About the Forest Rights Act, 2006**

- The **Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006**, commonly known as the Forest Rights Act (FRA), was enacted to address **historical injustices** forest-dwelling communities face.
- Objective:** To ensure **livelihood and food security** for these communities and empower them with legal rights over forests and their resources.
- Critical Wildlife Habitats:** The FRA mandates that **critical wildlife habitats** within National Parks and Sanctuaries **remain inviolate** for wildlife conservation. However, this must be balanced with the rights of forest dwellers.

**Individual Rights vs. Community Rights under the Forest Rights Act, 2006**

Characteristic	Individual Rights (IFR)	Community Forest Rights (CFR)
<b>Nature of Rights</b>	These rights are granted to individuals, providing them with specific entitlements to forest land and resources.	These rights are collective in nature, allowing entire communities to manage and utilise forest resources.
<b>Resource Access</b>	Individuals have access to <b>minor forest produce</b> , grazing areas, and pastoralist routes to support their livelihood.	Communities have the authority to collectively manage and utilise <b>community forest resources</b> , promoting sustainable use.
<b>Land Ownership</b>	Individuals can claim ownership of up to <b>4 hectares</b> of forest land they currently cultivate.	Communities are granted ownership over <b>community forest resources</b> .
<b>Eligibility</b>	These rights are available to individuals who have resided on forest land for at least <b>75 years</b> prior to December 13, 2005.	Communities that have traditionally depended on forest resources are eligible to claim community rights.
<b>Decision-Making</b>	Decisions related to the use of forest land and resources are made <b>individually</b> by the right-holder.	Decisions are made <b>collectively</b> by the community, ensuring participatory governance and equitable resource management.

### Authorities for Vesting Forest Rights

- **Gram Sabha:** Plays a key role in initiating the process of determining the nature and extent of individual and community forest rights.

**Challenges in Implementation - Xaxa Committee Findings**

**Arbitrary Rejections:** Claims are often rejected without clear justification or due process.

**Lack of Deadlines:** No specific timelines for processing claims, leading to delays in granting rights.

**Displacement Due to Development Projects:** The rights of those displaced by infrastructure and development projects remain unaddressed, leaving many forest dwellers vulnerable.

- **Sub-Divisional Level Committee:** Examines resolutions passed by the Gram Sabha and forwards recommendations to the District Level Committee.
- **District-Level Committee (DLC):** This committee grants final approval for forest rights, as seen in the case of ATR tribal settlements.

### Significance of ATR Approvals

- The recognition of rights in ATR **empowers tribal communities** to access and manage forest resources sustainably while preserving their cultural heritage.
- By implementing the FRA, the state seeks to **balance wildlife conservation with social justice**, ensuring that forest-dwelling communities are not excluded from the benefits of forest governance.

## ICA Global Cooperative Conference 2024

### News Excerpt

Recently, India hosted the International Cooperative Alliance (ICA) Global Cooperative Conference in **New Delhi**.

#### About ICA

- The International Cooperative Alliance (ICA) is a **global organisation** that unites, represents, and serves cooperatives worldwide.
- Founded in **1895 in London**, England, during the **1st Cooperative Congress**, it is one of the oldest and largest non-governmental organisations, representing 1 billion cooperative members globally.
- With approximately **3 million cooperatives worldwide**, the ICA serves as the **apex body** for the cooperative movement, providing a global platform for collaboration, knowledge exchange, and coordinated action.
- It has over **306 member organisations** across **105 countries**. Its members include international and

national cooperative organisations representing various economic sectors, such as agriculture, banking, consumer goods, fisheries, health, housing, insurance, and industry and services.

- It first **expanded** into the **Asia-Pacific region in 1960** by establishing the Regional Office & Education Centre for South-East Asia.

### Key Highlights of ICA Global Cooperative Conference 2024

- **Indian Farmers Fertiliser Cooperative Limited (IFFCO)** organised the event in collaboration with the **International Cooperative Alliance (ICA)**, **AMUL**, **KRIBHCO**, and the Government of India.

### The Cooperative Spirit

**Definition**  
A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise.

**Cooperative Values**  
Cooperatives are based on the values of self-help, self-responsibility, democracy, equality, equity, and solidarity. In the tradition of their founders, cooperative members believe in the ethical values of honesty, openness, social responsibility and caring for others.

**Cooperative Principles**

- ✓ Voluntary and Open Membership
- ✓ Democratic Member control
- ✓ Member Economic Participation
- ✓ Autonomy and Independence
- ✓ Education, Training, and Information
- ✓ Cooperation among Cooperatives
- ✓ Concern for Community



- It provides a platform for **leaders, policymakers, and stakeholders** to address issues and **share practices and strategies** for advancing the cooperative movement.
- The conference theme is **“Cooperatives Build Prosperity for All,”** which aligns with the Indian Government’s vision of **“Sahkar Se Samridhhi”** (Prosperity through Cooperation).
- PM Modi launched the **UN International Year of Cooperatives 2025**, centred on **“Cooperatives Build a Better World.”**
- A commemorative **postal stamp** featuring a **lotus** was launched. The five petals of the lotus represent the **five elements of nature (Panchatatva)**, highlighting cooperatives' commitment to environmental, social, and economic sustainability. Panchatatva includes earth, water, fire, air, and space.

### India’s Contribution to ICA-AP and the Cooperative Movement

- The ancient Indian principle of **Vasudhaiva Kutumbakam – “the world is one family”** – has been a guiding force behind the cooperative movement in India, emphasising solidarity and mutual support.
- The **97th Constitutional Amendment of 2011** gave **constitutional status** and protection to cooperatives in India. **Part IX B (Articles 243-ZH to 243-ZT)** was added

to the Indian Constitution, which deals with cooperative societies and their functioning. It made forming cooperative societies a **fundamental right** under **Article 19 (1)**. A new **Directive Principle of State Policy, Article 43-B**, was introduced to promote cooperative societies.

- In **2021**, the **Ministry of Cooperation** was established to strengthen the cooperative sector further. The Ministry's vision is to promote a **cooperative-driven economic model** that reaches every village, reinforcing social and economic bonds across regions. The Union government plans to establish a **cooperative university** and unveil a **new cooperative policy**.
- The cooperative sector in India spans various domains, such as agriculture, banking, housing, and rural development. Cooperatives have been instrumental in **empowering marginalised communities**, providing access to resources, and contributing to rural economic development.
- India has over **8 lakh cooperatives** covering 98% of rural areas. About **300 million people** are associated with cooperatives in India.

#### About National Cooperative Development Corporation (NCDC)

- The **Union Minister of Cooperation** recently addressed the **91st General Council Meeting** of the National Cooperative Development Corporation in New Delhi.
- It is a **statutory organisation** operating under the **Union Ministry of Cooperation**. Established in **1963** through an **Act of Parliament**, it supports the growth and development of cooperative institutions across the country.
- It has a **Governing Council**, a **51-member body** responsible for formulating the policies and programs of NCDC.
- A **12-member Board of Management** manages the corporation's day-to-day operations.
- **Functions of NCDC**
  - **Planning, promoting, and financing programs** related to the production, processing, marketing, storage, export, and import of agricultural produce, food products, and other commodities.
  - Providing **financial support** for projects in the **rural industrial cooperative sector**.
  - Extending **financial aid** to cooperatives, societies, and federations to enhance operations.
- Encouraging and supporting **farmer cooperatives** to boost agricultural production and productivity.

#### Types of Cooperatives in India

**Consumers' Cooperative Societies:** These provide reasonably priced consumer goods, eliminating middlemen. Examples include Kendriya Bhandar and Apna Bazar.

**Producers' Cooperative Societies:** These support small producers by providing raw materials and equipment. Examples include APPCO and Haryana Handloom.

**Cooperative Marketing Societies:** These assist small producers in marketing their goods collectively. AMUL, the Gujarat Cooperative Milk Marketing Federation, is a prominent example.

**Cooperative Credit Societies:** These offer financial assistance to members by accepting deposits and providing loans at reasonable interest rates.

**Cooperative Farming Societies:** These enable small farmers to benefit from collective farming practices like lift-irrigation cooperatives.

**Housing Cooperative Societies:** These provide affordable housing options by purchasing and developing land for members.

### SSAI Issues Advisory for E-commerce Food Business Operators (FBOs)

#### News Excerpt

Considering the **growth of e-commerce** in the **Food Sector**, FSSAI has issued an advisory for E-commerce Food Business Operators (FBOs) to ensure the **safety, quality, and authenticity of food products** being sold online.

#### About Food Safety and Standards Authority of India (FSSAI)

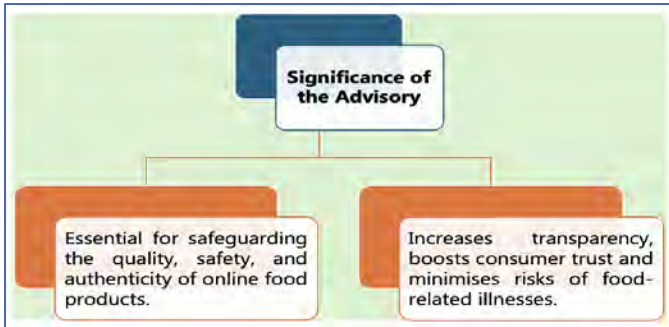
- It is an **autonomous statutory body** established under the **Food Safety and Standards Act 2006**. The act consolidates various food-related laws, such as the **Prevention of Food Adulteration Act of 1954**, the **Fruit Products Order of 1955**, the **Meat Food Products Order of 1973**, and others.
- It operates under the **Ministry of Health & Family Welfare** and protects and promotes public health by regulating and supervising food safety and quality in India.
- It frames **regulations and standards** for food products and additives, grants **licences and registration** to food businesses, conducts **risk assessments and scientific research** on food safety issues, and coordinates with other agencies and stakeholders on food safety matters.
- It is led by a **Chairperson** appointed by the central government and has 22 members, **one-third** of whom are **women**.
- FSSAI has a **headquarters** in **New Delhi** and **regional offices** in eight zones across the country.

#### Key Provisions of the Advisory

- **Ensuring Regulatory Standards:** E-commerce platforms must adhere to the **Food Safety and Standards (Labelling and Display) Regulations, 2020**. Online claims should reflect those on physical labels to avoid consumer deception.



- **Promoting Food Safety and Hygiene:** Delivery personnel should be adequately trained to maintain food safety and hygiene during transportation.
- **Shelf-Life Guidelines:** Delivered food products must retain at least 30% of their shelf life or a minimum of 45 days before expiry.
- **Accountability of Sellers:** Platforms must display sellers' FSSAI licence, registration numbers, and hygiene ratings prominently.



## 'Secular, socialist' to stay in Constitution's Preamble: SC

### News Excerpt

In **Dr Balram Singh and Ors v Union of India** judgement, the Supreme Court **dismissed petitions** challenging the constitutional validity of the **42nd Amendment Act**, which added the words '**secular**' and '**socialist**' to the **Preamble** of the Constitution in 1976 during the Emergency.

### Insertion of the terms 'socialist' and 'secular' in the Preamble

- The **Objectives Resolution**, presented by **Jawaharlal Nehru** in **1946**, established the foundational principles of the Constitution, emphasising independence, equality, and the protection of minority rights, laying the **groundwork** for future constitutional amendments.
- While **initial discussions** on incorporating socialism and secularism occurred during the Constitution's drafting, early proposals to include these concepts were **not adopted**.
- The terms '**socialist**' and '**secular**' were officially added to the Preamble through the **42nd Amendment** during the **Emergency period** (1975–1977), a time marked by **political turmoil** and significant government overreach.

**Socialist:** According to the **Western concept**, socialism supports government/ collective ownership of the means of production in order to achieve economic equality. The **Indian concept** emphasises democratic socialism by distributing resources fairly and permitting a mixed economy that includes the public and private sectors.

**Secularism:** According to the **Western concept**, secularism primarily refers to the absolute separation of religion and state. The **Indian concept** shows no strict division between religion and the state and highlights the importance of the state in fostering religious harmony and equal respect for all religions.

### Key Highlights of the SC Judgment:

- The petitioners argued that the amendment was **introduced** during the **Emergency** imposed by the Government of India, **questioning its legitimacy**. The SC pointed out that this **issue was deliberated** during the Constitution **Forty-Fourth Amendment Bill, 1978**, which **retained** the terms after extensive parliamentary discussion.
- The SC ruled that **Parliament's power under Article 368** extends to **amending the Preamble**. Hence, the argument against retrospective amendments was rejected.
  - The bench stated that accepting the **retrospectivity argument** would **undermine** all constitutional amendments despite Parliament's unquestioned authority to amend the Constitution.
- The court noted that while the Constituent Assembly had initially excluded the terms '**secular**' and '**socialist**' from the Preamble, their **inclusion aligns** with India's **evolving democratic and social framework**.
- **Interpretation of key terms:**
  - **Secularism:** The State remains neutral, neither endorsing nor opposing any religion. This principle is enshrined in **Articles 14, 15, and 16** of the Constitution.
  - **Socialism:** The term 'socialist' does not constrain economic policies but reflects the State's commitment to being a welfare state.



## Recalling Stories of Women Who Helped Draft the Indian Constitution

### News Excerpt

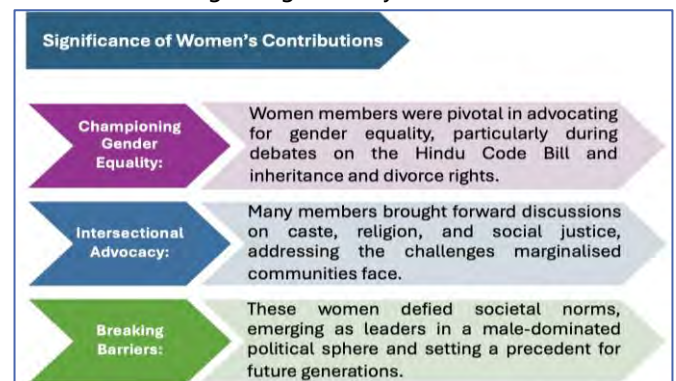
On **Constitution Day**, President Droupadi Murmu highlighted the **invaluable contributions** of **women** members in the **Constituent Assembly**. Of the 299 members, 15 were women, each bringing unique perspectives on gender, caste, and reservations.

### Profiles of Women Members

- **Ammu Swaminathan (1894-1978)**

- **Background:** Born in Palakkad, Kerala, Ammu Swaminathan became politically active after marrying Subbarama Swaminathan, a lawyer and political figure.
- **Advocacy:** Opposed regressive practices like widow shaving and jewellery renunciation after witnessing her mother's plight. Championed gender equality, especially during debates on the Hindu Code Bill.
- **Political Career:** Contested Central Legislative Assembly elections in 1945 on a Congress ticket. Post-independence, she represented Dindigul, Tamil Nadu, in the Lok Sabha.
- **Key Incident:** During a debate on the Hindu Code Bill, she highlighted its importance for women, drawing laughter from a male-dominated House but persisting with her arguments.
- **Annie Mascarene (1902-1963)**
  - **Background:** Born in Trivandrum (now Thiruvananthapuram) in a Latin Christian family, Mascarene overcame social and economic barriers to study and teach law.
  - **Advocacy:** Fought for universal adult franchise at a time when lower-caste communities, including Christians, Ezhavas, and Muslims, were disenfranchised. Supported a strong central government while ensuring autonomy for local bodies.
  - **Political Career:** She joined the Congress and became a member of the Constituent Assembly. In 1952, she ran as an independent candidate, winning from Thiruvananthapuram.
  - **Legacy:** She became one of India's first female MPs in independent India.
- **Begum Qudsia Aizaz Rasul (1909-2001)**
  - **Background:** Qudsia Rasul grew up in the royal family of Malerkota, Punjab, and pursued formal education despite opposition and fatwas.
  - **Advocacy:** Criticized separate electorates based on religion, aligning with a more inclusive vision of democracy. Expressed concerns about the potential socio-economic impact of Pakistan on poor Muslims.
  - **Political Career:** Initially associated with the Muslim League but chose to stay in India post-independence. Became a Rajya Sabha member from Uttar Pradesh in 1952.
  - **Legacy:** Her principled stance on electorates and her decision to remain in India showcased her commitment to secularism.
- **Dakshayani Velayudhan (1912-1978)**
  - **Background:** A Dalit woman from the Pulaya community in Cochin (now Kochi) faced systemic discrimination, including being barred from practical experiments in college.

- **Advocacy:** She opposed separate electorates for Dalits, differing from Ambedkar, arguing it was against nationalism. Advocated for the integration of Dalits into the mainstream nationalist movement.
- **Political Career:** Elected to the Constituent Assembly in 1946 from Malabar at the age of 34. Financial constraints prevented her from continuing a political career, but she remained active in the Dalit movement.
- **Legacy:** Her contributions were trailblazing. She was the first Dalit woman to graduate in science and the first Dalit woman in the Cochin Legislative Council.
- **Renuka Ray (1904-1997)**
  - **Background:** Born in Pabna (now in Bangladesh), Renuka Ray came from an educated family, with her mother being one of the first women students of Calcutta's Presidency College.
  - **Advocacy:** Focused on women's issues, including rights to divorce and inheritance. Opposed women's reservation in legislatures, believing it would hinder women's growth and independence.
  - **Political Career:** Represented women's organisations in the Central Legislative Assembly in 1943. Joined the Constituent Assembly and later became a Lok Sabha MP in 1957.
  - **Legacy:** Her activism and legislative work advanced women's rights significantly.



## Government notifies Telecommunications (Telecom Cyber Security) Rules, 2024

### News Excerpt

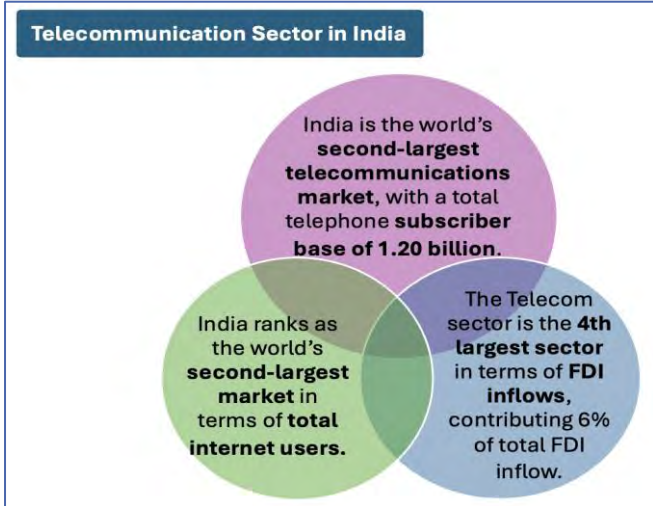
The government **notified** the Telecommunications (Telecom Cyber Security) Rules, 2024, which gives the Centre **power to seek traffic data and any other data** from a telecommunication entity other than message content.

### About Telecommunications Act, 2023

- The Telecommunications Act 2023 was brought in to **consolidate three acts**. Earlier, the Indian Telecommunications sector was governed by three separate Acts of Parliament:
  - Indian Telegraph Act 1885
  - Indian Wireless Telegraphy Act 1933

- Telegraph Wires, (Unlawful Protection) Act 1950
- It **aims** to amend the existing laws governing the **provision, development, expansion, and operation** of telecommunication services, telecom networks, infrastructure, and spectrum assignment.

**Key Provisions of Telecommunications (Telecom Cyber Security) Rules, 2024**



- The rules have been issued by **exercising power** under the **Telecommunications Act, 2023** and in supersession of the prevention of tampering of the **Mobile Device Equipment Identification Number Rules, 2017**.
- Defines Telecom Cyber Security, Telecommunication entity, and Security Incident.
- **Telecom Cyber Security:** Cyber security of telecommunication networks and services includes tools, policies, etc., that can safeguard them against relevant security risks in the cyber environment.
- **Telecommunication Entity:** This term refers to any person providing telecommunication services or establishing, operating, maintaining, or expanding telecommunication networks, etc.
- **Security Incident:** It refers to an event having real or potential risks to telecom cyber security.
- **Data collection and sharing:** The central government or **designated agency** may seek traffic data and any other data from a **telecommunication entity** and share them with **law enforcement** and telecom entities.
  - It can also direct telecommunication entities to **establish the necessary infrastructure** for collecting and providing such data from designated points to enable its processing and storage.
- **Obligations related to telecom cyber security:**
  - **For Individuals:** No person shall endanger or send any message that adversely affects telecom cyber security
  - **For Entities:** Entities should develop and adopt a telecom cyber security policy that addresses risks, audits, and incident responses.
    - Establish **Security Operations Centres (SOCs)** for telecom cyber security incidents, intrusions, etc.

- Entities should mandatorily appoint a **Chief Telecommunication Security Officer (CTSO)** whose details shall be provided to the Central Government.
- **Reporting of security incidents:** The Central Government must be **notified within 6 hours** of becoming aware of a security incident. Entities should furnish **details** such as the number of users affected, duration, geographical area affected, remedial measures taken, etc., **within 24 hours** of becoming aware of incidents.

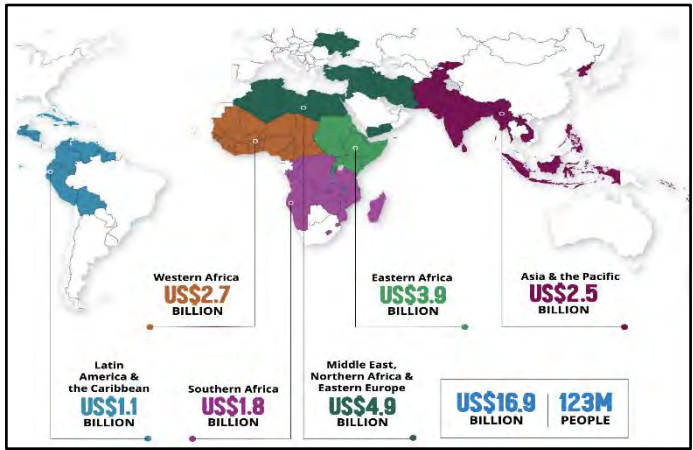
**SOCIAL ISSUES**

**World Food Programme (WFP) 2025 Global Outlook**

**News Excerpt**

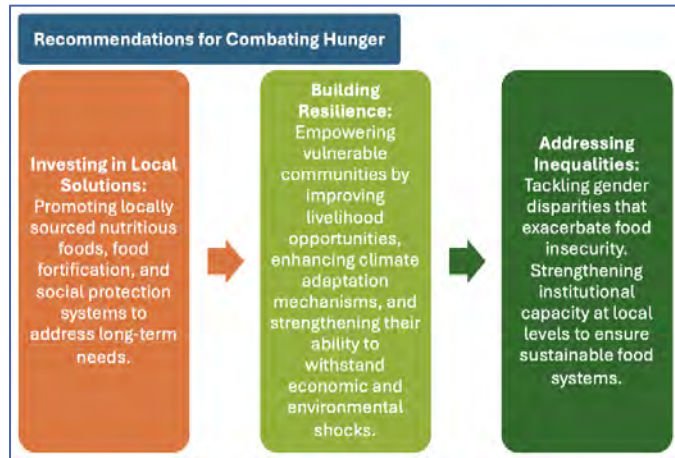
The **World Food Programme (WFP)** has released its '**Global Outlook for 2025**', providing critical updates on the state of global food security and highlighting strategies to address the root causes of hunger and respond effectively to crises.

**Key Highlights of the Report**

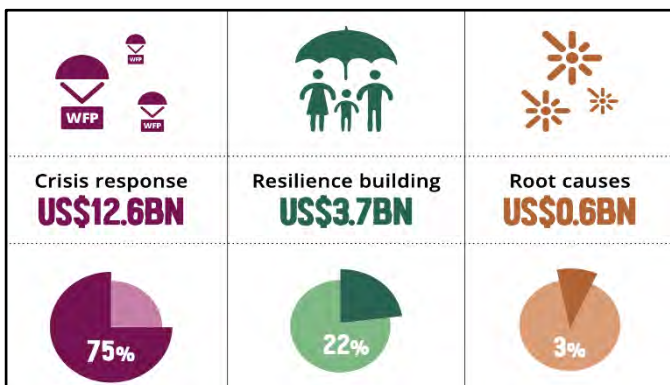


- **Global Hunger Crisis**
  - **Scale of Food Insecurity:** An estimated **343 million people** across **74 countries** are experiencing acute food insecurity, with **1.9 million people** on the brink of starvation.
  - **Major Drivers:** Armed violence is a significant factor in **14 out of 16 hunger hotspots**, including regions like **Sudan** and **Gaza**. Other contributors include **food inflation, extreme weather events,** and economic fragility.
  - **Fragile Contexts:** Approximately **65%** of acutely food-insecure people live in fragile or conflict-affected regions.

- **Funding Needs:** The WFP requires **US\$16.9 billion** to deliver critical assistance to **123 million** of the most vulnerable individuals facing severe food insecurity



globally.



● **India-Specific Insights**

- **Undernutrition Crisis:** India is home to **25% of the world's undernourished population**, making it a key focus area for global hunger eradication efforts.

- **Poverty and Malnutrition:** Around **21.25%** of India's population lives on less than **US\$1.90 per day**. **38% of children** aged 6-59 months suffer from chronic malnutrition, emphasising the need for targeted interventions.

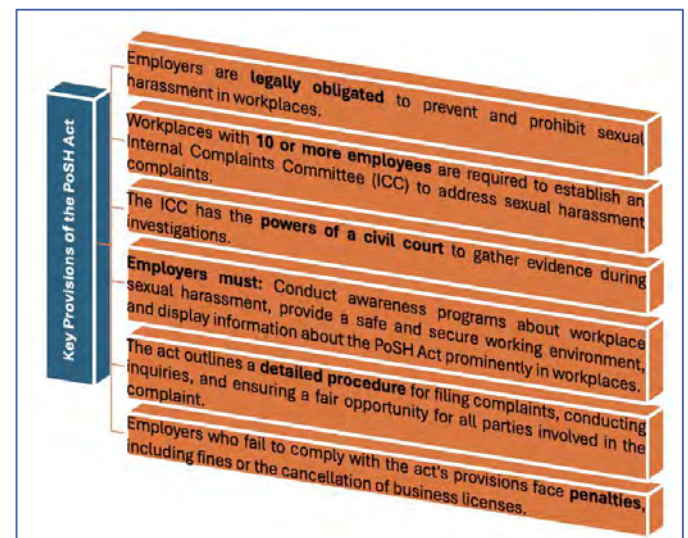
**Supreme Court Directions for Effective Compliance with the POSH Act**

**News Excerpt**

The Supreme Court has issued directions to **all States and Union Territories** to ensure uniform and effective **implementation** of the Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013 (**POSH Act**).

**About PoSH Act, 2013**

- The Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013 (PoSH Act) is a **legislation** enacted by the Government of India to **combat sexual harassment** against women in workplaces.
- The PoSH Act is based on the **Vishakha Guidelines**, established by the Supreme Court in the landmark case of **Vishakha and Others v. State of Rajasthan (1997)**. The Vishakha Guidelines mandated protective measures to address workplace sexual harassment and formed the basis for this legislation.



**Key Directions Issued by the Court**

- **Appointment of District Officers:** The appropriate government must notify District Officers for every district to perform the duties mandated under the POSH Act.
- **Responsibilities of District Officers**
  - **Ensuring Internal Complaints Committees (ICC):** District Officers must ensure the formation of Internal Complaints Committees (ICC) in all organisations within their jurisdiction.
    - **Section 4** of the POSH Act mandates that every employer constitutes an ICC to receive

complaints, conduct inquiries, and recommend appropriate actions.

- **Establishing Local Committees:** Under **Section 6** of the POSH Act, District Officers must constitute Local Committees (LCs) to address complaints from:

- Establishments with **fewer than ten employees**, where an **ICC is not required**.
- Cases where the complaint is against the employer.

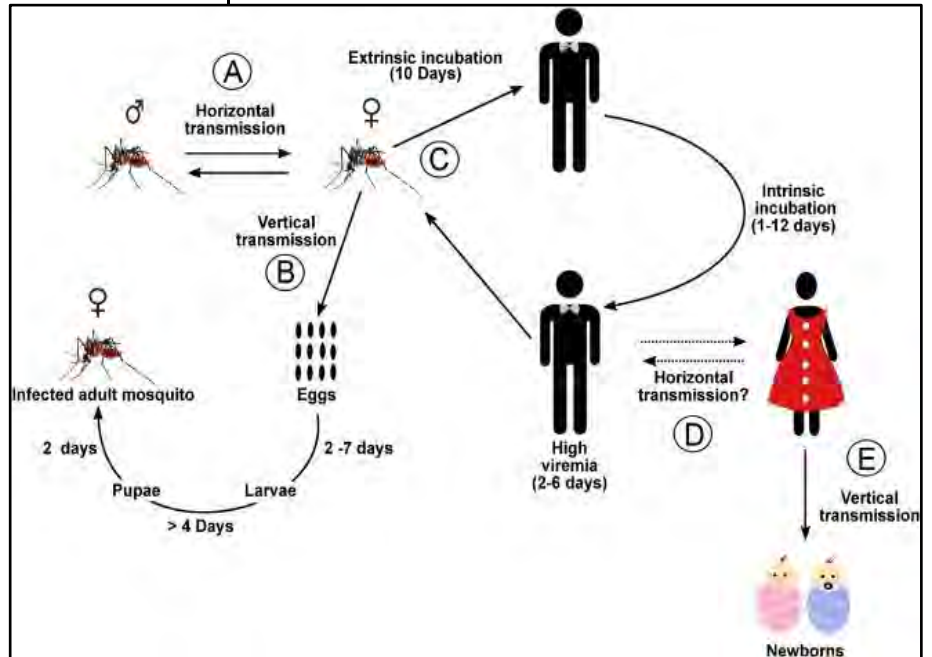
- **Designation of Nodal Officers:** Each **Block, taluka, and Tehsil** in rural or tribal areas and each municipality in urban areas must have a designated nodal officer to facilitate compliance with the POSH Act.

- **Jurisdiction of Local Committees:** The jurisdiction of Local Committees (LCs) extends to the entire area within their respective districts, ensuring comprehensive coverage.

- **Implementation of SHe-Box:** States are encouraged to introduce the Sexual Harassment electronic Box (SHe-Box) for registering complaints.

- The **SHe-Box is a single-window platform** enabling women to register workplace sexual harassment complaints conveniently and efficiently.

- It is caused by a **ribonucleic acid (RNA) virus** belonging to the **alphavirus genus** under the **Togaviridae family**.
- Chikungunya primarily manifests as **fever** and **severe joint pain**, which can be debilitating and may last for varying durations. Due to symptoms that overlap with

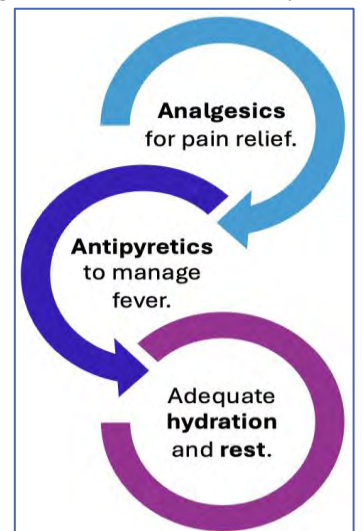


**dengue** and **Zika virus**, chikungunya is often misdiagnosed.

- The disease is transmitted through the bites of **infected female mosquitoes**, primarily - **Aedes aegypti** and **Aedes albopictus**. These mosquito species are also known vectors for **dengue** and **Zika virus**. They bite throughout daylight, with activity peaks in the **early morning** and **late afternoon**.

- According to the **World Health Organization (WHO)**, chikungunya is prevalent across **Africa, Asia, and the Americas**.

- There is **no specific cure** for chikungunya. Treatment focuses on **symptomatic relief**, including:



- Preventing Chikungunya relies on **mosquito control measures**, such as:

- Eliminating **stagnant water** to prevent mosquito breeding.
- Using **medicated mosquito nets**.
- Ensuring proper **civic maintenance** and **public health outreach**.

## US Reports Surge in Chikungunya Cases Among Travellers from Telangana

### News Excerpt:

Following a surge in chikungunya cases, the **U.S. Centers for Disease Control and Prevention (CDC)** issued a **Level 2 travel advisory** for U.S. travellers returning from Telangana, India.

### About the News

- The advisory urges **enhanced precautions** due to the **higher-than-expected number of chikungunya cases** reported among U.S. travellers returning from Telangana.
- **CDC Travel Advisory System:** The CDC categorises travel risk into four levels:

- **Level 1:** Usual precautions.
- **Level 2:** Enhanced precautions (e.g., the current advisory for Telangana).
- **Level 3:** Reconsider non-essential travel.
- **Level 4:** Avoid all travel.

### About Chikungunya

- Chikungunya is a **mosquito-borne viral disease** first identified during an outbreak in **southern Tanzania in 1952**.

- The **National Vector Borne Disease Control Programme (NVBDCP)** plays a pivotal role in preventing and controlling vector-borne diseases, including **chikungunya, malaria, dengue, Japanese Encephalitis (JE), lymphatic filariasis, and kala-azar.**

## International Pathogen Surveillance Network (IPSN)

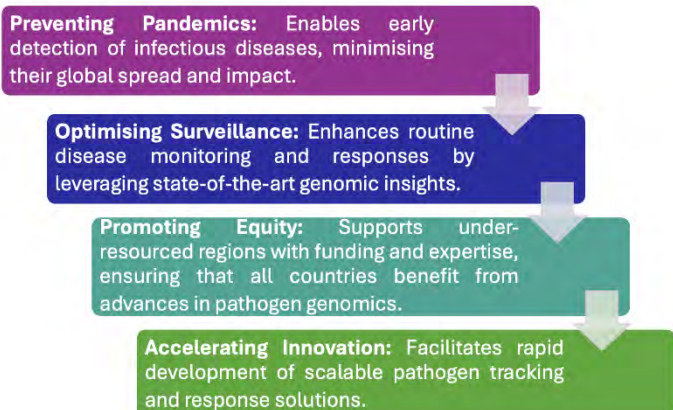
### News Excerpt

The International Pathogen Surveillance Network (IPSN) announced its **first round of catalytic grants** to support partners in **low—and middle-income countries** in building capacity for pathogen genomic analysis.

### About IPSN

- **Establishment:** It is a global **public health initiative** established in **2021** in **Berlin**. The WHO Hub for Pandemic and Epidemic Intelligence hosts it.
- **Objective:** It aims to provide robust data, advanced analytics, and informed decision-making for responding to health emergencies.

### Significance of IPSN



- **Focus on Pathogen Genomic Surveillance (PGS):** PGS involves monitoring and analysing the genetic material (genomes) of pathogens, including viruses, bacteria, fungi, and parasites.
  - **Offers critical insights** into how pathogens spread, evolve, and the severity of their infectiousness or mortality rates.
  - **Enables early detection** and tracking of diseases to improve prevention, outbreak responses, and therapeutic measures.
- **Global Collaboration:** Brings together experts from governments, philanthropic foundations, multilateral organisations, civil society, academia, and the private sector.

- **Encourages members** to collaborate in dedicated working groups focusing on specific challenges in pathogen genomics.
- **It supports equity** by prioritising partnerships with low—and middle-income countries, ensuring global access to advanced genomic surveillance tools.

## Australia’s Social Media Ban for Children Under 16

### News Excerpt

The **Australian Senate** has **passed** groundbreaking legislation that **bans** children under 16 from creating social media accounts, marking the **first such law** globally.

### Key Provisions of the Law

- **Ban on Social Media Accounts for Children Under 16:** Platforms such as TikTok, Facebook, Instagram, Snapchat, Reddit, and X are required to prevent children under 16 from creating accounts.
- **Penalty for Non-Compliance:** Platforms that fail to enforce the ban face fines of up to 50 million Australian dollars (£26 million).
- **Implementation Timeline:** Platforms have one year to devise and implement mechanisms for compliance before penalties come into force.
- **Privacy Protections:** Platforms cannot require users to submit government-issued identification such as passports or driver’s licenses. Digital identification via government systems is also prohibited.

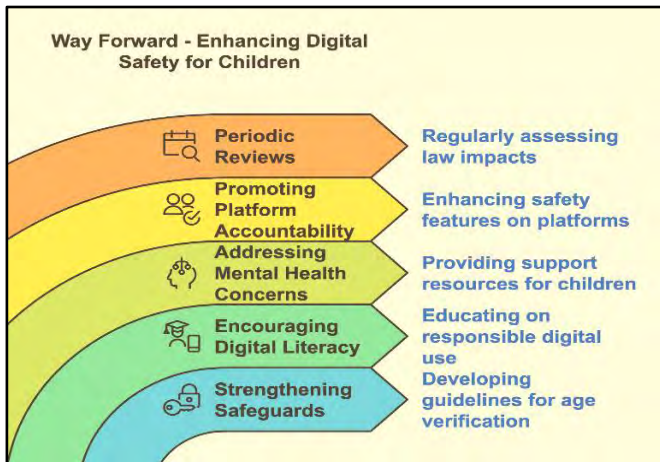
### Government’s Rationale



### Criticisms and Concerns

- **Privacy Risks:** Requiring users to prove their age may inadvertently infringe on the privacy of all users, not just children. Privacy advocates worry about how platforms will implement age verification without compromising user anonymity.
- **Potential Harm to Vulnerable Communities:** Mental health experts and child welfare advocates warn the ban could isolate vulnerable children, especially those in **regional areas** or the **LGBTQI community**, who use social media for support and connection.
- **Isolation and Exclusion:** The ban will exclude children from social media’s positive aspects, such as learning, creativity, and community engagement.
- **Encouraging Risky Behavior:** The ban may drive underage users to the dark web or other unregulated spaces.

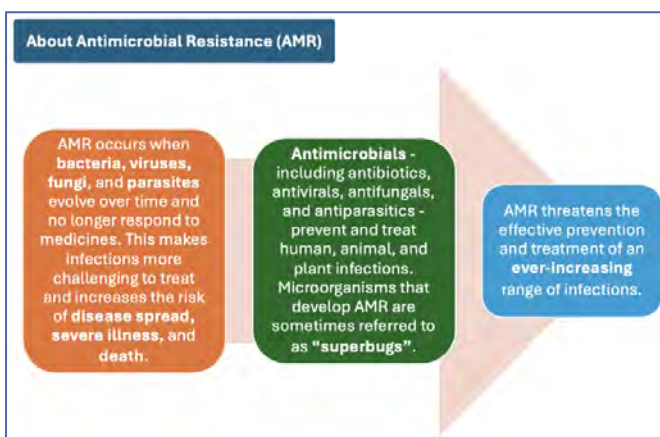
- **Safety Concerns:** The legislation could discourage younger children from reporting harm on social media platforms, reducing oversight and accountability.
- **Impact on Parental Authority:** The legislation undermines parents' rights to decide about their children's social media usage, transferring authority to the government and platforms.
- **Impact on Platform Accountability:** The ban may reduce platforms' incentives to improve **online safety measures**, as they may rely on blanket exclusions rather than fostering a safer online environment for all users.



#### 4th Global High-Level Ministerial Conference on AMR

##### News Excerpt

The Fourth Global High-Level Ministerial Conference on Antimicrobial Resistance (AMR) recently took place in **Jeddah, Saudi Arabia**.



##### Key Highlights of the Conference

- It gathered **ministers and experts** from health, agriculture, and environmental sectors representing **57 countries** and **450 participants** from UN organisations. Nigeria was announced to host the next Ministerial Summit in 2026 to evaluate progress.
- **Theme:** From Declaration to Implementation – Accelerating Actions Through Multisectoral Partnerships for the Containment of AMR.

- **Key Objectives:**
  - Address critical challenges impeding AMR progress.
  - Foster multisectoral collaboration through the One Health approach.
  - Develop systematic and sustainable solutions to combat AMR.
- **Adoption of the Jeddah Commitments:** A comprehensive global framework designed to combat AMR. Focused on translating the **UNGA Political Declaration on AMR** into action. Aimed to strengthen governance, surveillance, research, access, and disposal mechanisms.
- Establishment of the **Independent Panel for Evidence on Action Against AMR by 2025**.
- Creation of national AMR coordination mechanisms.
- Promotion of global data sharing through platforms like:
  - **GLASS AMR/AMC** (Global Antimicrobial Resistance and Use Surveillance System).
  - **ANIMUSE** (Animal AMR Use Surveillance).
  - INFARM.
- Adherence to **Codex Alimentarius Commission** guidelines for prudent antimicrobial use.
- Establishment of the **One Health AMR Learning Hub** for knowledge sharing and capability building.
- Proposal for a **Regional Antimicrobial Access and Logistics Hub** for sustainable procurement and access.
- Emphasis on increasing **investment** in antimicrobial research and innovation. Focus on sustainable manufacturing of antimicrobials and diagnostics.

##### India's Participation

- India was represented by the **Union Minister of State for Health and Family Welfare**. Key contributions and proposals:
  - Strengthening AMR detection and surveillance across sectors.
  - Prioritising sustainable financing for AMR research and governance.
  - Supporting the creation of **AMR Multi-Partner Trust Fund** and **Independent Panel on Evidence for Action by 2025**.
- Highlighted the need for:
  - Addressing barriers to access and affordability of antimicrobials in developing nations.
  - Ensuring availability in Low- and Middle-Income Countries (LMICs).
- Highlighted three interconnected agendas:
  - **Development Agenda:** Promote sustainable food production and livestock management.
  - **Prevention Agenda:** Build food systems independent of antimicrobial use and improve water supply systems.
  - **Environmental Agenda:** Minimize environmental contamination from antimicrobials.

## ECONOMY

## Windfall gains tax removed

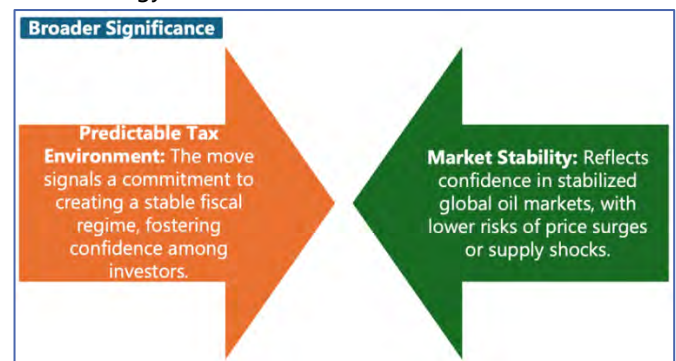
## News Excerpt:

Recently, the government withdrew the windfall gains tax on domestic production of crude oil and export of diesel, petrol, and aviation turbine fuel (ATF), scrapping the levy that was introduced 30 months ago amid a surge in the prices of crude oil and key fuels in the international market in the wake of Russia's invasion of Ukraine.

## Windfall Tax:

- **Windfall Gains Tax:** This was a term used to describe cesses under central excise imposed on fuel exports and domestic crude oil production. The tax targeted super-normal profits of fuel exporters and oil producers.
  - **Tax Structure:**
    - **For domestic crude oil and ATF exports:** The tax was in the form of Special Additional Excise Duty (SAED).
    - **For diesel and petrol exports:** It included SAED and Additional Excise Duty (AED), also known as Road and Infrastructure Cess (RIC).
  - **Implementation and Adjustments**
    - **Review Mechanism:** The duties were reviewed fortnightly based on global fuel margins and crude oil price movements. Petrol levy was reduced to nil in the first revision and was not reintroduced thereafter.
    - **Initial Imposition:** Imposed on 1 July 2022, following the global price surge due to Russia's invasion of Ukraine. International crude oil price hikes led to high domestic oil prices as Indian crude oil pricing is benchmarked to international prices.
  - **Objectives and Impact**
    - **Reasons for Introduction:**
      - To capture excess profits of oil producers and refiners due to the price surge.
      - To partly offset duty cuts on domestic petrol and diesel.
      - To ensure adequate fuel supply in the domestic market, refiners preferred exporting fuels to lucrative international markets, causing supply disruptions in some regions.
  - **Global Trend:** India was among several countries that introduced windfall gains taxes to regulate super-normal profits of energy companies in the aftermath of the Ukraine conflict.
- Scrapping the Windfall Gains Tax: Impact and Significance:**
- **Opposition from the Oil Industry - The oil industry opposed the tax since its inception, citing:**
    - Profitability constraints for publicly listed companies.
    - A discouraging environment for increasing oil production in India, which imports over 85% of its oil.

- The unpredictability caused by frequent tax revisions.
- **Decline in Revenue Generation - Revenue collection under the windfall gains tax saw a significant decline due to softened international prices for crude oil and fuels:**
  - **FY23:** Approximately ₹25,000 crore.
  - **FY24:** Reduced to ₹13,000 crore.
  - **FY25 (so far):** Around ₹6,000 crore.
- **Government Assurance to the Oil Industry - The scrapping of the levy also removed provisions for adjusting the tax level, signaling:**
  - A move towards predictable and stable taxation for the oil sector.
  - Assurance that surge-induced disruptions in oil prices are unlikely in the near future.
- **Limited Financial Impact on Companies - The removal is unlikely to notably affect the financials of major players like:**
  - Oil producers: ONGC, Oil India.
  - Fuel exporters: Reliance Industries (RIL), Nayara Energy (NEL).

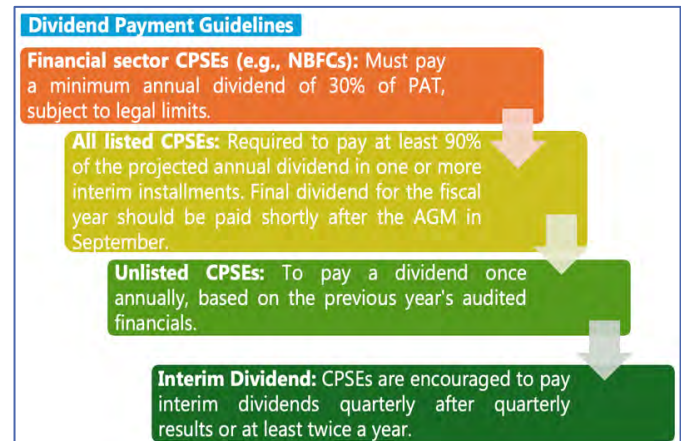


## DIPAM revised Guidelines for CPSEs

## News Excerpt:

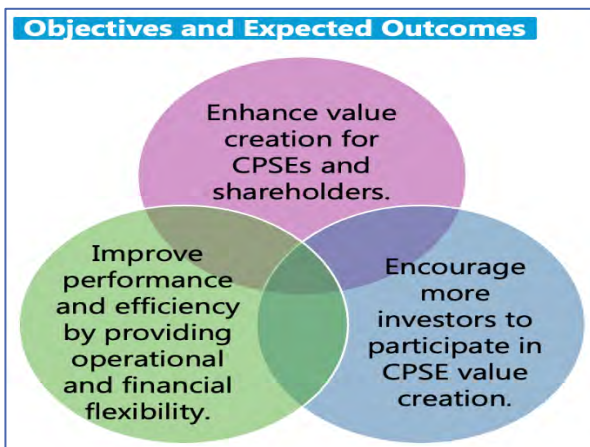
The Finance Ministry came out with revised guidelines for capital restructuring by CPSEs, mandating them to pay a minimum of 30% of net profit or 4% of the net worth, whichever is higher as an annual dividend.

## DIPAM's Revised Guidelines for Financial Year 2024-25:





- **Buyback of Shares**
  - **CPSEs may consider share buybacks if:**
    - The market price of shares has been below the book value consistently for six months.
    - They have a net worth of at least ₹3,000 crore.
    - They hold a cash and bank balance of over ₹1,500 crore.
- **Bonus Shares and Share Splits**
  - **Bonus Shares:** To be considered if reserves and surplus are 20 times or more than the paid-up equity share capital.
  - **Share Splits:** Listed CPSEs with a market price exceeding 150 times the face value consistently for six months may split shares.
  - **A cooling-off period of three years** is mandated between successive share splits.
- **Applicability to CPSE Subsidiaries**
  - Guidelines also apply to subsidiaries where the parent CPSE holds more than 51% stake.
- **Capital Management Oversight**
  - Issues concerning capital management and restructuring will be addressed by the Committee for Monitoring of Capital Management and Dividend by CPSEs (CMCDC), chaired by the Secretary of DIPAM.
- **Exemptions**
  - **The guidelines do not apply to:**
    - Public sector banks.
    - Public sector insurance companies.
    - Corporate bodies are prohibited from distributing profits under Section 8 of the Companies Act.



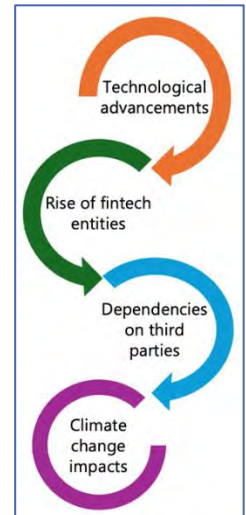
## Strengthen framework to curb unethical practices: RBI Governor to bank boards

### News Excerpt:

Recently, the RBI Governor asked bank boards to strengthen internal governance framework to curb unethical practices, such as mis-selling of products or opening of accounts without proper KYC verification.

## Key Points of Governor Address at the Conference of Directors of Private Sector Banks:

- **Ethical Banking Practices**
  - Incentives for bank staff must be structured to discourage unethical practices.
  - Unethical practices might yield short-term gains but pose significant long-term risks, including:
    - Reputational damage.
    - Supervisory scrutiny.
    - Financial penalties.
- **Current State of the Banking Sector**
  - The Indian banking sector is transitioning through a period filled with opportunities, risks, and challenges.
  - The sector remains strong and stable, with improvements in financial indicators since May of the previous year.
  - Progress is attributed to the collective efforts of bank management and boards.
- **Building Resilience:** Strong fundamentals should be leveraged to reinforce the resilience of the banking system. Good times are ideal for strengthening defences and promoting sustainable growth.
- **Challenges in a Dynamic Environment: Banks face new challenges in a technology-driven environment, influenced by:**
- **Role of Bank Boards:** Bank boards should act as lighthouses, offering steady guidance to lenders. Their role is crucial in navigating challenges and steering banks towards safe and sustainable outcomes.



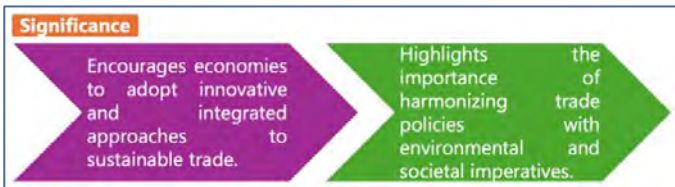
## Sustainable Trade Index 2024

### News Excerpt:

World's Most Sustainable Economies in 2024, With an overall score of 24, India ranks 23rd globally in the Sustainable Trade Index 2024.

### Sustainable Trade Index 2024:

- **Focus on Resilience:** Resilience has become a key theme post-pandemic due to health crises, climate change, and geopolitical tensions. Global economies are prioritizing resilience-building in their trade systems to mitigate future shocks.
- **Definition of Sustainable Trade:** Sustainable trade ensures mutually beneficial outcomes for trading partners. It balances economic growth, societal advancement, and environmental resilience.



- **Key Strategies for Resilient Economies:**
  - Policies aimed at strengthening domestic industries.
  - Developing a workforce capable of withstanding economic shocks.
  - Aligning trade practices with environmental and social goals to foster sustainable, green economies.
- **Sustainable Trade Index 2024:**
  - Published by the Hinrich Foundation in collaboration with IMD.
  - Ranks global economies based on their trade sustainability.
- **Evaluation is based on three pillars:**
  - **Economic Growth:** Trade's contribution to robust and sustainable economic development.
  - **Societal Advancement:** Promoting equitable opportunities and social well-being.
  - **Environmental Resilience:** Integrating ecological considerations into trade practices.

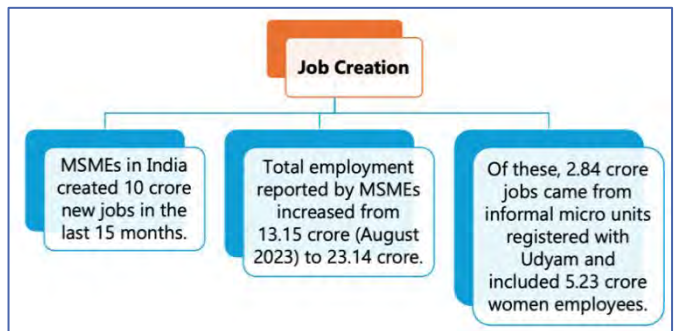
- **India, the world's fifth largest economy,** has made significant strides in its economic growth; however, challenges such as poverty and inequality persist, in addition to societal challenges like gender inequality and environmental issues like air pollution and deforestation, which have led it to rank 23rd globally in the Sustainable Trade Index 2024.
- **India's overall score is 24, with 62.3 for economic factors, 13.3 for societal aspects, and 43.1 for environmental considerations.** This indicates India's strong economic performance, while also highlighting significant challenges in societal and environmental areas.

### Indian MSMEs create about 10 crore jobs in 15 months

#### News Excerpt:

According to the figures, the number of registered MSMEs has now gone up to 5.49 crore from 2.33 crore in August last year while the number of jobs reported by these enterprises has shot up to 23.14 crore from 13.15 crore during this period.

#### Employment and Growth in MSMEs (Micro, Small, and



#### Medium Enterprises)

- **Growth in MSMEs:**
  - The number of registered MSMEs rose from 2.33 crore to 5.49 crore during the same period.
- **Breakdown of registered enterprises:**
  - Micro enterprises: 5.41 crore.
  - Small enterprises: 7.27 lakh.
  - Medium enterprises: 68,682.
- **Budget allocation:** Rs. 22,137.95 crore, a 41.6% increase over the previous fiscal year.
- **New initiatives include:**
  - A term loan scheme for machinery/equipment purchases by MSMEs, with guarantees of up to Rs. 100 crores.
  - Mudra loan limit raised to Rs. 20 lakhs for entrepreneurs in the "Tarun" category with a history of repayment.
  - Turnover threshold for buyers under government support lowered from Rs. 500 crores to Rs. 250 crores.



#### Sustainable Trade Index 2024: Top 10 most sustainable trade economies in the world

- It's noteworthy to mention that New Zealand has retained as the 'most sustainable trade economy' for the third consecutive edition. It has risen one place in both the economic and societal pillars while maintaining its lead in the environmental pillar.
- Following next is the UK, which has fallen one place in the economic pillar; however, it has remained steady at fourth in the societal pillar and second in the environmental pillar.

#### Sustainable Trade Index 2024 - India stand:

- **Digital and Financial Support:** Financial support for establishing food irradiation units and food quality labs. Public sector banks instructed to use digital footprint scoring to assess MSME creditworthiness. Only 6% of MSMEs actively use e-commerce platforms, prompting emphasis on digital transformation.
- **Other Highlights:** Focus on boosting employment and industrial growth through MSME development. Importance of women's participation and informal micro-units underlined as key components of the sector's workforce.

## 'Jobs at Your Doorstep' Report by World Bank

### News Excerpt:

Union Ministry for Education, along with Ministry of Labour and Employment launched a report titled Jobs at Your Doorstep: A Jobs Diagnostics for Young People in Six States.

### Key Points on "Jobs at Your Doorstep" and Skilling Initiatives:

- **Compliments to World Bank:** Shri Dharmendra Pradhan appreciated the World Bank's detailed report on six states and suggested a pan-India framework for skilling and jobs diagnostics.
- **Broadening the Definition of Jobs:** He emphasized redefining jobs from the perspective of economic opportunities and empowerment. Stressed the integration of skilling from schools, as envisioned in NEP 2020, to make India a global skills hub.
- **Technological Disruptions and Skill Development:** The Minister highlighted the impact of technological disruptions on jobs and economic activities. Urged the need for continuous up-skilling and re-skilling to prepare the workforce for the future.
- **Regional Skilling Initiatives:** Dr. Mansukh Mandaviya discussed region-specific skilling models, emphasizing a hub-and-spoke model for employment and curriculum development. Focused on integrating informal education with academic programs.
- **Collaborative Approach:** Shri Sanjay Kumar reaffirmed a 'whole-of-government' approach, ensuring collaboration to promote skill education in schools. Emphasized consistent practice and diligence as per NEP 2020.
- **National Goals and Reforms:** India aims to transform into a high-income economy by 2047, requiring dynamic approaches to reform the employment landscape. Emphasis on educational reform and market-linked skill development for job growth.

- **Skilling Targets Under NEP 2020:** By 2025, 50% of students should access skill education. By 2030, all secondary schools should offer skill education.
- **World Bank's STARS Program:** The STARS initiative focuses on six states: Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Odisha, and Rajasthan. Aims to align school trades with district-specific industry needs using a bottom-up approach.
- **"Jobs at Your Doorstep" Report:** Serves as a diagnostic and roadmap for linking education with job opportunities. Identifies priority sectors and roles in the six states, focusing on embedding skill-based education from grades 9-12.
- **Focus Areas in Report:** Analyses skill gaps and proposes alignment between school programs and industry requirements. Utilizes primary and secondary research to reimagine skill offerings.
- **Benefits of Skill-Based Education:** Prepares students for diverse career paths. Ensures decentralized, market-led, and inclusive vocational education systems.

## Implementation of Trade and Economic Partnership Agreement (TEPA)

### News Excerpt:

Recently, the Commerce Secretary visited Norway for the implementation of the Trade and Economic Partnership Agreement (TEPA) to boost 99.6% of Indian exports with market access to EFTA countries and drive \$100 billion in investment.

### Key Points of the Visit and the Trade and Economic Partnership Agreement (TEPA):

- **Objective of the Visit:** The visit aimed to advance the objectives of the Trade and Economic Partnership Agreement (TEPA), signed in March 2024. The focus was on unlocking large market access for Indian exports of goods and services to EFTA countries and pushing for the early implementation of the \$100 billion investment target.
- **TEPA Overview:**
  - TEPA is a modern and ambitious trade agreement between **India and four developed countries in EFTA (European Free Trade Association), an important economic bloc in Europe.**
  - The agreement aims to boost Make in India and create opportunities for India's young and talented workforce.
    - **EFTA market access:** EFTA is offering 92.2% of tariff lines, covering 99.6% of India's exports, including 100% access for non-agricultural products and tariff concessions on processed agricultural products.
    - **India's offer:** India has offered 82.7% of tariff lines, covering 95.3% of EFTA's exports.

**Focus on Services**

**Services sector:** TEPA aims to boost India's services exports in sectors like IT services, business services, cultural services, audio-visual services, and education services.

**Access for EFTA services:** EFTA countries have offered better access through digital delivery (Mode 1), commercial presence (Mode 3), and temporary stay of personnel (Mode 4).

- **Key Sectors for India:** TEPA will promote domestic manufacturing in sectors such as infrastructure, pharmaceuticals, chemicals, food processing, banking, transport, and logistics. It will also focus on Atmanirbhar Bharat (self-reliance) and make in India initiatives.
- **Job Creation and Skill Development:** TEPA is expected to create direct jobs for India's young workforce in the next 15 years, including enhanced facilities for vocational and technical training. The agreement facilitates technology collaboration and access to world-leading technologies in fields like renewable energy, health sciences, and precision engineering.
- **Meetings and Discussions:** Shri Barthwal, Commerce Secretary, met key officials in Norway, including Mr Tomas Norvoll, State Secretary of the Ministry of Trade, Industry, and Fisheries, to promote trade, investments, and mobility for Indian professionals. The visit also included discussions with Norwegian Chamber of Commerce, Innovation Norway, Shipbuilders Association, and CEOs of major Norwegian companies in sectors such as renewable energy, shipping, green hydrogen, IT, and consumer goods.
- **Encouraging Early Ratification:** The Commerce Secretary stressed the importance of early ratification of TEPA and discussed its potential to create unprecedented opportunities as the Indian economy transitions to becoming the third largest economy in the world in the next 3-4 years.

## Network Readiness Index 2024

### News Excerpt:

India has improved its position by eleven slots and is now placed at 49th rank as per the Network Readiness Index 2024 (NRI 2024) report, as against 60th rank scored in the NRI 2023 report.

### Key highlight:

**About the Report:** Published by the Portulans Institute, an independent non-profit based in Washington DC. Covers 133 economies based on four pillars: Technology, People, Governance, and Impact. Assesses a total of 54 variables.

**India's Improved Ranking:** India's score improved from 49.93 (2023) to 53.63 (2024). India ranks 2nd among lower-middle-income countries, after Vietnam.

**Top Performances by India**

- 1st Rank**
  - o AI Scientific Publications
  - o AI Talent Concentration
  - o ICT Services Exports
- 2nd Rank**
  - FTTH/Building Internet Subscriptions
  - Mobile Broadband Internet Traffic
  - International Internet Bandwidth
- 3rd Rank**
  - Domestic Market Scale
- 4th Rank**
  - Annual Investment in Telecommunication Services

- **India's Digital Progress:** Significant advances in technological innovation and digital transformation. Tele density rose from 75.2% to 84.69% over the last decade. Wireless connections surged to 119 crore. Internet subscribers increased sharply from 25.1 crore to 94.4 crore, with significant growth in rural broadband access.
- **Key Initiatives Driving Progress:** 5G Services Launch (2022): Improved India's global mobile broadband speed ranking from 118 to 15. Reforms in spectrum management, ease of doing business, and consumer protection. Expansion of Digital India initiatives, emphasizing rural internet access.
- **Future Aspirations:** India's Bharat 6G Vision aims to position the country as a leader in future telecom technologies. Continued investment in emerging technologies and data capabilities. Strengthened by robust telecom infrastructure, India's NRI ranking reflects its trajectory toward global digital leadership.

## The State of Tax Justice 2024

### News Excerpt:

The State of Tax Justice 2024 report released by the Tax Justice Network.

### More detail about news:

- Countries are losing US\$492 billion in tax a year to multinational corporations and wealthy individuals using tax havens to underpay tax, the 2024 edition of the Tax Justice Network's State of Tax Justice finds.
- Nearly half the losses (43%) are enabled by the eight countries that remain, as of writing, opposed to a UN tax convention: Australia, Canada, Israel, Japan, New Zealand, South Korea, the UK and the US.

### Key Findings:

- Countries are losing US\$492 billion in tax a year to multinational corporations and wealthy individuals using tax havens to underpay tax.
- Of the US\$492 billion lost to global tax abuse a year, two-thirds (US\$347.6 billion) is lost to multinational corporations **shifting profit offshore to underpay tax.**

The remaining third (US\$144.8 billion) is lost to wealthy individuals hiding their wealth offshore.

- Nearly half the losses (43%) are enabled by the eight countries that remain opposed to a **UN tax convention: Australia, Canada, Israel, Japan, New Zealand, South Korea, the UK and the US.**
- The biggest enablers of global tax abuse are also some of the biggest losers: US\$177 billion lost by the 8 countries that voted against **UN tax convention** terms in August 2024; US\$189 billion lost by 44 those that abstained; US\$123 billion lost by 110 countries voting for.
- Multinational corporations are shifting more profit into tax havens and underpaying more on tax, evidencing failure of OECD's tax reform attempts
- Multinational corporations cheated more after-tax rate cuts, disproving "**tax appeasement**" thinking popular with lobbyists and some politicians
- Offshore tax evasion by wealthy individuals dropped, but by far less than claimed. Most wealth offshore still hidden from tax authorities.

## Government decides to update the GDP base year from 2011-12 to 2022-23

### News Excerpt:

The Government has decided to update the base year for compilation of Gross Domestic Product (GDP) from 2011-12 to 2022-23.

### Steps Taken by the Government to Improve the Statistical System:

- **Constitution of ACNAS:** An Advisory Committee on National Accounts

Statistics (ACNAS) has been formed to identify new data sources and advise on methodologies for compiling National Accounts Statistics.

- **Standardization of Data Structure:** Efforts are underway to standardize data structures across the National Statistical System to ensure consistent and high-quality reporting.
- **Utilization of Administrative Data:** Administrative data from various government agencies is being increasingly used to enhance the accuracy and timeliness of statistical estimates.



## RBI to allow small finance banks to extend credit lines through UPI

### News Excerpt:

Recently, the Reserve Bank proposed to allow small finance banks to extend pre-sanctioned credit lines through Unified Payments Interface (UPI).

### Key Points about UPI Expansion and RBI Initiatives:

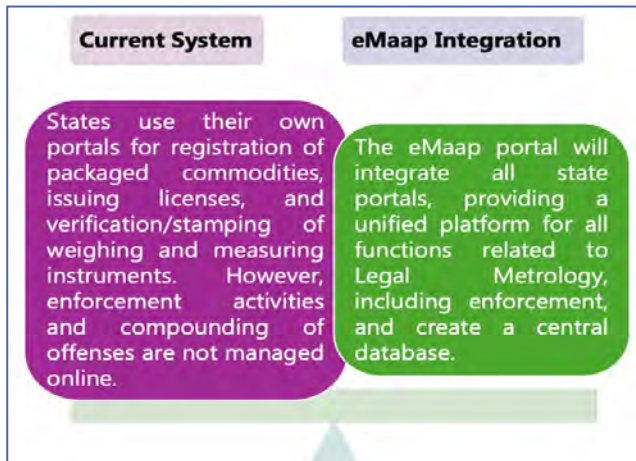
- **Credit Line Potential:** The addition of credit lines to UPI offers low-ticket, low-tenure credit products for new-to-credit customers, as noted by RBI Governor.
- **Role of SFBs:** Small Finance Banks (SFBs), with their low-cost, high-tech model, are seen as important in expanding credit access to underserved populations. The RBI plans to allow SFBs to extend pre-sanctioned credit lines via UPI, with guidelines to be issued soon.
- **RBI's Communication Strategy:** The RBI is enhancing public awareness efforts using traditional and new-age communication techniques to improve transparency and disseminate information about its decisions. The RBI is expanding its use of social media and other platforms to reach a wider audience.
- **Launch of Podcasts:** As part of its communication strategy, the RBI plans to launch podcasts aimed at broader public information dissemination on topics of interest.

## Department of Consumer Affairs is developing eMaap

### News Excerpt:

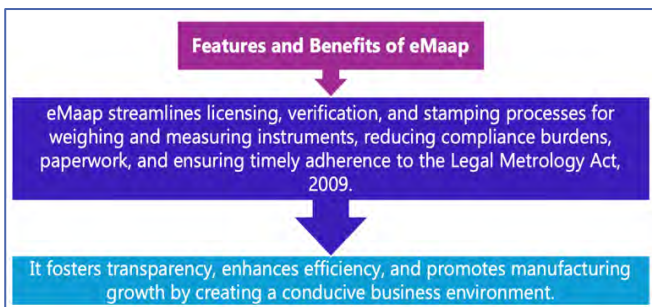
Department of Consumer Affairs, Government of India, developing National Legal Metrology Portal (eMaap) for ensuring fair trade, consumer protection and a centralized database of all stakeholders.

**About the National Legal Metrology Portal (eMaap):**



**Objective of eMaap:**

- The Department of Consumer Affairs is developing the National Legal Metrology Portal (eMaap) to centralize State Legal Metrology Departments and their portals.
- It aims to streamline licensing, verifications, and compliance processes, creating a unified database to enhance ease of doing business, ensure transparency, and eliminate the need for multiple registrations.



**Consultations and Stakeholder Engagement:**

- Multiple consultations were held under the Chairpersonship of the Secretary (Consumer Affairs) to shape the portal’s development.
- A hybrid meeting was conducted on 30th August 2024 with Controllers of Legal Metrology and NIC to discuss the initial framework.
- Another hybrid meeting was held on 28th November 2024, involving key stakeholders like industry associations (**FICCI, CII, PHD, ASSOCHAM**), State Legal Metrology Departments, and the NIC team, focusing on refining the portal to better serve stakeholders such as **traders, manufacturers, packers, importers of packaged commodities, and manufacturers, dealers, and repairers of weighing and measuring instruments.**
- Suggestions from stakeholders are being incorporated to ensure the portal is user-friendly and efficient.

- **Impact on Consumers:** Ensures that trade instruments are verified for accuracy, enhancing consumer confidence in market transactions. Provides a transparent legal metrology system, easy access to certificates, and promotes awareness of consumer rights and responsibilities.
- **Benefits for Governments:** Data-driven decision-making is facilitated, enabling better policy formation and streamlined enforcement activities. The portal will contribute to a robust and efficient regulatory framework for Legal Metrology in India.

**India Skills Report 2025**

**News Excerpt:**

According to the "India Skills Report 2025," employment among Indian graduates is predicted to increase by 7%, reaching 54.81 percent in 2025.

**Highlights of the Report**

- **Employability Trends:** Nearly 55% of Indian graduates are expected to be globally employable in 2025, compared to 51.2% in 2024 (a 7% increase).
- **Global Employability by Discipline:**
  - **Management graduates:** 78% employability.
  - **Engineering students:** 71.5% employability.
  - **MCA students:** 71% employability.
  - **Science graduates:** 58% employability.
- **Regional Insights:**
  - States like Maharashtra, Karnataka, and Delhi are emerging as major hubs for employable talent.
  - Cities such as Pune, Bengaluru, and Mumbai are leading in providing a skilled workforce.
- **Gender Analysis:**
  - For men, the employability rate is projected to rise from 51.8% in 2024 to 53.5% in 2025.
  - For women, the employability rate is expected to decline from 50.9% in 2024 to 47.5% in 2025.
- **Vocational Training:**
  - 50% of secondary and tertiary students are expected to receive vocational training by 2025.
  - This positions India as a key player in the global talent market.
- **Emerging Sectors:**
  - Highlights the importance of aligning vocational training with industry needs.
  - Focus areas include AI, cybersecurity, and green energy as emerging domains.

- Preparation and Data Source:** Prepared by Confederation of Indian Industries (CII) in collaboration with Wheebox (a talent assessment agency) and the All-India Council for Technical Education (AICTE). Based on data from over 6.5 lakh candidates who participated in the Global Employability Test (G.E.T.) across India. Includes insights from over 1,000 corporations spanning 15 diverse industries.

<b>Cost</b>	May involve higher fees due to structuring complexity.	Generally straightforward and cost-effective.
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## Receivables Securitization

### News Excerpt:

For MSMEs, receivables securitization offers a more flexible and cost-effective way to access liquidity compared to traditional invoice financing.

### About Receivables Securitization:

- Receivables securitization is a financial process where businesses bundle their trade receivables—amounts owed to them by customers—into a pool.
- This pool is then sold to a third party, which finances the purchase by issuing securities that are sold to investors in the financial markets.
- The main goal of this process is to convert these receivables into liquid funds that can be used for business operations, expansion, or other capital needs.
- In essence, receivables securitization allows MSMEs to unlock the value tied up in outstanding payments and gain access to funds quickly. These funds can be used for a variety of purposes, such as reducing debt, originating more assets, or meeting capital requirements.

### Advantages for MSMEs:

- Provides quick liquidity without waiting for customer payments.
- Reduces the burden of credit risk by transferring receivables to another entity.
- Helps maintain a smoother cash flow for business operations.

### Difference Between Receivables Securitization and Invoice Financing

Aspect	Receivables Securitization	Invoice Financing
<b>Structure</b>	Pool of receivables sold to investors or financiers.	Individual invoices used as collateral.
<b>Risk Transfer</b>	Credit risk shifted to investors.	Credit risk is usually retained by the MSME.
<b>Cash Flow Impact</b>	Provides liquidity for a group of invoices.	Provides funding against specific invoices.

## AGRICULTURE

### FAO Released 'Statistical Yearbook 2024'

#### News Excerpt:

The Statistical Yearbook 2024 offers a synthesis of the major factors at play in the global food and agricultural landscape.

#### Key Observations (Global Context):

- Agriculture's Share in Global GDP:** Remained stable at approximately 4% since 2000.
- Global Workforce in Agriculture:** Declined from 40% in 2000 to 26% in 2022, amounting to 892 million workers. Agriculture remains the second-largest source of employment globally, after the services sector.
- Global Hunger:** In 2023, 9.1% of the world population experienced hunger, significantly higher than the pre-COVID-19 level of 7.5%.

#### Key Findings About India:

- Cropland Area per Capita:** Decreased from 0.16 hectares per capita (2000) to 0.12 hectares per capita (2022).
- Agriculture's Share in GDP:**
  - Declined from 27.9% (2000) to 15.9% (2022).
  - Lower than the global average of 4.3% and China's 7.7%.
- Employment:**
  - India had the largest agricultural workforce globally in 2022, with 226 million workers, followed by China with 170 million.
  - Women's share in agricultural employment rose from 32.2% (2000) to 36% (2022).
- Agricultural Production:**
  - Sugar:** India is the second-largest producer globally, contributing 19% of production, after Brazil.
  - Milk:** India is the largest producer, contributing 23% of global production in 2022.
  - Organic Farming:** 6% of India's agricultural area was under organic farming in 2022, making it the second largest globally after Australia (46%).
  - Irrigation:** India has the largest equipped area for irrigation globally at 76 million hectares, followed by China with 75 million hectares.

## Milk, meat and egg production increased in 2023-24: Centre

### News Excerpt:

Milk production in the country saw an increase of 3.78% during 2023-24 over the estimates of 2022-23, according to the 'Basic Animal Husbandry Statistics - 2024' prepared by the Department of Animal Husbandry and Dairying.

### Key Points from the Union Minister's Report on Livestock Production (November 26, 2024)

- **Milk Production:**
  - Estimated Milk Production (2023-24): 239.30 million tonnes.
  - CAGR (Compound Annual Growth Rate): 5.62% over the past 10 years.
  - Milk Production in 2014-15: 146.3 million tonnes.
  - Milk Production in 2022-23: 230.58 million tonnes.
  - India's Global Ranking: India is the world leader in milk production.
- **Top Milk-Producing States:**
  - Uttar Pradesh: 16.21% of India's total milk production.
  - Rajasthan: 14.51%.
  - Madhya Pradesh: 8.91%.
  - Gujarat: 7.65%.
  - Maharashtra: 6.71%.
- **Growth in Milk Production:**
  - West Bengal: Recorded the highest growth in milk production for 2023-24 at 9.76%.
  - Other states with strong growth include Jharkhand (9.04%), Chhattisgarh (8.62%), and Assam (8.53%).
- **Egg Production:**
  - Estimated Egg Production (2023-24): 142.77 billion eggs.
  - CAGR: 6.8% over the past 10 years.
  - Egg Production in 2014-15: 78.48 billion eggs.
  - Annual Growth: Increased by 3.18% in 2023-24 over 2022-23 (138.38 billion eggs).
- **Top Egg-Producing States:**
  - Andhra Pradesh: 17.85% of total egg production.
  - Tamil Nadu: 15.64%.
  - Telangana: 12.88%.
  - West Bengal: 11.37%.
  - Karnataka: 6.63%.
- **Meat Production:**
  - Estimated Meat Production (2023-24): 10.25 million tonnes.
  - CAGR: 4.85% over the past 10 years.
  - Meat Production in 2014-15: 6.69 million tonnes.
  - Annual Growth: Increased by 4.95% in 2023-24 over 2022-23 (9.77 million tonnes).

- Poultry: Accounts for 48.96% of total meat production.

- **Top Meat-Producing States:**

- West Bengal: 12.62% of total meat production.
- Uttar Pradesh: 12.29%.
- Maharashtra: 11.28%.
- Telangana: 10.85%.
- Andhra Pradesh: 10.41%.

- **Highest Growth in Meat Production:**

- Assam: 17.93% growth.
- Uttarakhand: 15.63%.
- Chhattisgarh: 11.70%.

- **Wool Production:**

- Estimated Wool Production (2023-24): 33.69 million kg.
- Annual Growth: 0.22% over the previous year.
- Wool Production in 2019-20: 36.76 million kg.

- **Top Wool-Producing States:**

- Rajasthan: 47.53% of total wool production.
- Jammu & Kashmir: 23.06%.
- Gujarat: 6.18%.
- Maharashtra: 4.75%.
- Himachal Pradesh: 4.22%.

## National Seed Congress

### News Excerpt:

The 13th National Seed Congress, a three-day conclave of policymakers, scientists, and farmers recently held in Varanasi, is seeking transformative solutions, especially in the wake of climate change and increasing diseases in various crops.

### Key Points from the Seed Congress:

- **Government's Commitment to Seed Quality:**

- **Priority for Good Seeds:** The Union Agriculture Minister emphasized the importance of good quality seeds for boosting agricultural production.
- **Strict Action Against Low-Quality Seeds:** The government will take strict action against those providing low-quality seeds and fertilizers.





- **Road Map for Seed Sector:** A roadmap will be prepared to ensure timely availability of high-quality seeds at reasonable prices.
- **Preservation of Traditional Seeds:** The government aims to preserve traditional rice varieties.
- **Role of Technology and Innovation:**
  - **Geospatial Technology:** The use of geospatial technology to map and analyze fallow lands can help optimize crop planning.
  - **Hybrid Seed Development:** Private sector companies are investing in research and development to develop new hybrid seed varieties.
  - **GM Crop Technology:** There is a need for a unified approach to the adoption of genetically modified crops to enhance agricultural productivity.
- **Challenges and Opportunities:**
  - **Policy and Regulatory Framework:** The need for a streamlined regulatory framework to facilitate the introduction of new technologies and varieties.
  - **Access to Quality Seeds:** Ensuring that farmers, especially smallholders, have access to quality seeds at affordable prices.
  - **Climate Change and Sustainable Agriculture:** Addressing the challenges posed by climate change and promoting sustainable agricultural practices.
  - **Public-Private Partnerships:** Fostering collaboration between the government, private sector, and research institutions to drive innovation and improve agricultural productivity.

## Iffco seeks govt nod to launch new nano NPK fertiliser in retail market

### News Excerpt:

Fertiliser major Iffco, which has introduced nano liquid urea and nano liquid DAP, has now developed nano NPK nutrient and sought the government's approval to launch it in the market.

### Key Points on IFFCO's Nano Fertilizers:

- **New Product Launch:** IFFCO is set to launch a new nano NPK product in granule form, pending government approval.
- **Manufacturing Location:** The nano NPK product will be manufactured at IFFCO's Kandla unit.
- **Pricing and Benefits:** The product will be priced at Rs 950 per 5 kg bag and is expected to significantly reduce the consumption of conventional urea and DAP.
- **Previous Innovations:** IFFCO has already launched nano liquid urea and nano liquid DAP, investing around Rs 2,000 crore since 2017.
- **Pricing of Nano Fertilizers:** Nano liquid urea is priced at Rs 240 per 500 ml bottle, while nano liquid DAP is priced at Rs 600 per bottle.

- **Manufacturing Capacity:** IFFCO currently has a manufacturing capacity of 16 crore bottles of nano liquid urea and 7 crore bottles of nano liquid DAP annually.
- **Investment in Promotion:** IFFCO is investing Rs 200 crore annually to promote nano fertilizers and educate farmers on their usage.
- **Equivalence:** One bottle of nano liquid DAP is equivalent to one bag of conventional DAP, and one bottle of nano liquid urea is equivalent to one bag of conventional urea.

## Digital Agriculture Mission: Centre asks states to make farmer IDs faster

### News Excerpt:

The Ministry of Agriculture and Farmers' Welfare (MoA&FW) has instructed states to organise camps to expedite the issuance of digital identities for farmers (Farmer ID), also referred to as 'Kisan Pehchaan Patra'.

### More detail about news:

- This Aadhaar-linked digital identity integrates with state land records, encompassing essential details such as demographic information, crop patterns, and ownership data.
- The Farmer ID will form the core of the 'Farmers' Registry', one of the three registries under the 'Agri Stack' initiative, part of the Centre's Digital Agriculture Mission.

### Key Details About Farmer ID or 'Kisan Pehchaan Patra':

- **Overview and Purpose:** The Farmer Identification Card (Kisan Pehchaan Patra) is a digital identity card for farmers, akin to Aadhaar, designed to monitor and support farmers effectively. The initiative is part of the Digital Agriculture Mission led by the Ministry of Agriculture and Farmers Welfare.
- **Budget and Funding:** The project is approved with a total budget of Rs 2,817 crore:
  - Central Government contribution: Rs 1,940 crore.
  - Remaining funds to be provided by state governments and other stakeholders.
- **Features and Information Captured:** The card will provide comprehensive information about farmers, such as:
  - Land ownership details.
  - Number of livestock owned.
  - Type of crops cultivated.
  - Village land maps and crops sown.
- **Benefits for Farmers:** Using this digital identity, farmers can avail of:
  - Crop insurance & Crop loans.
- It will streamline access to government schemes and services by linking farmer-specific data to these programs.

- **Significance:** This initiative represents a significant step towards digitising the agriculture sector, enabling:
  - Better monitoring of farming activities.
  - Enhanced planning and execution of agricultural schemes.
  - Improved resource allocation based on accurate farmer data.
- **Govt's target with farmers' digital identities**
  - The government has set an ambitious target to generate digital identities for 11 crore farmers:
    - 60 million farmers in FY2024-25
    - 30 million crore farmers in FY2025-26
    - two million farmers in FY2026-27
  - To meet this goal, the Centre has advised states to adopt a 'camp-mode approach' to facilitate inclusive, efficient, and rapid farmer registration. A communication to this effect was issued to states on November 28.

### Incentives by the Centre to States for Farmer ID Implementation

- **Incentives Structure:** The Centre will provide up to Rs 15,000 per camp organised at the field level for the Farmer ID project. An additional Rs 10 per Farmer ID generated will also be provided. The funding for these incentives comes from the Pradhan Mantri Kisan Samman Nidhi (PM-Kisan) scheme.
- **Progress Across States:** States like Gujarat, Madhya Pradesh, Maharashtra, and Uttar Pradesh have gained momentum in implementing the initiative. States such as Assam, Chhattisgarh, and Odisha are still conducting field tests. Other states are at varying stages of implementation.
- **Additional Support through Special Assistance Scheme:** The incentives are complemented by the 'Special Assistance Scheme' announced by the Finance Ministry. Rs 5,000 crore was allocated in August 2024 for creating the Farmers' Registry under the Scheme for Special Assistance to States for Capital Investment 2024-25.

## INTERNATIONAL RELATION

### 2nd India-Australia Annual Summit

#### News Excerpt

**PM Modi** and the **Prime Minister of Australia**, Anthony Albanese, recently convened the second India-Australia Annual Summit in Rio de Janeiro, Brazil, **alongside the G20 Summit.**

#### Key Highlights of the Summit:

- **Economic Cooperation:** Acknowledged increasing two-way trade facilitated by the India-Australia Economic Cooperation and Trade Agreement (**ECTA**). Discussed

advancing the Comprehensive Economic Cooperation Agreement (**CECA**) for mutual economic growth.

- **Investment Synergies:** Identified complementarities between India's Make in India initiative and Australia's Future Made in Australia strategy to create jobs and economic prosperity. Extension of the Australia-India Business Exchange (**AIBX**) programme by four years to foster business partnerships.
- **Climate and Renewable Energy:** Launch of the India-Australia Renewable Energy Partnership (**REP**) to collaborate on solar PV, green hydrogen, energy storage, and skills training for the renewable workforce.
- **Critical Minerals Collaboration:** Progress under the MoU between **India's KABIL** and Australia's Critical Minerals Office to support supply chain diversification for clean energy technologies.
- **Space Cooperation:** Joint efforts in space technology, including supporting India's **Gaganyaan** mission and the planned launch of Australian satellites aboard Indian launch vehicles by 2026.
- **Defence Collaboration:** Intent to renew the **Joint Declaration** on Defence and Security Cooperation in 2025. Strengthened interoperability through frequent and complex defence exercises under the **Mutual Logistics Support Arrangement.**
- **Maritime Security:** Agreement on enhanced maritime domain awareness, reciprocal defence information sharing, and a joint maritime security collaboration roadmap.
- **Defence Industry Engagement:** Participation of Indian industries in the Indian Ocean Defence & Security Conference (2024) and Australian defence trade expositions to boost bilateral defence industrial collaboration.
- **Educational Partnerships:** Commended Australian universities establishing campuses in India. Outcomes of the second Australia-India Education and Skills Council meeting (October 2024) to advance cooperation in education and skills.
- **Mobility and Workforce Development:** Launch of Australia's Working Holiday Maker visa for Indians and the Mobility Arrangement for Talented Early-professionals Scheme (**MATES**) for STEM graduates.
- **Sports Collaboration:** Focused on training, sports medicine, and major event management to strengthen bilateral ties through sports.
- **Consular Developments:** Opening new Consulates-General in **Bengaluru** and **Brisbane** to deepen cultural and economic linkages.
- **Indo-Pacific Collaboration:** Commitment to an open, inclusive, and peaceful Indo-Pacific, respecting international law and **UNCLOS**. Strengthened cooperation under the **Quad framework** for maritime security, disaster response, and technology.

- **ASEAN and Indian Ocean Cooperation:** Emphasis on ASEAN centrality and practical implementation of the ASEAN Outlook on the Indo-Pacific (**AOIP**). Joint initiatives under the Indo-Pacific Oceans Initiative (**IPOI**) and enhanced collaboration in the Indian Ocean Rim Association (**IORA**).
- **Support for Pacific Island Nations:** Focus on climate action, education, and health under the Pacific Islands Forum and Forum for India-Pacific Islands Cooperation (**FIPIC**).
- **Global Issues:** Emphasis on combating terrorism and financing through the Financial Action Task Force (**FATF**). Call for resolving global conflicts through dialogue and diplomacy.

## New Zealand Lawmakers Staged a 'Haka' Against a Divisive Bill

### News Excerpt

Recently, **New Zealand's Parliament** experienced a significant **protest** as Indigenous **Maori lawmakers** performed a haka, a traditional ceremonial dance, to **oppose** the Treaty Principles Bill.



### About Haka: An Emblem of Maori Identity

- **Origins:** The haka is a ceremonial Maori dance of immense cultural importance. Warriors traditionally perform it to prepare for battle or to greet and challenge another tribe.
- **Symbolism:** It embodies physical prowess, unity, cultural pride, and spiritual vitality.
  - Chanting and rhythmic shouting.
  - Dramatic facial expressions, including wide eyes and protruding tongues.
  - Hand gestures and powerful stomping.

### About Maori People

- **Origins:** The Maori are the **indigenous people** of New Zealand. They trace their ancestry to **Polynesian voyagers** who settled in New Zealand around the **13th century**.
  - They primarily established communities in the **northern regions** of the **North Island**, while the South Island remained more sparsely populated.
  - Their traditions and customs reflect a profound **connection** to their **land (whenua)** and their

**ancestors (tipuna)**, which are integral to their identity.

- **Cultural Resilience:** Maori culture faced significant challenges over the centuries: European colonisation, led by the British Crown, disrupted traditional ways of life and introduced systemic inequalities.
- **Demographics:** As of the 2013 census, the Maori population in New Zealand stood at 598,605, representing 14.9% of the total population. Maori are the **second-largest ethnic group** in New Zealand, following European New Zealanders (Pakeha)
- **Language:** The Maori language, **Te Reo Maori**, belongs to the Polynesian subgroup of the Eastern Oceanic branch of Austronesian languages. Most Maoris are bilingual, and English is widely spoken.
- **Ta Moko (Traditional Tattoos):** Ta moko, the traditional Maori tattoo, is a distinctive cultural practice. These tattoos are deeply personal, reflecting the wearer's genealogy, social status, and accomplishments. Each design is unique, carrying profound spiritual and cultural meaning.

### About Treaty of Waitangi 1840

- **Parties:** Signed between British Crown representatives and 500 Maori chiefs.
- **Promises:** Guaranteed Maori tribes protection of their lands, rights, and interests while ceding governance to the British.
- **Evolving Principles:** Over time, courts, tribunals, and governments have articulated core treaty principles: **Partnership, Participation, Protection, and Redress**.
- The **1975 Treaty of Waitangi Act** created a tribunal to document colonisation's effects on Maori and provide a platform for redress. These developments have shaped New Zealand's legal and social systems to honour the treaty better.

### About Treaty Principles Bill

- **Legally Defines Principles:** Aims to codify the treaty's principles, which are currently interpretive and evolved through judicial rulings.
- **Objective:** Advocates argue this will clarify the treaty's application, reduce racial divisions, and ensure fairness.

### Criticism:

- **Threat to Maori Rights:** Opponents fear codification will dilute the treaty's spirit and hinder Indigenous autonomy.
- **Anti-Maori Sentiment:** Critics see the Bill as promoting divisive rhetoric under the guise of equality.
- **Undermines Judicial Oversight:** Transferring interpretative authority from courts to Parliament risks politicising treaty principles.

## What is the 4B feminist movement from S Korea taking off in the US?

### News Excerpt

A feminist movement sweeping **South Korea**, in which women are saying “**No**” to **intimate relationships** with men, is taking hold in the United States following former President Donald Trump’s resounding victory in the presidential election.

#### About 4B Movement

- It developed in South Korean feminist circles and on **social media** in the **mid-to-late 2010s** during a wave of **violence** against women in the country and in protest over other manifestations of **sexism** and **inequality** in South Korean society.
- 4B is shorthand for four words that start with “**bi**”, which means “no” in Korean. The movement calls for:
  - Bihon, which means **no heterosexual marriage**.
  - Bichulsan, **no childbirth**.
  - Biyeonae, **no dating**.
  - Bisekseu, **no heterosexual sexual relationships**.

#### Why Did the Movement Emerge in South Korea?

- **Escalating Male Violence:** Between 2009 and 2018, 824 women were killed, and 602 faced life-threatening violence from intimate partners.
- **Economic Inequalities:** South Korean men earn 31.2% more than women (OECD). Women disproportionately bear the burden of childcare, eldercare, and household responsibilities while working.
- **Traditional Expectations:** Conservative family structures pressure women into caregiving roles, creating disillusionment with marriage and motherhood.
- **Rising Inflation:** Financial burdens exacerbate women’s responsibilities, driving rejection of traditional family roles.
- **Declining Birth Rate:** South Korea’s fertility rate fell to 0.72 in 2023, the world’s lowest. Policies like the criticised 2016 birth map, which treated women as “livestock,” spurred feminist movements, including the 2017 **bisekseu** (“no sexual relationship”) slogan.

#### ‘Your Body, My Choice’ - Why Is the 4B Movement Gaining Traction in the United States?

- **Gendered Voting Trends:** CNN exit polls showed Trump winning 46% of the women’s vote but a significant 56.5% of the male vote, sparking disappointment among young women.
- **Misogynistic Rhetoric:** Trump supporters, like far-right activists, co-opted feminist slogans with statements like “Your body, my choice,” deepening distrust and anger among women.
- **Social Media Mobilization:** Platforms like TikTok and X witnessed a surge in young women promoting the 4B movement as a way to reject misogyny and assert autonomy.

#### Impact on Women’s Rights and Abortion in the US

**Trump’s Stance:** While he has stated a preference for leaving abortion laws to the states, fears persist about a federal abortion ban.

**Legal Precedents:** Concerns about the resurrection of the 1873 Comstock Act, which criminalises the sale and distribution of abortion-related materials, are mounting.

**Political Control:** With Republicans holding the Senate, Supreme Court, and potentially the House of Representatives, women’s rights groups fear a rollback of reproductive freedoms.

## ENVIRONMENT

### Global plastic treaty talks collapsed

#### News Excerpt:

The week-long global talks in Busan, South Korea, on curbing plastic pollution ended in failure to adopt a final legally binding treaty as countries could not reach an agreement on how to regulate plastic production.

#### About news:

- This was the fifth and final round of negotiations since March 2022, when the United Nations Environment Assembly (UNEA) agreed to develop a legally binding treaty on plastics pollution by the end of 2024. Although the treaty was not finalized, discussions on the draft text of the treaty will continue next year.

#### Reasons for the Failure of Talks on the Plastic Treaty:

- **Demand for Production Caps:** A major point of contention was the inclusion of production cap goals in the final treaty to limit global plastic production. Additionally, clear language was sought on the elimination of certain plastic chemicals and products.
- **Proponents of Production Caps:** This demand was backed by a coalition of over 100 countries, including:
  - African and Latin American nations.
  - Most members of the European Union.
- **Opposition to Provisions on Production Cuts:** A coalition of “like-minded countries,” including Saudi Arabia, Kuwait, Russia, and Iran, opposed these provisions. Their argument was that these proposals exceeded the mandate of the 2022 resolution to end plastic pollution.
- **Concerns Raised by Kuwait:** Kuwait stated that the inclusion of production caps was being used to advance:
  - Trade restrictions.
  - Economic agendas.
  - Commercial competition, under the guise of environmental action.
- **Support from India and China:** Both India and China supported the stance of the opposing coalition, aligning with their concerns on trade and economic implications.

### Key Highlights of the Treaty's Draft Text:

- **Points of Consensus:**
  - **Ban on Open Dumping and Burning:** The draft proposes a ban on these practices as part of sustainable waste management strategies.
  - **Definitions of Plastic:** It provides clear definitions of plastics and plastic products to establish common terminology.
- **Contentious Issues Omitted:** The draft does not address definitions of:
  - Microplastics.
  - Nanoplastics.
  - Primary plastic polymers.
  - Recycling processes.
- **Proposals to Reduce Plastic Production:** Despite resistance from Saudi Arabia, Kuwait, and other Arab countries, the draft text includes options for production reduction after the treaty is finalized. It also references single-use plastics and short-lived plastics.
- **Next Steps:** The current draft, with its agreements and unresolved issues, will be the foundation for further discussions in the next session scheduled for 2025.

### India's Stance on the Plastic Pollution Treaty:

- **Focus on Development and Assistance:** Emphasized the right to development for countries. Highlighted the need for technical and financial assistance to manage plastic waste, particularly for developing nations.
- **Avoiding Overlaps with Existing Agreements:** Stressed that the scope of the treaty should not conflict or overlap with existing multilateral environmental agreements.
- **Call for Financial and Technological Support:** During the opening plenary, India argued that any legally binding treaty must include provisions for financial aid and technology transfer to developing countries.
- **Opposition to Production Caps:**
  - **Rejected proposals to curb or limit production, stating:**
    - Sustainable production levels are not well-defined.
    - Caps on production might restrict development and innovation in producing countries.
  - Asserted that primary polymer production is not directly linked to plastic pollution and should not be targeted with specific reductions or limits.
- **Plastic Pollution Fee:** Opposed the idea of a levy on the production of primary polymers, considering it a potential burden on production processes.
- **Focus on Pollution Reduction:** Urged that efforts should prioritize reducing plastic pollution rather than regulating polymer or plastic production directly.

- **Balanced Approach:** Concluded that a balance is required to address plastic pollution while ensuring the sustainable development of developing countries is not compromised.

### GRAP stage IV

#### News Excerpt:

Recently, the Supreme Court questioned the Delhi government over the delay in implementing the GRAP Stage IV plan. The sub-committee for invoking actions under the GRAP earlier imposed Stage I, Stage II and Stage III restrictions on 14 October, 21 October and 14 November, respectively.

#### Graded Response Action Plan (GRAP):

- **Definition:** GRAP is a set of emergency measures designed to prevent further deterioration of air quality in the Delhi-NCR region when it crosses specific thresholds.
- **Approval and Notification:**
  - Approved by the Supreme Court in 2016.
  - Officially notified in 2017.
  - Developed by the Environment Pollution (Prevention and Control) Authority (EPCA) after consultations with state governments and experts.
- **Purpose:** To institutionalize measures that must be implemented as air quality worsens.
- **Nature:** Incremental approach: Measures are progressively implemented based on the severity of air quality. Measures from the preceding stages continue in subsequent stages as air quality worsens.
- **Stages of GRAP: GRAP categorizes actions into four stages based on Air Quality Index (AQI) levels:**
  - **Stage I:** AQI in the 'Poor' category (201–300).
  - **Stage II:** AQI in the 'Very Poor' category (301–400).
  - **Stage III:** AQI in the 'Severe' category (401–450).
  - **Stage IV:** AQI in the 'Severe+' category (more than 450).
- **Objective:**
  - **GRAP aims to:**
    - Mitigate the immediate impact of severe air pollution.
    - Act as a preventive framework to curb the escalation of pollution levels.

#### Reasons for Imposition of GRAP Stage IV:

- **Review of Air Quality:** The decision to implement GRAP Stage IV was based on a review of the air quality conditions and meteorological forecasts.
- **AQI Threshold Breach:** On 17 November 2024 evening, Delhi's Air Quality Index (AQI) reached 441, categorizing it as "Severe". The AQI breached the Stage IV threshold by night.
- **Meteorological Conditions:**

- The air quality is expected to stay in the "Severe+" range due to the following adverse factors:
  - Heavy fog reduces pollutant dispersion.
  - Variable winds limit the movement of pollutants.
  - Highly unfavorable climatic conditions exacerbating pollution levels.
- **Official Notification:** Authorities issued a notification predicting continued poor air quality due to these combined meteorological and climatic challenges.

#### GRAP Stage IV Measures

- **Restrictions on Truck Traffic:**
  - **Entry Ban:** Stop the entry of truck traffic into Delhi, except for trucks carrying essential commodities or providing essential services.
  - **Permitted Trucks:** Trucks running on LNG, CNG, Electric, or BS-VI Diesel are allowed to enter Delhi.
- **Light Commercial Vehicles (LCVs):** Ban entry of LCVs registered outside Delhi, except for vehicles running on CNG, Electric, or BS-VI Diesel, and those carrying essential commodities/providing essential services.
- **Medium and Heavy Goods Vehicles:** Ban on plying of Delhi-registered BS-IV and below diesel-operated Medium Goods Vehicles (MGVs) and Heavy Goods Vehicles (HGVs) in Delhi, except those carrying essential commodities/providing essential services.
- **Construction and Demolition Ban:** Extend the ban on construction and demolition activities under Stage III to linear public projects such as: Highways, roads, flyovers, overbridges, power transmission, pipelines, and telecommunications.
- **Education Sector:** Discontinue physical classes for students in classes VI-IX and XI in NCR.
  - Conduct lessons in online mode.
- **Workforce Restrictions:**
  - NCR State and Delhi governments may allow 50% attendance in public, municipal, and private offices.
  - Remaining workforce to operate from home.
  - Central Government to make appropriate decisions for work-from-home for its employees.
- **Additional Emergency Measures: State governments may implement further measures, such as:**
  - Closure of colleges and educational institutions.
  - Closure of non-emergency commercial activities.
  - Odd-Even vehicle operation based on registration numbers.

## Climate Change Performance Index (CCPI 2025) report

### News Excerpt:

The Climate Change Performance Index report leaves the first three places empty followed by Denmark and the

Netherlands while the largest two emitters, China and the U.S., remain very low at 55th and 57th place, respectively.

### Key Highlights of Climate Change Performance Index (CCPI) 2025

- **CCPI 2025 Overview**
  - **Published by:** Germanwatch, New Climate Institute, and Climate Action Network International.
  - **Metrics:** Assesses 63 countries and the European Union, which together account for 90% of global emissions. Tracks progress in emissions, renewables, and climate policy.
- **India's Performance**
  - **Rank:** India ranks 10th out of 63 countries assessed, maintaining its position among the highest performers despite dropping two spots from the previous year.
- **Key Factors:**
  - **Low per capita emissions:** India's per capita emissions are 2.9 tons of CO<sub>2</sub> equivalent (tCO<sub>2</sub>e), much lower than the global average of 6.6 tCO<sub>2</sub>e.
  - **Rapid renewable energy growth:** Large-scale solar projects and the Rooftop Solar Scheme have boosted renewable energy. Target to achieve 500 gigawatts of renewable energy capacity by 2030.
  - **Net Zero Pledge:** India aims to reach net zero emissions by 2070.
  - **Energy Efficiency and EV Deployment:** Progress in energy efficiency standards, although coverage is still inadequate. Advancements in electric vehicle (EV) deployment, especially with two-wheelers.
  - **Coal Dependency:** India remains reliant on coal, with plans to increase production despite significant renewable energy development. Among the 10 countries with the largest developed coal reserves.

### Global Context

- **Top Performers:**
  - The first three places remain empty as no country achieved an overall "very high" rating.
  - Denmark ranks at the top (technically 4th), followed by the Netherlands and the U.K.
  - The U.K. climbed significantly due to its coal phase-out and a pledge to stop new fossil fuel project licenses.
- **Low Performers:**
  - China (55th) and the U.S. (57th) are ranked among the very low performers, being the world's largest and second-largest emitters, respectively.
  - Four lowest-ranked countries: Iran (67th), Saudi Arabia (66th), UAE (65th), and Russia (64th), all major oil and gas producers.
- **Key Trends:**

- **Resilience Focus:** The global shift towards sustainable trade systems is influenced by health crises, climate change, and geopolitical tensions.
- **Notable Declines:** Argentina (59th) dropped significantly, with its new leadership questioning human-caused climate change and threatening to withdraw from the Paris Agreement.

## Silica mining

### News Excerpt:

The National Green Tribunal (NGT) directed the Central Pollution Control Board (CPCB) to prepare detailed pan-India guidelines for silica sand mining and silica washing plants within three months.

### The Silica Sand Washing Plant and Green Court Judgment:



- **Purpose of Silica Sand Washing Plants:**
  - Used to remove impurities and contaminants from silica sand.
  - Both mining and washing processes pose health risks, including silicosis, a lung disease caused by prolonged inhalation of silica dust.
- **Health Hazards:**
  - Workers and nearby residents face risks of silicosis and other health issues.
  - Specialized healthcare facilities must be provided for workers and communities near silica sand mining and washing sites.
- **Green Court's Actions:**
  - The National Green Tribunal (NGT) reviewed a petition on illegal silica sand mining in Uttar Pradesh.
  - A Bench led by Justice Prakash Shrivastava, Judicial Member Sudhir Agarwal, and expert member A. Senthil Vel issued directives for stricter compliance.
- **Key Directives:**
  - The Central Pollution Control Board (CPCB) must prepare comprehensive guidelines for silica sand mining and washing plants within three months.
  - These guidelines are to be shared with all statutory regulators for uniform enforcement.
- **State Responsibility:**
  - The Uttar Pradesh State Government and Pollution Control Board must:
    - Coordinate with relevant departments to provide healthcare facilities for affected workers.
    - Arrange medical infrastructure to prevent and treat silica-related illnesses.
- **Irregularities in Operations:**

- The court highlighted significant lapses in the operation of silica sand mines and washing plants:
  - Lack of record maintenance.
  - Negligence by statutory regulators in enforcing compliance with legal standards.
- **Penalties:** Penalties were imposed on private companies engaged in mining-related activities for failing to adhere to regulations.
- **Advocate's Statement:** Advocate Rohit Kumar Tuteja, representing the petitioner, expressed hope that nationwide guidelines from CPCB would bring impactful change.

## Avian botulism, leading to 600 bird deaths in Rajasthan

### News Excerpt:

High temperatures and reduced salinity in Sambhar Lake may have created conditions conducive to **avian botulism**, resulting in the mass deaths of migratory birds in Rajasthan.

### Key Points on the Avian Botulism Outbreak at Sambhar Lake:

- **Mass Bird Deaths:** A significant number of birds died at Sambhar Lake due to avian botulism.
- **Avian Botulism:** This disease is caused by the ingestion of a toxin produced by the bacterium *Clostridium botulinum*.
- **Environmental Factors:**
  - High temperatures and low oxygen levels in the lake may have contributed to the outbreak.
  - A sudden change in water quality, possibly due to increased freshwater inflow, may have triggered the bacterial growth.
- **Weakened Bird Immunity:** Migratory birds, already weakened by long-distance travel, may be more susceptible to the disease.
- **Disease Spread:** The disease can spread through the water as infected birds decay and produce maggots.
- **Previous Outbreaks:** A similar outbreak occurred at Sambhar Lake in 2019.
- **Challenges in Prediction:** Predicting such outbreaks is difficult as it depends on a combination of environmental factors and bird behavior.
- **Preventive Measures:**
  - **Monitoring Water Quality:** Regular monitoring of water quality can help identify potential outbreaks early.
  - **Rapid Response:** Quick intervention and removal of infected birds can help prevent further spread.
  - **Public Awareness:** Educating the public about the disease and its symptoms can help in early detection and prevention.

- **Research and Development:** Continued research can help develop effective prevention and treatment strategies.

## Madagascar's huge ocean algae bloom

### News Excerpt:

Recently, scientists have found new evidence that desertification, potentially linked to global warming, leads to large amounts of nutrient-rich dust landing in the sea, causing ocean algae to grow rapidly.

### Key Highlights of the Research on Phytoplankton Bloom near Madagascar:

- **Research Lead and Context:** Conducted by biological oceanographer John A. Gittings and an international research team. Focused on phytoplankton bloom in the Indian Ocean, southeast of Madagascar.
- **Observation:** Satellite images were analyzed to track changes in sea color over several years. Phytoplankton blooms, visible through sea color changes, indicated significant growth of microscopic algae.

### Trigger for Phytoplankton Growth:

- **Nutrient Availability:** Rapid phytoplankton growth was linked to increased nutrients, especially iron, which originates from dust deposition.
- **Drought Conditions:** Severe droughts in southern Africa's drylands increased dust flow into the ocean, enhancing nutrient levels.
- **Key Finding:** The study observed the strongest phytoplankton bloom in the region in 27 years, attributed to heightened nutrient influx due to drought-induced dust.
- **Significance:** Highlights the connection between terrestrial climate changes (like drought) and marine ecosystems. Suggests the potential impact of environmental changes on oceanic productivity and biodiversity.

### About Phytoplankton Blooms:

- **Definition:** A phytoplankton bloom occurs when phytoplankton—tiny, plant-like organisms—multiply rapidly under favorable conditions, leading to a noticeable increase in their population.
- **Importance of Phytoplankton:**
  - **Oxygen Production:** They produce approximately 50% of Earth's oxygen, essential for life.
  - **Role in Carbon Cycle:** They play a critical role in the global carbon cycle by absorbing carbon dioxide during photosynthesis.
- **Foundation of Marine Food Webs:** Provide food for zooplankton (tiny marine animals), which support larger species like fish and whales.
- **Growth Conditions:** Favorable factors include adequate light, availability of nutrients, optimal temperature, and

other environmental conditions. Blooms are seasonal, typically occurring when these conditions align.

- **Detecting Blooms:** Phytoplankton contains chlorophyll, a green pigment that changes the color of ocean surface water. Satellite ocean color sensors can detect these changes and monitor blooms from space.
- **Specific Case: Bloom off Madagascar:**
  - Occurred during the southern hemisphere spring/summer of 2019-2020 in the Indian Ocean southeast of Madagascar.
  - Began in November 2019 and spread into the Mozambique Channel and the Madagascar Basin by January 2020. Covered an estimated 2,000 km<sup>2</sup>.

### Causes of the Phytoplankton Bloom Near Madagascar:

- **Tracking Water Movement:** Researchers analyzed Lagrangian trajectories, which track the movement of water parcels to study nutrient sources in the ocean. This method helped determine whether nutrients came from nearby landmasses like Madagascar's east coast or the south-east Africa continental shelf.

### Dust Sources:

- **Major contributors of dust included:**
  - Etosha and Makgadikgadi salt pans in Namibia and Botswana.
  - Ephemeral rivers in the Namibian desert.
  - The south-western Kalahari pan belt.
  - These areas supplied iron-rich dust, a critical nutrient for phytoplankton growth, to the ocean.
- **Mechanism of Nutrient Delivery:** Wind and rainfall transported the dust over long distances to the nutrient-limited surface waters south-east of Madagascar. The dust deposition coincided with intense rainfall events, facilitating nutrient availability in surface waters.
- **Climate Implications:**
  - **Such large-scale blooms are rare but may increase in frequency due to:**
    - Rising air temperatures.
    - Increasing dryness in southern Africa.
    - Higher dust emissions caused by prolonged drought conditions.
- **Significance:** This phenomenon underscores the link between terrestrial drought and marine ecosystems, showing how climatic and environmental changes in one region can impact distant ecosystems.

### Effects and Implications of the 2019/2020 Phytoplankton Bloom Near Madagascar:

- **Impact on Marine Food Web:** The bloom provided an abundant food supply, potentially boosting the populations of zooplankton and fish species in the region. Further research is needed to assess the long-term effects on the broader marine ecosystem.
- **Role in Climate Regulation:** Oceans are critical for absorbing carbon dioxide (CO<sub>2</sub>) from the atmosphere, and this bloom significantly contributed as a carbon sink.



The bloom's high photosynthesis rates led to the absorption of large quantities of CO<sub>2</sub>, highlighting the role of phytoplankton in mitigating climate change.

- **Uniqueness of the Bloom:** This event was exceptional, being the first of its kind observed in approximately 27 years of satellite ocean colour data.
- **Link to Climate Change:** Trends such as rising air temperatures, increasing aridity, and higher dust emissions in southern Africa indicate that such events may become more frequent in the future. Similar findings, such as ocean fertilisation due to megafires in Australia, suggest a connection between global warming, drought, aerosol emissions, and ocean blooms.
- **Potential for Carbon Removal:** Dust-induced phytoplankton blooms could help remove CO<sub>2</sub> from the atmosphere, though this potential requires further investigation to confirm its scalability and consistency.
- **Research Implications:** The findings underline the importance of studying the interactions between terrestrial and marine ecosystems, particularly under the influence of climate-induced changes.

## An Eye on Methane 2024 - Report

### News Excerpt:

The An Eye on Methane 2024 report was published by the United Nations Environment Programme's (UNEP) International Methane Emissions Observatory (IMEO).

### Key Points on Methane Emissions and UNEP's Report:

- **Importance of Addressing Methane Emissions:** Methane emissions are responsible for about one-third of current global warming.
- Reducing methane emissions is the fastest and most cost-effective method to slow global warming in the short term.
  - Critical to preventing severe climate damage.

### UNEP's IMEO Report:

- **Publication Title:** An Eye on Methane: Invisible but not unseen (Fourth Edition).
  - Focuses on leveraging a methane data revolution to facilitate global emission reductions.
  - Emphasizes the need for actionable data and accountability mechanisms.
- **Methane Data Collection and Publishing:** UNEP's International Methane Emissions Observatory (IMEO) gathers data from:
  - **Oil and Gas Methane Partnership 2.0 (OGMP 2.0):** Industry reporting.
  - **Methane Alert and Response System (MARS):** Satellite monitoring.
  - **Global Methane Science Studies:** Analytical assessments.
  - **National Emissions Inventories:** Comprehensive tracking.

- **Purpose:** Provide reliable data and context to stakeholders who can act to reduce emissions.
- **Key Findings of the Report:**
  - **Action Gap:** Efforts to engage with emission reduction systems are lagging behind pledges.
  - **Call to Action:** Tools for a methane data revolution exist; governments and companies must act.
  - **UNEP's 2024 Emissions Gap Report** warns that climate goals are becoming increasingly unattainable without immediate, data-driven methane reduction.
- **Call for Urgent Action:**
  - Data-driven initiatives on methane reduction offer a clear path to address climate challenges effectively.
  - Governments and industries are urged to adopt existing systems and frameworks to meet their climate commitments.

### Executive Summary:

#### Enabling oil and gas sector transparency and mitigation

- **Global Standard for Methane Accountability:** OGMP 2.0 sets the global standard for methane accountability and transparency in the oil and gas sector.
- **Increased Membership:** The partnership has expanded to 140 members, covering 42% of global production.
- **Gold Standard Reporting:** 55 companies achieved the highest level of data quality in their emissions reporting.
- **Path to Gold Standard:** 41 companies are on track to achieve Gold Standard reporting by following the agreed pathway.
- **Early Adopter:** One company achieved Gold Standard reporting ahead of schedule, demonstrating the potential for rapid progress.
- **Importance of Measurement-Based Data:** Accurate and reliable data is crucial for tracking and reducing methane emissions.
- **Future Goals:** The goal is to have all member companies achieve Gold Standard reporting to enable effective emission reduction strategies.

#### Understanding the oil and gas methane emissions reporting gap

- **Measurement-Based Framework:** OGMP 2.0 provides a framework for companies to measure and report their methane emissions accurately.
- **Emissions Gap:** Previous reports have shown that emissions reported by OGMP 2.0 companies were lower than actual atmospheric emissions.
- **Data Quality and Accuracy:** The 2024 report highlights the importance of accurate and reliable data for effective emissions reduction.
- **Generic Emission Factors:** The report suggests that using generic emission factors can underestimate actual emissions.
- **Asset Type Differences:** Differences in the types of oil and gas assets operated by OGMP 2.0 and non-OGMP

2.0 companies may explain some of the emission intensity differences.

- **Future Outlook:** With increased data and improved measurement techniques, the emission gap is expected to narrow in the coming years.
- **Expanding OGMP 2.0:** Expanding the partnership to include more companies will provide a more comprehensive picture of global methane emissions.

#### **The Methane Alert and Response System (MARS): Ready for action**

- **Satellite Data:** MARS utilizes data from over a dozen satellite instruments to detect methane emissions.
- **Emission Alerts:** UNEP has issued over 1,200 notifications to countries and governments about significant methane emissions.
- **AI-Powered System:** MARS has been enhanced with AI tools to improve its capabilities.
- **Global Impact:** MARS has catalyzed action to mitigate emissions across four continents.
- **Low Response Rate:** Despite numerous notifications, only a small percentage have resulted in substantive action.
- **Climate Opportunity:** There is a significant opportunity for countries to increase mitigation efforts by responding to MARS alerts.

#### **Methane emissions in the steel supply chain:**

- **Significant Methane Emissions:** The production of metallurgical coal (metcoal) contributes to a substantial portion of energy sector methane emissions.
- **Cost-Effective Mitigation:** A significant portion of these emissions can be mitigated at a relatively low cost.
- **Alignment with Low-Carbon Transition:** Addressing methane emissions aligns with the steel industry's efforts to reduce its carbon footprint.
- **IMEO's Role:** UNEP's IMEO is working to incorporate methane mitigation into the steel industry's climate strategies.
- **IMEO Steel Methane Programme:** This program sets ambitious targets and promotes emissions measurement in metcoal production.
- **Building on OGMP 2.0:** The program leverages the success of OGMP 2.0 in the oil and gas sector.
- **Practical and Cost-Effective:** The approach offers a practical and cost-effective way to reduce the climate impact of steel production.

#### **Evolving IMEO's methane science:**

- **As of 2024, IMEO has launched 37 methane science studies across 19 countries.** Initial IMEO methane science studies have successfully filled key knowledge gaps, including by providing the first empirical studies of offshore oil and gas infrastructure and liquefied natural gas facilities, as well as research campaigns in regions lacking empirical data.

#### • **Four main objectives:**

- Advancing reconciliation and data integration approaches for multi-scale emissions data
- Validating measurement-based approaches
- Supporting data assurance and characterization of regions and sources with high uncertainty or discrepancies in the integrated data
- Furthering science studies in support of countries targeting methane mitigation.

## SCIENCE & TECHNOLOGY SPACE

### Copernicus Sentinel-1C Earth Observation Satellite Successfully Launched

#### News Excerpt

The **Copernicus Sentinel-1C** Earth observation satellite was successfully launched by a **Vega C rocket** operated by Arianespace from Europe's Spaceport in **Kourou, French Guiana.**



#### About Sentinel-1C

- **Part of the Copernicus Programme:** Sentinel-1C is part of the Copernicus Programme, the Earth Observation component of the European Union's Space Programme.

#### Significance of Sentinel-1C

**Environmental Monitoring:** Tracking landslides, earthquake zones, and volcanic activity. Monitoring polar ice cover variations and deforestation.

**Natural Disaster Management:** Supporting emergency responders and search and rescue operations during disasters.

**Water Resource Management:** Analyzing the usage of water resources and their distribution.

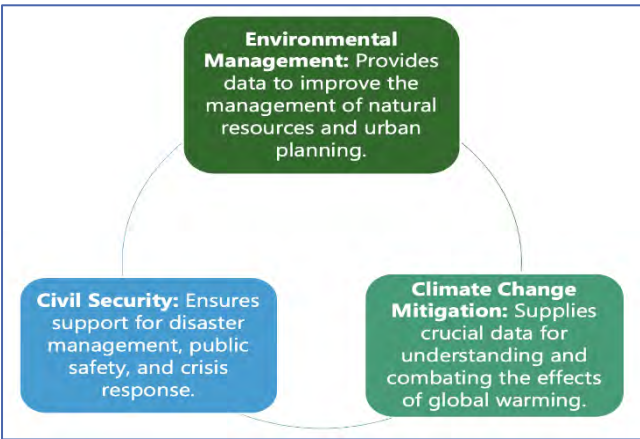
**Maritime Safety:** With an Automatic Identification System (AIS) payload, Sentinel-1C enhances maritime traffic management, collision avoidance, and ship monitoring.

- **Objective:** Sentinel-1C is designed to provide day and night imaging of Earth's surface in all weather conditions. Its Synthetic Aperture Radar (SAR) allows for continuous global monitoring.
- **Orbital Characteristics:** Operates in a low-Earth orbit at an altitude of 700 km. Part of a Sun-synchronous orbit, ensuring consistent daylight observation conditions. Designed for a 7.25-year operational lifetime.

- **Payload and Innovation:** First Sentinel-1 satellite to feature an AIS payload. Features a patented mechanism to separate the radar antenna from the spacecraft bus during re-entry, reducing orbital debris.
- **Mission Design:** It operates in tandem with Sentinel-1A and later with Sentinel-1D. It provides optimal global coverage with a 12-day repeat cycle. Pre-tasking capability ensures consistent long-term data collection for analysing environmental trends.
- **Accessibility of Data:** Sentinel-1C provides free, full, and open-access data to Public authorities, companies, and citizens worldwide. It supports scientific research, policy-making, and industrial applications.
- **Future Developments:** Sentinel-1D, the twin satellite of Sentinel-1C, is undergoing final testing at Thales Alenia Space and will join the constellation in orbit.

**About Copernicus Programme**

- Copernicus is the **Earth Observation component** of the European Union's Space Programme.
- **Objectives**

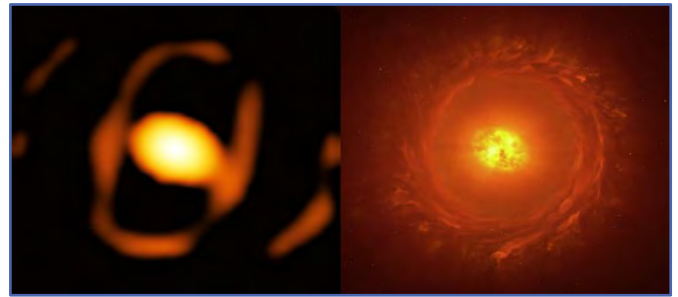


- **Components**
  - **Satellite Systems:** A family of Sentinel satellites, each tailored for specific Earth observation tasks.
  - **Ground-based Monitoring Networks:** These include weather stations, ocean buoys, and air quality networks. These systems provide calibration and validation for satellite data.
- **Programme Management**
  - **European Commission:** Manages the Copernicus Programme.
  - **European Space Agency (ESA):** Responsible for the programme's coordination, implementation, and evolution. Develops and operates some spacecraft and ensures technological innovation.

**Dying star WOH G64**

**News Excerpt**

For the **first time**, scientists have captured a **detailed image** of **star WOH G64**, located in another galaxy approximately **160,000 light-years** away from Earth.



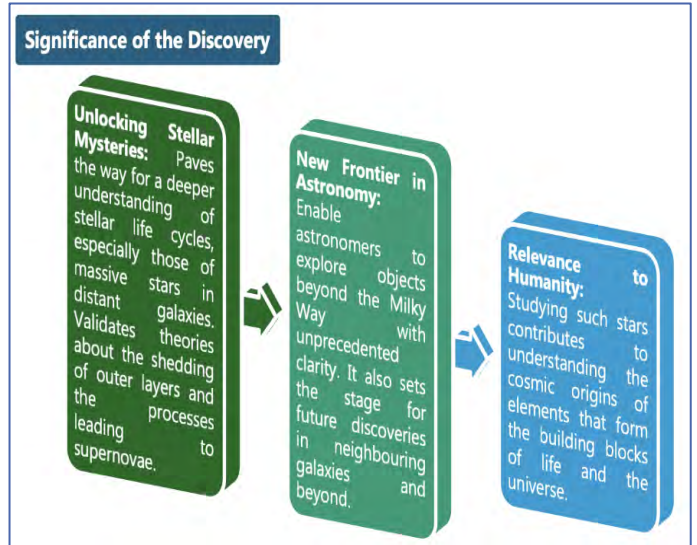
**Imaging WOH G64**

**GRAVITY's Role:** GRAVITY's advanced capabilities enabled the imaging of WOH G64 with unprecedented sharpness, marking a major leap in studying stars in distant galaxies.

**Technological Feat:** Using the ESO's VLT with the **GRAVITY interferometer**, scientists combined light from **four** telescopes in Cerro Paranal, Chile, achieving the resolution of a much larger telescope. Although the star was studied in 2005 and 2007, this breakthrough marks the **first time** a clear image has been obtained.

**About WOH G64**

- **Origins of the Name:** WOH G64 was discovered in the 1970s by Bengt Westerlunds, Olander, and Hedin. Its name derives from their initials (WOH).
- **Location and Characteristics:**



- It is in the **Large Magellanic Cloud**, one of the closest satellite galaxies to the Milky Way.
- Classified as a **red supergiant**, it has a mass approximately **2,000 times larger than the Sun** and a diameter that dwarfs most known stars.
- **A Dying Star:** WOH G64 is nearing the end of its life. It has dimmed significantly over the last decade. Red supergiants like WOH G64 **shed their outer layers**, which are composed of **gas and dust**, forming complex **wreaths and arcs** around them during their **final stages**.
  - Once its **core collapses**, the star could either form a **black hole**, where gravity is so intense that nothing, not even light, can escape or produce a **supernova**.

- Supernovae generate **critical elements** like zinc, silver, tin, gold, mercury, lead, and uranium, essential for the universe's chemical enrichment.

### Role of Technology in Advancing Astronomy

- **European Southern Observatory's VLT**

- **Capabilities:** VLT is a network of four 8-meter diameter telescopes designed to capture high-resolution images of distant celestial objects.
- **Interferometry Advantage:** By combining light from multiple telescopes, the VLT achieves the clarity of a much larger telescope.

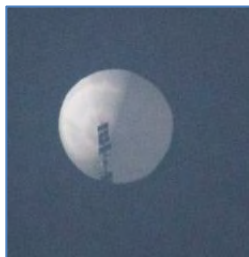
- **Future Prospects with GRAVITY+**

- **Overcoming Challenges:** As stars like WOH G64 grow fainter in their final stages, imaging them becomes increasingly difficult.
- The upcoming **GRAVITY+** upgrade promises to enhance VLT's capabilities, enabling more detailed observations of distant and elusive stars.

## Chinese Balloon Allegedly Spotted in Taiwan

### News Excerpt

Recently, Taiwan detected a **Chinese balloon** over the sea, approximately 111 km northwest of **Keelung Port**. This marks the first such incident since April. According to Taiwan's Defense Ministry, the balloon **entered** the island's **air defence identification zone (ADIZ)**.



### High-Altitude Balloons

- **Early Use:** High-altitude balloons have been in use for over 200 years, with their early applications focused on scientific observation and weather data collection.
- **Modern Evolution:** Balloons' capabilities have advanced significantly, with modern designs capable of reaching **heights of 40-50 kilometres** and carrying payloads weighing several thousand kilograms.
  - Their versatility has expanded their use in **tourism, disaster relief, and national security.**
- **Materials:** Most balloons are made of **thin polyethylene sheets** resembling plastic bags filled with helium gas.
  - Balloons designed for longer missions or higher altitudes incorporate advanced materials to improve durability and withstand environmental pressures.
- **Structure and Features:**
  - **Gondolas:** Attached baskets that carry instruments, cameras, or other payloads. In manned flights, they can carry humans.
  - **Parachute System:** For unmanned flights, gondolas are attached to parachutes, enabling a controlled descent once the mission is complete.

- **Flight Characteristics:** Balloons can remain airborne for durations ranging from a few hours to several months

### Geopolitical Context

**China's Position on Taiwan:** China claims Taiwan as its territory as part of its "One China" policy and routinely escalates **political and military pressure** on the island. Such incidents can be interpreted as **symbolic moves** to assert dominance and test Taiwan's defences.

**Taiwan's Position:** Taiwan views itself as a **sovereign and independent** entity, though its international recognition remains limited. The island continues to face **threats from China's** growing use of unconventional military tactics, including balloons, drones, and cyber operations.

depending on their purpose. Landing zones are pre-calculated based on weather conditions, wind speed, and mission objectives.

### Applications of High-Altitude Balloons

- **Weather Research:** Meteorological agencies routinely use balloons to measure air temperature, pressure, wind speed, and aerosol concentrations.
- **Astrophysics and Space Research:** Can reach clear altitudes (above commercial airline zones below satellite orbits) making them useful for astrophysical observations. Cost-effective compared to satellites and allow for the recovery and reuse of instruments.
- **Global Usage:** NASA has a robust balloon program, conducting 4-5 launches annually. Balloon-based experiments have contributed to major scientific advancements, earning **two Nobel Prizes in Physics** (1936 and 2006).
- **Advantages in Espionage:** High-altitude balloons can hover over target areas for prolonged periods. Their large payload capacity enables them to carry multiple surveillance instruments. Slow movement makes them **difficult to detect** on radar, and they are often **mistaken for birds.**

### Ballooning in India

- **First Use in 1948:** Physicist Homi Bhabha launched India's first scientific balloon for cosmic ray research in 1948, marking the beginning of balloon-based scientific exploration in the country.
- **TIFR Contributions:** The **Tata Institute of Fundamental Research (TIFR)** started balloon fabrication in the 1950s and launched numerous flights from Mumbai and Hyderabad. In 1969, TIFR established a **Balloon Facility in Hyderabad**, India's largest facility for such missions.
- **Scientific Research:** The Hyderabad facility has supported over 500 balloon launches for various scientific objectives. Balloons are used extensively by the **Indian Space Research Organization (ISRO)** and weather research institutions like the **Indian Institute of Tropical Meteorology (IITM)** in Pune.
- **Educational Institutions:** Universities like **Osmania University** and private institutions have active balloon programs, contributing to academic research and technological innovation.

## India's GSAT-20 rides SpaceX Falcon-9 to orbit

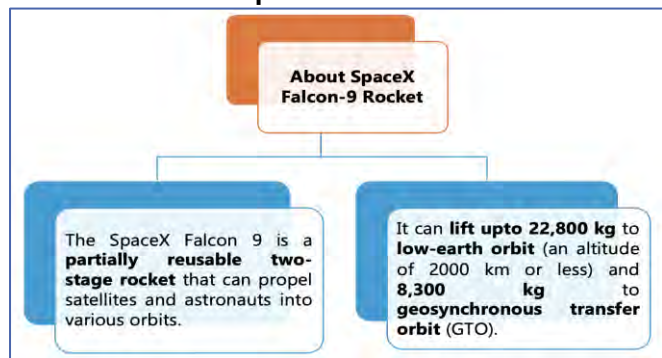
### News Excerpt

India's **GSAT-N2 (GSAT-20)** communication satellite was recently launched successfully by SpaceX's Falcon-9 rocket

**About Launch Details:**



- The satellite was launched into a **geosynchronous transfer orbit (GTO)**, an elliptical orbit **around 37,000 km** from Earth.
  - A GTO is a **highly elliptical orbit** that transfers a spacecraft from a low earth orbit (LEO) to a geosynchronous orbit (GEO).
    - GEO is a circular orbit around Earth where the satellite matches Earth's rotation period, making it appear stationary relative to the ground.
- To achieve its final position in a **geosynchronous orbit (GEO)**, the satellite will use **onboard propulsion** to circularise its orbit by firing its rocket engine at the **apoapsis** (farthest point in the orbit).
- The launch occurred from **Cape Canaveral, Florida**, showcasing seamless collaboration between India and the U.S.
- **Why Falcon-9?**
  - ISRO's **Mark-3 launch vehicle**, capable of placing up to **4,000 kg** into a geosynchronous transfer orbit (GTO), was **insufficient** for the 4,700 kg GSAT-N2.
  - This necessitated collaboration with SpaceX's Falcon-9 rocket, marking India's **first such commercial venture with SpaceX**.



**About GSAT-N2**

- The GSAT-N2, developed by **NewSpace India Limited (NSIL)** under the **Department of Space**, is a state-of-the-art communication satellite designed to address India's increasing need for **high-speed data transmission** and **internet services**.
- **Ka-band Communication:** By operating in the Ka-band, GSAT-N2 ensures greater bandwidth and reduced interference, making it ideal for high-speed data transmission to a large user base with small user terminals.
- **High Data Capacity:** GSAT-N2 offers a data throughput of approximately **48 Gbps**, making it India's highest throughput satellite. It features **32 user beams**, with 8 narrow spot beams over the Northeast region and 24

wide spot beams covering the rest of India. These beams are supported by ground-based hub stations.

- **Mission Life:** With a lift-off mass of **4,700 kg**, GSAT-N2 has an operational life of 14 years.
- **Applications:** The satellite aims to provide internet services to remote regions, support India's Smart Cities Mission, and enable in-flight connectivity.

**Role of NSIL**

- NSIL, ISRO's commercial arm, builds, launches, and operates satellites under a **demand-driven model** to meet end users' specific needs.
  - The demand-driven approach ensures that satellite capabilities are tailored to meet the requirements of both government and private stakeholders.
- GSAT-N2 is the **second demand-driven satellite** developed by NSIL, following the launch of **GSAT-24 in June 2022**.

**India Successfully Conducts Flight Test of First Long-range Hypersonic Missile**

**News Excerpt**

Recently, the Defence Research and Development Organisation (DRDO) conducted a **successful flight trial** of India's first long-range **hypersonic missile** from Dr APJ Abdul Kalam Island off the coast of Odisha. Previously, only the **US, Russia, and China** had this technology.



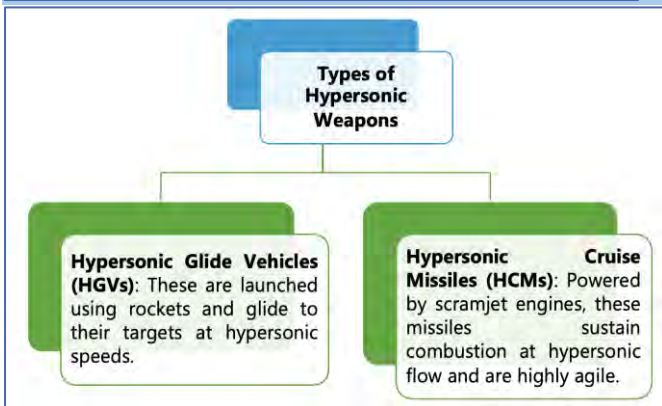
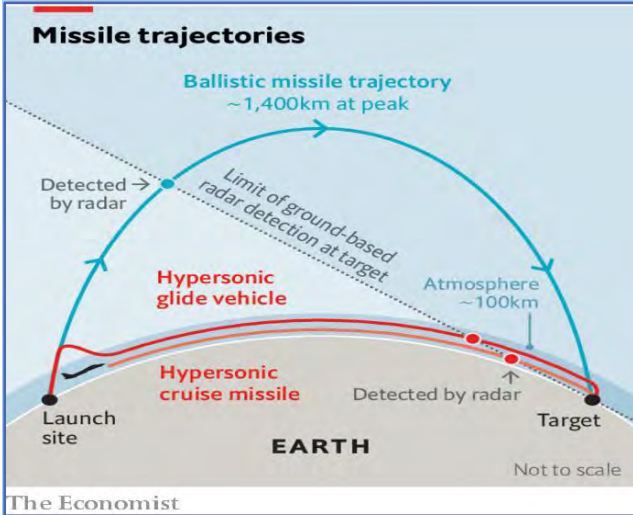
**Key Features of the Missile**

- The indigenously developed hypersonic missile has a **range exceeding 1,500 km** and can achieve **speeds over Mach 6**.
- It combines the speed of ballistic missiles with the manoeuvrability of cruise missiles, making it a **versatile weapon system** for the Armed Forces.
- The test demonstrated cutting-edge technologies:
  - **Aerodynamic Stability:** Advanced configurations enabled stable hypersonic manoeuvres.
  - **Scramjet Propulsion:** The missile utilised a scramjet engine for sustained high-speed combustion, compressing incoming air using its forward motion.
  - **Thermo-structural Resilience:** The missile successfully withstood extreme aerothermal conditions during flight.
- The hypersonic missile was developed by the **Dr APJ Abdul Kalam Missile Complex, Hyderabad**, along with various other **DRDO labs** and **industry partners**.

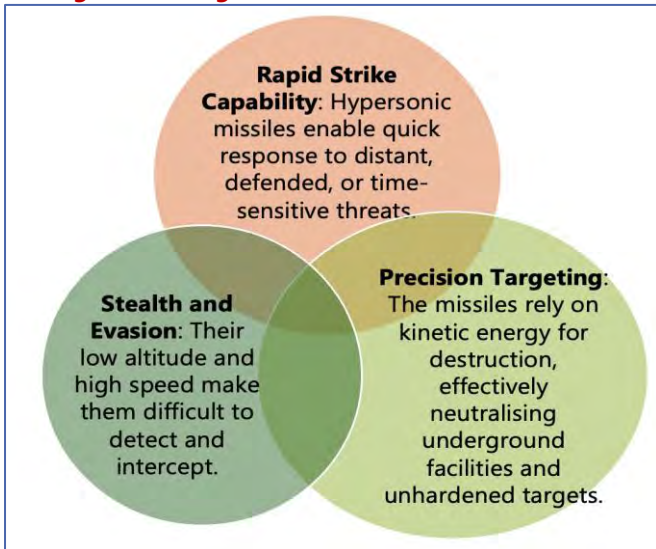
**HEALTH**

**About Hypersonic Missiles**

- **Speed:** Hypersonic missiles travel at speeds exceeding Mach 5 (five times the speed of sound, or approximately 6,174 km/h).
- **Trajectory:** Unlike ballistic missiles, which follow a predictable arched path, hypersonic missiles can manoeuvre mid-flight, making detection and interception challenging.



**Strategic Advantages**



**'Obesity memory' of your cells**

**News Excerpt**

A new study published in the journal **Nature** has discovered that **weight gain** is more **dependent** on how existing **fat cells store nutrients** rather than increasing fat cells. This discovery shifts the focus from fat cell proliferation to fat cell behaviour.

**Key Highlights of the Study**

- **Methodology and Findings**
  - Researchers analysed **fat tissue from individuals** with obesity, both **before and after** they underwent **bariatric (weight-loss) surgery**. They compared the tissue to samples from people who had never been obese.
  - Some **genes** in the fat cells of the **obesity group** were **more active**, even after substantial weight loss. These active genes promote efficient fat storage and reflect a cellular memory of obesity.
  - The persistence of these genetic changes suggests that the **body's metabolic programming** remains **biased** toward regaining weight.
- **Fat Cell Behavior in Obesity:** Fat cells in individuals with obesity are programmed to **store excess nutrients** more efficiently. This storage behaviour doesn't change even after weight loss, resulting in faster weight regain when calorie intake increases.
  - This trait reflects a **biological adaptation** to store energy, which may have been useful historically but now contributes to obesity in modern sedentary lifestyles.
- **No Change in Fat Cell Numbers:** The number of fat cells remains relatively constant; however, their ability to grow in size and store more nutrients is the **primary cause** of weight gain.

**Mechanism of "Obesity Memory"**

- **Epigenetic Changes in Fat Cells:** Epigenetic changes refer to **modifications** in gene expression caused by environmental factors, such as **diet and lifestyle**, without altering the DNA sequence itself. These changes in gene expression in fat cells create a lasting memory of obesity that persists even after weight loss.
- **Environmental Influence:** Rapid weight gain is **not purely genetic** but is significantly influenced by lifestyle and environmental factors. The epigenetic modifications in fat cells underscore the complex interaction between genes and the environment.
- **Non-Heritable Changes:** The obesity memory is not passed down genetically but is **acquired** during a person's lifetime, modifying it with long-term interventions.

## Significance of the Study

- **Understanding Weight Regain:** The study explains the biological resistance to weight loss after dieting or bariatric surgery, emphasising the role of fat cell behaviour.
- **Public Health Implications:** It highlights the need for long-term, sustainable interventions and weight loss programs that prioritise maintaining weight loss over time.
- **Lifestyle Recommendations:** Permanent lifestyle changes, including healthy eating, regular exercise, and weight monitoring, are essential to counteract the memory of obesity.

## First Indigenous Antibiotic "Nafithromycin"

## News Excerpt

Recently, **India's first indigenous antibiotic**, Nafithromycin, was formally launched to fight **drug-resistant** infections.

## About Nafithromycin

- Nafithromycin is an innovative antibiotic developed to tackle the growing global challenge of **antimicrobial resistance (AMR)**.
- This antibiotic, supported by the **Biotechnology Industry Research Assistance Council (BIRAC)**, a unit under the **Department of Biotechnology**, is specifically designed to treat **Community-Acquired Bacterial Pneumonia (CABP)** caused by drug-resistant pathogens.
- Typical bacterial pathogens that cause CAP include **Streptococcus pneumoniae**, **Haemophilus influenzae**, and **Moraxella catarrhalis**.
- Currently **awaiting final approval** from the Central Drugs Standard Control Organisation (CDSCO) for manufacturing and public use.
- Nafithromycin was developed over **14 years of rigorous clinical trials** conducted in the U.S., Europe, and India. This initiative highlights successful public-private collaboration between the Indian government and **Wockhardt Pharmaceuticals**.

## Significance

**Combatting Drug Resistance:** Nafithromycin effectively treats CABP caused by drug-resistant pathogens, addressing a global health issue linked to over 2 million deaths annually.

**Efficient and Safe:** It offers a faster, safer alternative to traditional antibiotics for drug-resistant infections.

**Affordable Solution:** Provides cost-effective treatment, especially beneficial in low-resource settings with limited healthcare access.

- Nafithromycin is **10 times more effective than azithromycin**, requiring just three doses to combat drug-resistant pneumonia.

- It demonstrates **minimal side effects**, no significant drug interactions, and is **food-independent**, ensuring patient convenience and safety.

## About Central Drugs Standard Control Organisation (CDSCO)

- The Central Drugs Standard Control Organisation (CDSCO) is India's **National Regulatory Authority (NRA)**, functioning under the **Directorate General of Health Services**, Ministry of Health and Family Welfare.
- It is a key body responsible for ensuring the **safety, efficacy, and quality of drugs, medical devices, and cosmetics** in the country.
- Under the **Drugs and Cosmetics Act**, CDSCO is responsible for:
  - Approval of New Drugs
  - Regulation of Clinical Trials
  - Standard Setting for Drugs
  - Control Over Imported Drugs
  - Coordination with State Authorities
- It is located in **New Delhi**.
- The organisation is headed by the **Drugs Controller General of India (DCGI)**, who oversees its operations and decision-making processes.

## GENERAL SCIENCE

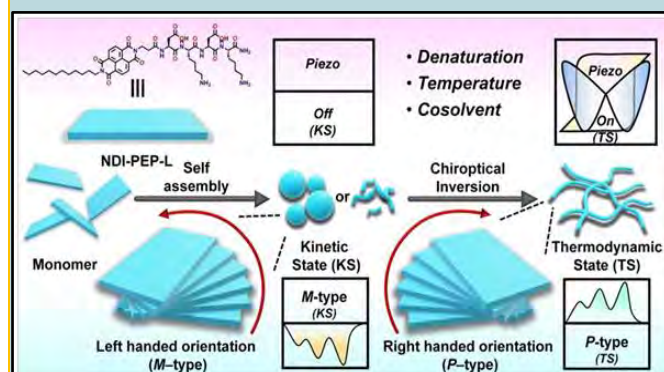
## Peptide-based Tuneable Piezoresponsive Nanomaterials

## News Excerpt

Indian researchers have successfully developed **adjustable piezoresponsive nanomaterials** composed of **peptides**—short chains of amino acids.

## About Piezoresponsive Nanomaterials (PN)

- Piezoelectric materials can **generate an electric charge** in response to mechanical stress.
  - This unique property is **utilised in sensors, actuators, and energy-harvesting devices** to convert mechanical energy into electrical signals and vice versa.
- The **structural asymmetry** in the nanostructures, achieved through controlled self-assembly, enables these materials to exhibit **piezoelectric characteristics**.
  - This capability **enhances materials' functionality**, allowing for dynamic and **customisable properties** essential for next-generation smart materials and devices.



### Key Highlights of the Research

- Researchers from the **Centre for Nano and Soft Matter Sciences (CeNS)** and the **Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR)** conducted the study.
- Their research, published in the journal **Chemical Science** by the Royal Society of Chemistry, discusses the **interplay between kinetic and thermodynamic states in peptide self-assembly** and its impact on the materials' piezoelectric properties.
- The ability to fine-tune piezoelectric properties through molecular control opens **new possibilities for designing materials** for sensors, energy harvesting, and biomedical applications. This control ensures enhanced efficiency and versatility in **next-generation devices**.

### Fundamentals of Peptide Self-Assembly

- Self-assembly of peptides, or **supramolecular self-assembly**, refers to the **spontaneous organisation** of peptides into structured formations driven by non-covalent interactions such as hydrogen bonding, hydrophobic forces, and ionic interactions.
  - This process is crucial for the **precise molecular control** needed to create **nanodevices** in electronics, optoelectronics, and biomedicine.
- By controlling various parameters, such as **temperature** and **solvent compositions**, researchers can manipulate the kinetic and thermodynamic states during peptide self-assembly.
  - This manipulation determines the final structure and functionality of the nanomaterials, allowing for the **precise engineering** of molecular arrangements and the creation of organised, asymmetric structures critical for introducing piezoelectric properties.

## US Justice Department Wants Google To Sell Chrome

### News Excerpt

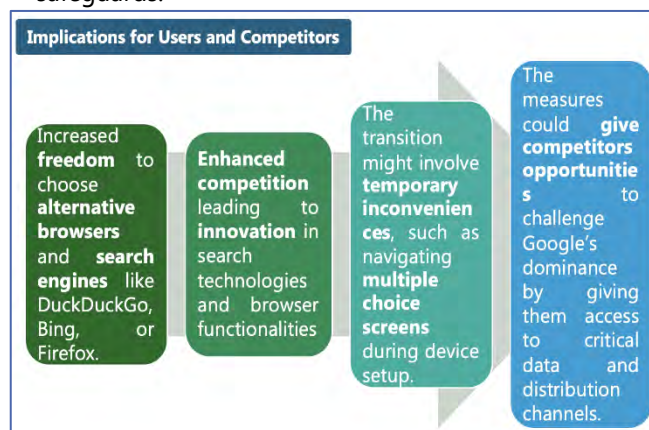
The United States Department of Justice (DoJ) has accused Google of **monopolistic practices** in the **online search and browser markets** and proposed measures to **dismantle Google's** control over critical segments of the tech ecosystem.

#### Background: The Antitrust Landscape

- Over recent years, **U.S. regulatory agencies** have intensified scrutiny of major **tech companies**, including Amazon, Meta, and Google, for alleged **monopolistic practices**.
- In 2020, the DoJ and multiple states **sued Google**, asserting that the company cemented its **dominance by paying billions** annually to companies like **Apple and Samsung** to make Google the default search engine on their devices.

### DoJ's Proposal: Key Remedial Measures

- **Divestment of Chrome and Android**
  - **Chrome Browser:** The proposal calls for Google to divest its Chrome web browser to reduce its dominance in the search ecosystem. The DoJ also suggests banning Google from re-entering the browser market for five years.
  - **Android Operating System:** It is recommended that Android be divested to prevent Google from leveraging its mobile OS to favour its search engine.
- **Prohibition on Exclusive Agreements:** Google would be prohibited from entering into exclusive agreements with hardware manufacturers and content publishers that prioritise its services over competitors.
- **User and Advertiser Data Sharing:** To level the playing field, Google must share user-side and ad data with competitors for 10 years at no cost, ensuring data privacy safeguards.



- **Choice Screens for Consumers:** To reduce default bias, Google must implement "choice screens" on its devices, allowing users to select their preferred search engine during device setup.
- **AI Model Training Restrictions:** Publishers and content creators would gain the ability to block their data from being used to train Google's AI models, limiting its dominance in emerging technologies.
- **Transparency in Search Technologies:** Google would need to make its search index accessible to rivals for a nominal fee and provide greater transparency in its search algorithms.
- **Monitoring and Enforcement:** To ensure compliance, the DoJ has proposed forming a 'Technical Committee' to oversee the implementation of the remedies. This committee would evaluate Google's adherence to the divestment, data-sharing, and transparency requirements.

### Google's Response

- Google has vehemently opposed the DoJ's proposals, describing them as a **"radical interventionist agenda."** Google argued that these measures could:



- Compromise **user security and privacy** by forcing Google to share sensitive data.
- Disrupt Google's investments in **artificial intelligence** and **innovation**.
- Harm **small businesses and developers** reliant on Google's ecosystem.
- Normalise **government overreach** in technology markets.
- Google also expressed concerns about the impact on users, citing **potential disruptions** in accessing widely used services like Google Search, Chrome, and Android.

## DISEASES

### Preventing malaria using genetically modified malaria parasites

#### News Excerpt

Recent developments in **malaria prevention** have **transitioned** from targeting genetically modified mosquitoes to focusing on genetically modified malaria-causing parasites.

#### About Malaria

- Malaria is a disease caused by **Plasmodium parasites** transmitted to humans through the bites of infected female Anopheles mosquitoes.
- Among the **five Plasmodium** species that infect humans, **P. falciparum** and **P. vivax** are the most dangerous.
- The disease cycle begins when a **mosquito bites an infected person** and then **transmits the parasites** to another person during subsequent bites.
- Once in the human body, the **parasites travel to the liver**, where they mature before **invading red blood cells**, causing symptoms such as fever, chills, and anaemia.
- Malaria continues to be a **major health concern** in India, with an estimated 1 million cases reported annually, according to the **National Vector Borne Disease Control Programme (NVBDCP)**.

#### Current Methods for Preventing Malaria Transmission

##### About Genetically Modified Malaria Parasites

- Researchers are now **exploring the possibility of modifying** the **malaria parasite** itself. By making the parasite less harmful, they **aim to "prime"** the human immune system to recognise and fight off malaria more effectively.
- **Malaria Parasite Life Cycle**
  - **Liver Stage:** After a mosquito bite, the parasite enters the liver, growing and multiplying before moving into the bloodstream.

#### Genetically Modified Mosquitoes

**Sterilised Mosquitoes:** Male mosquitoes are sterilised using radiation, preventing offspring and reducing malaria-spreading populations.

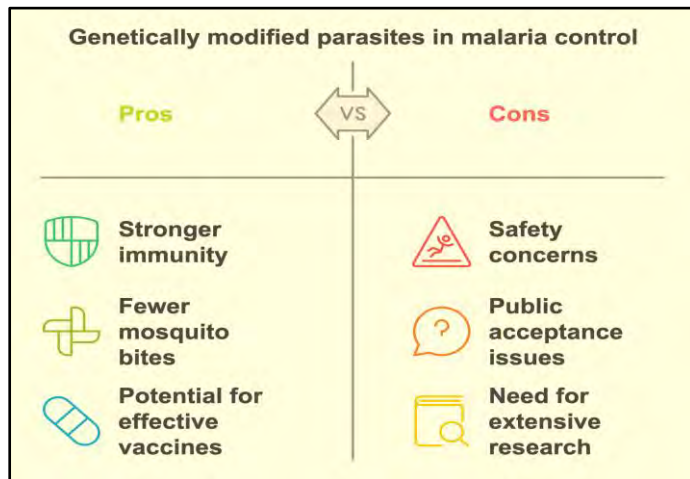
**Slower Parasite Growth:** Genetically engineered mosquitoes slow parasite development, decreasing transmission to humans.

**Parasite Resistance:** Modified mosquitoes carry genes that make them resistant to malaria parasites, further curbing transmission.

- **Bloodstream Stage:** Once in the bloodstream, the parasite infects red blood cells, causing malaria symptoms such as fever and chills.
- **Genetically Modified Parasites**
  - **Late-Arresting Parasites:** These parasites are designed to die during the liver stage, around day 6. This allows the immune system to recognise the parasite and prepare a defence without causing disease.
  - **Early-Arresting Parasites:** These parasites die earlier, on day 1 of the liver stage, providing less time for the immune system to build an effective response.
- **Training the Immune System:** The modified parasites interact with the immune system during the liver stage, **"training"** it to respond more effectively to future infections.
  - This method helps prevent malaria infection when exposed to unmodified parasites introduced by mosquito bites.

**Malaria Vaccines:** The World Health Organization (WHO) recommends malaria vaccines such as **RTS,S/AS01** and **R21/Matrix-M** as preventive measures.

- **Immune Response**
  - **Antibody Levels:** Participants in the late-arresting group exhibited higher antibodies against malaria antigens levels than the placebo group.
  - **T-Cell Activity:** Specific T-cells, crucial for long-term immunity, were identified in the late-arresting group but were absent in other groups.
- **Comparison with Radiation-Attenuated Sporozoites:** Another preventive method, radiation-attenuated sporozoites, offers protection rates between 50% and 90%.
  - However, this method requires significantly more mosquito bites (approximately 1,000) than genetically modified parasites, which provide strong protection with far fewer bites.



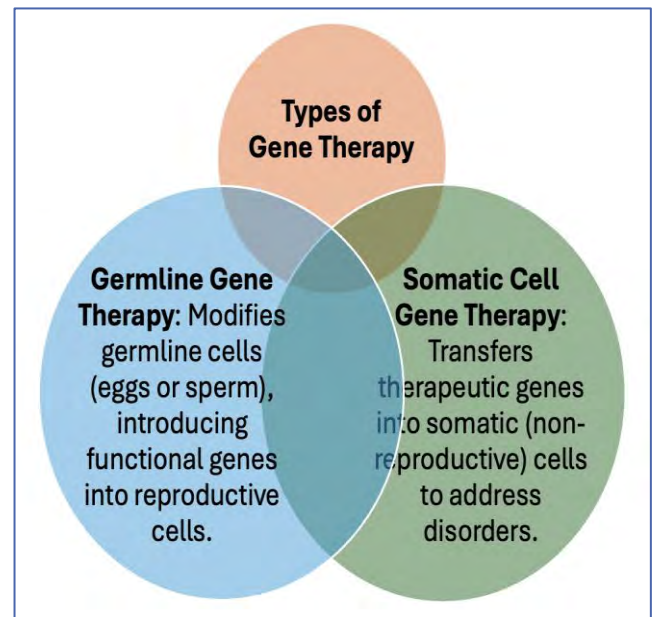
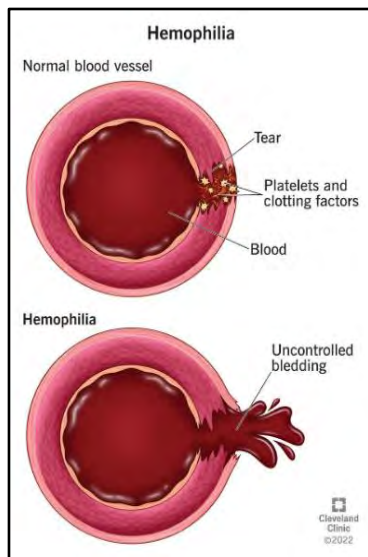
## India Develops First Human Gene Therapy for Hemophilia A

### News Excerpt:

The Department of Biotechnology (DBT), in collaboration with the Centre for Stem Cell Research (CSCR), has **successfully** developed India's **first human gene therapy** to treat **Hemophilia A**.

### About Gene Therapy

- Gene therapy is an advanced **medical technique** that uses **genetic material** to treat, prevent, or cure diseases by:
  - Replacing defective genes,
  - Deactivating harmful genes or
  - Introducing new functional genes to restore health.
- Key tools and methods include **plasmid DNA** (genetically engineered circular DNA molecules) and **human gene-editing technologies**.
- This cutting-edge therapy leverages a **lentiviral vector** to introduce a normal copy of the **Factor VIII gene** into **autologous hematopoietic stem cells (HSCs)**, effectively addressing the deficiency responsible for Hemophilia A.
  - **Lentiviral vectors:** Specialized viral vectors deliver genetic material into cells.
  - **Hematopoietic Stem Cells (HSCs):** Multipotent cells that give rise to all types of blood cells.
- **Applications:** Gene therapy can target **inherited genetic disorders** (e.g., sickle cell disease) and **acquired conditions** (e.g., leukaemia).



### About Hemophilia A

- Hemophilia is a **rare group of bleeding disorders** caused by a deficiency in specific clotting factors. The most common type, **haemophilia A**, results from a deficiency in **Factor VIII**, a key blood-clotting protein.
  - This deficiency prolongs bleeding after injuries, as **blood takes longer to clot**.
  - It can also be **acquired** later in life, triggered by auto-antibodies that target Factor VIII.
- **Causes:** Hemophilia A is primarily inherited and follows an **X-linked recessive pattern**.
  - **Males** (one X chromosome and one Y chromosome) are more prone to the disorder if they inherit the defective gene on the X chromosome from their mother.
  - **Females** (two X chromosomes) generally don't exhibit symptoms unless both X chromosomes carry the defective gene, which is rare.
- **Symptoms:** The severity of Hemophilia A depends on the level of Factor VIII activity. Common symptoms include - easy bruising and excessive bleeding from minor injuries, joint bleeding (knees, elbows, ankles) leading to pain, swelling, and stiffness, and prolonged bleeding after surgery or dental procedures.
- **Treatment Options:** Treatment involves replenishing the missing clotting factor to enable normal blood clotting. Traditional approaches include:
  - **Plasma-Derived Factor Concentrates:** Extracted from human plasma, containing clotting factors.
  - **Recombinant Factor Concentrates:** Genetically engineered and free from human plasma, minimising the risk of transmitting infections.

## INTERNAL SECURITY

### Coastal Defence Exercise Sea Vigil 24

#### News Excerpt:

The fourth edition of the Pan-India Coastal Defence Exercise Sea Vigil 24 concluded successfully.

#### Key Highlights of the Sea Vigil 24 Exercise:

- **Exercise Overview:** Conducted over a 36-hour period to demonstrate India's commitment to maritime security and coastal defense. Covered India's 11,098 km coastline and 2.4 million sq. km Exclusive Economic Zone (EEZ).
- **Multi-Agency Participation:** Involved over 21 agencies from six ministries, including: Indian Navy, Indian Army, Indian Air Force, Indian Coast Guard, State Marine Police, Customs, BSF, CISF, Port Authorities, Fisheries Department, among others.
- **Deployment Scale:** Utilized more than 550 surface assets from various maritime security agencies. Conducted 60 air sorties with about 200 hours of flying time across the coastline.
- **Coastal Defence and Security Readiness Evaluation (CDSRE):** Preceding the tactical phase, CDSRE spanned seven days. Involved a comprehensive audit of over 950 critical coastal locations, such as:
  - Fishing Landing Centres, Lighthouses, Major and Non-Major Ports, Coastal Police Stations, Offshore Assets, Coastal Vulnerable Areas (VAs) and Vulnerable Points (VPs).
- **First-Time Participation:** National Security Council Secretariat officials took part in the CDSRE activities in Gujarat and West Bengal, marking a significant addition to the exercise.
- **Strategic Importance:** The exercise emphasized enhancing coordination among stakeholders to fortify coastal security mechanisms and protect critical assets.

#### Focus and Objectives of Sea Vigil 24:

- **Primary Focus:** Enhancing coastal defense mechanisms to safeguard India's maritime boundaries and infrastructure.
- **Security of Vital Maritime Assets:** Emphasis on protecting critical installations along the coast, including:
  - Oil Rigs, Single Point Moorings (SPMs), and Cable Landing Stations.
  - Non-Major Ports and Nuclear Installations.
- **Indian Air Force Contributions:** Deployed Air Defence Systems on offshore platforms and oil rigs to secure vital offshore infrastructure.
- **Merchant Ship Security:** Special focus on merchant ship safety, including:
  - Simulated hijacking drills.
  - Naval Cooperation and Guidance for safe shipping.
  - Re-routing of Indian merchant vessels for enhanced security.

- **Fishing Community Participation:** Fishing communities from all coastal states actively participated. Engaged in coordination with maritime forces to enhance coastal vigilance.
- **Community Outreach Programs:** Expanded outreach



initiatives aimed at fostering maritime security awareness, especially among: Youth groups, including NCC cadets, Bharat Scouts and Guides, and students in coastal areas. Organized by the Indian Navy to build a security-conscious coastal ecosystem.

- **Nationwide Coastal Ecosystem Strengthening:** Programs designed to create a robust grassroots-level awareness and reinforce the nation's coastal defense framework.

#### Strengthening Inter-Agency Coordination:

- **Platform for Evaluation:** Sea Vigil 24 served as a critical platform to evaluate inter-agency coordination within India's Coastal Defence Architecture.
- **Gap Identification:** The exercise aimed to identify and address gaps in the coastal security infrastructure.
- **Seamless Collaboration:** The exercise demonstrated effective collaboration between various agencies, ensuring readiness to counter evolving maritime threats.

#### Legacy and Vision:

- **Pivotal Role:** Since its inception in 2018, Sea Vigil has been instrumental in enhancing India's Coastal Defence preparedness.
- **Real-Time Scenarios:** Simulated real-time scenarios provided valuable insights into the nation's maritime defence capabilities.
- **Improvement in Defence Architecture:** Lessons learned from the exercises help in making the Coastal Defence Architecture more robust and resilient.

#### Achievements of Sea Vigil 24:

- **Safeguarding Maritime Borders:** Underscored India's commitment to safeguarding its maritime borders.
- **Indian Navy's Role:** Reaffirmed the Indian Navy's dedication to ensuring 'Overall Maritime Security'.
- **Milestone in Coastal Defence:** Marked another milestone in fortifying India's coastal defence against emerging security challenges.
- **Enhanced Preparedness:** Highlighted robust inter-agency cooperation, community engagement, and proactive measures.

## Bharat National Cyber Security Exercise (Bharat NCX 2024)

### News Excerpt:

The Bharat National Cyber Security Exercise (Bharat NCX 2024), a landmark initiative to fortify India's cybersecurity resilience, was inaugurated at a high-profile ceremony organized by the National Security Council Secretariat (NSCS) in collaboration with Rashtriya Raksha University (RRU).

### About Bharat NCX 2024:

- The exercise includes immersive training on cyber defense and incident response, live-fire simulations of cyberattacks on IT and OT systems, and collaborative platforms for government and industry stakeholders.
- A Strategic Decision-Making Exercise will bring together senior management from across sectors to simulate decision-making in a national-level cyber crisis, enhancing their ability to respond to high-pressure situations with strategic acumen.
- The CISO's Conclave will feature Chief Information Security Officers from government, public, and private sectors sharing insights, participating in panel discussions, and exploring the latest trends and government initiatives in cybersecurity.
- On the sidelines, the Bharat Cybersecurity Startup Exhibition will showcase innovative solutions from Indian startups, emphasizing their role in enhancing the nation's cybersecurity infrastructure.
- The exercise also highlights leadership engagement and capacity building, fostering a unified approach to emerging cyber challenges.
- The event runs from November 18 to November 29, 2024, culminating in a comprehensive debrief to consolidate lessons learned and establish best practices in cybersecurity.

## India tests submarine-launched ballistic missile

### News Excerpt:

Recently, the Indian Navy carried out the test firing of the 3,500 Km K-4 ballistic missile from the newly inducted nuclear submarine INS Arighaat.

### About India's Nuclear-Capable Ballistic Missile Test:

- **Test Overview:** India successfully tested the K4 nuclear-capable ballistic missile on November 28, 2024, from the nuclear-powered submarine INS Arighaat in the Bay of Bengal. This missile has a range of **approximately 3,500 km**.
- **Strategic Significance:** The test solidifies India's membership in the elite group of nations capable of launching nuclear missiles from land, air, and undersea, enhancing its nuclear triad capabilities.

- **K4 Missile Details:** It is a solid-fuelled, submarine-launched ballistic missile (SLBM). Previously tested multiple times from submersible platforms. This was the first test of the missile from a submarine, demonstrating almost its full range.

**Nuclear-capable submarine-launched missiles**

- K-4 (in development) Range: 3,500km
- K-15 Sagarika Range: 750km

**ARIHANT-CLASS SPECIFICATIONS**

Length	110 metres
Displacement	6,000 tonnes
Crew	95
Surface speed	15 knots (28km/h)
Submerged speed	24 knots (44km/h)

**INS ARIGHAT:** Indian Navy's second indigenously-designed and built Arihant-class submarine

Six 533mm torpedo tubes

**Propulsion:** 80MW nuclear pressurised water reactor drives steam turbine

**Vertical launch tubes:** Can carry 12 K-15 (three per tube) or four K-4 missiles

**INDIA'S SUBMARINE FLEET**

Nuclear-powered ballistic missile submarines (SSBN): 2	Diesel-electric submarines (SSK): 14
INS Arihant	Kalvari-class (2)
INS Arighat	Shishumar-class (4)
Nuclear attack submarine (SSN): 1	Sindhughosh-class (8)
INS Chakra	

- **INS Arighaat:** Commissioned into the Indian Navy on August 29, 2024. It is the second Arihant-class submarine, equipped with indigenous systems designed and integrated by Indian scientists and industry personnel.
- **Advancements in Hypersonic Missile Technology:** India also successfully tested a long-range hypersonic missile off the Odisha coast recently. Hypersonic missiles can travel at speeds of Mach 5 or higher, making them highly agile and difficult to intercept. Advanced versions can reach speeds exceeding Mach 15.
- **Global Hypersonic Missile Development:** Russia and China lead in hypersonic missile technology. The United States is developing its hypersonic weapons under an ambitious program.
- **India's Defense Focus:** These developments align with India's strategy to bolster its military and deterrence capabilities, particularly in response to China's aggressive military posturing.

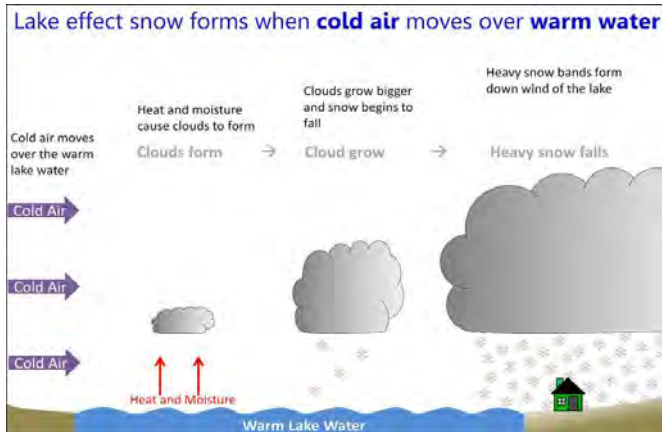
## GEOGRAPHY

### Lake Effect Snow

#### News Excerpt:

Lake effect snow is common across the Great Lakes region during the late fall and winter.

## About Lake Effect Snow:



- **Cold Air Movement:** Lake Effect Snow occurs when cold air (often from Canada) moves across the Great Lakes, which are typically warmer than the surrounding air in winter.
- **Heat and Moisture Transfer:** As cold air passes over the unfrozen waters of the lakes, warmth and moisture are transferred from the water into the lower atmosphere.
- **Cloud Formation:** This transfer of heat and moisture causes the air to rise, forming clouds that grow into narrow bands.
- **Snowfall Intensity:** The cloud bands can lead to intense snowfall, sometimes producing 2 to 3 inches of snow per hour or more.
- **Wind Direction:** The direction of the wind is a critical factor in determining which areas will experience lake effect snow. Snow may fall heavily in one location while another nearby area remains clear or sunny.
- **Geography's Role:** The physical geography, including the shape and size of the land and water, influences how lake effect snow develops. Meteorologists take these and other factors into account when forecasting snowfall.

## Deadly bomb cyclone cuts power for thousands in US north-west

### News Excerpt:

A storm off the coast of the US north-west and western Canada is pummeling the region - bringing high winds, flooding and snow to over seven million residents living in states along the Pacific Ocean.

### Key Points about a Bomb Cyclone:

- **Definition:** A bomb cyclone is a storm that rapidly intensifies, defined by a central air pressure drop of at least 24 millibars within 24 hours.
- **Naming:** The term "bomb cyclone" reflects the explosive power of these storms due to the sudden and intense pressure drop.
- **Weather Phenomena:** These storms are associated with a range of severe weather, including:
  - Blizzards

- Severe thunderstorms
- Heavy precipitation
- **Occurrence:** Bomb cyclones are not unusual for specific times of the year, particularly during seasonal transitions.
- **Relation to Atmospheric Rivers:**
  - Bomb cyclones often interact with atmospheric river events, which involve small regions of moisture traveling outside tropical zones.
  - The combination of these two phenomena can lead to major weather events with significant impacts.
- **Significance:** These storms are closely monitored due to their rapid development and potential for widespread disruption.

## Earth's axis tilted by 31.5 inches. India's rising water demand is the reason

### News Excerpt:

The study estimates that humans have pumped out around 2,150 gigatons of groundwater during the study period.

### The Study Linking Groundwater Extraction to Earth's Rotational Pole Drift:

- **Study Findings:** Excessive groundwater extraction has significantly shifted Earth's rotational pole. This phenomenon underscores the impact of human activities on the planet's geodynamics.
  - **Magnitude of Drift:** Between 1993 and 2010, Earth's rotational pole drifted approximately 80 centimeters eastward due to groundwater depletion.
  - **Groundwater Depletion:** Humans have extracted about 2,150 gigatons of groundwater during the study period. This extraction has contributed to a 0.24-inch sea level rise and altered Earth's mass distribution.
  - **Rate of Drift:** The groundwater redistribution caused the rotational pole to shift at a rate of 4.36 centimeters per year.
  - **Polar Motion:** Earth's rotational axis shifts relative to its crust due to changes in mass distribution. Groundwater movement from land to oceans has emerged as a major factor influencing this motion.
  - **Comparison with Climate Factors:** The study indicates groundwater depletion has a greater impact on polar drift than previously recognized climate-related factors, such as ice sheet melting.
  - **Research Leadership:** The study was led by Ki-Weon Seo of Seoul National University and published in Geophysical Research Letters.
- ### Key Points on Regional Impact and Implications of Groundwater Extraction:
- **Identified Regions:** Significant groundwater extraction has occurred in western North America and northwestern India. These mid-latitude areas significantly influence polar drift due to their geographic position and high-water withdrawal rates.

- **Immediate Effects:** The current shift in Earth's tilt does not yet affect weather patterns or seasons. However, continued depletion could result in long-term climatic impacts.
- **Long-term Climate Impact:** Over geological time scales, changes in polar motion could influence global climate systems. This highlights the critical need for sustainable groundwater management to mitigate potential effects.
- **Policy Implications:** The findings act as a wake-up call for policymakers and environmentalists to prioritize groundwater conservation as part of broader climate change mitigation strategies.
- **Conservation Measures:** Implementing sustainable practices to reduce groundwater extraction could potentially alter the trajectory of polar drift if consistently applied over decades.
- **Interconnectedness of Activities:** The research underscores the link between human activities and planetary dynamics, emphasizing the need to account for anthropogenic factors in understanding Earth's physical processes.
- **Global Cooperation:** Sustainable resource management requires global collaboration to address these challenges effectively and responsibly.

## DISASTER MANAGEMENT

### HLC approves National Landslide Risk Mitigation project

#### News Excerpt:

A High-Level Committee, under the chairmanship of Union Home Minister has approved Rs.1115.67 crore for disaster mitigation and capacity building projects for various states.

#### Key Highlight:

- **Approval for Disaster Mitigation and Capacity Building:** A High-Level Committee (HLC) chaired by Union Home Minister approved ₹1,115.67 crore for disaster mitigation and capacity-building projects across India.
- **Focus Areas: Landslide Risk Mitigation:**
  - ₹1,000 crore allocated for projects in 15 States.
  - **Funding breakdown:**
    - ₹139 crore for Uttarakhand.
    - ₹139 crore for Himachal Pradesh.
    - ₹378 crore for eight North-Eastern States.
    - ₹100 crore for Maharashtra.
    - ₹72 crore each for Karnataka and Kerala.
    - ₹50 crore each for Tamil Nadu and West Bengal.
- **Training and Capacity Building:** ₹115.67 crore allocated for training Civil Defense Volunteers in all

States and Union Territories under the National Disaster Response Fund (NDRF).

- **Previous Approvals by HLC:**
  - Urban Flood Risk Mitigation: ₹3,075.65 crore allocated for seven cities.
  - Glacial Lake Outburst Flood (GLOF) Risk Management: ₹150 crore allocated for four states.
- **Funding from Central Disaster Response and Mitigation Funds:** In 2024, the Central Government has released over ₹21,476 crore to states, including:
  - ₹14,878.40 crore from State Disaster Response Fund (SDRF) to 26 states.
  - ₹4,637.66 crore from National Disaster Response Fund (NDRF) to 15 states.
  - ₹1,385.45 crore from State Disaster Mitigation Fund (SDMF) to 11 states.
  - ₹574.93 crore from National Disaster Mitigation Fund (NDMF) to 6 states.
- **Commitment to Disaster Resilience:** Under the leadership of Prime Minister Narendra Modi and Home Minister Amit Shah, India is working towards a disaster-resilient nation by implementing measures to minimize loss of life and property during disasters.

## ART AND CULTURE

### Nagaland's Hornbill Festival

#### News Excerpt:

Hornbill Festival - called the 'Festival of Festivals' is a Naga cultural spectacle held every year in Nagaland during the first week of December.

#### The Hornbill Festival:

- **Significance of Festivals in Nagaland:** Celebrated with great enthusiasm and fervor. Over 60% of Nagaland's population depends on agriculture, making most festivals agriculturally themed. Festivals are considered sacred, and participation is mandatory for community members.
- **Nagaland - Land of Festivals:** Each tribe has its unique festival, celebrated with dedication and passion.
- **Important tribal festivals include:**



- Tsukhenyie (Chakhesangs) – January
- Mimkut (Kukis) – January
- Bushu (Kacharis) – January
- Sekrenyi (Angamis) – February
- Aoling (Konyaks) – April
- Moatsu (Aos) – May
- Tuluni (Sumis) – July
- Nyaknylum (Changs) – July
- Tokhu Emong (Lothas) – November
- Yemshe (Pochurys) – October
- **Hornbill Festival:** Organised by the Government of Nagaland to promote inter-tribal interaction and preserve cultural heritage. **Known as the “Festival of Festivals”.**
- **Held annually in the first week of December in Kohima, typically from December 1st to 10th.**
- **Venue and Activities:**
  - Hosted at the Naga Heritage Village, Kisama, about 12 km from Kohima.
  - All tribes of Nagaland participate, showcasing their traditions, arts, and culture.
- **Features for Visitors:**
  - Provides insight into Naga culture through food, music, dances, and customs.
  - Ideal for visitors during this time to experience Naga heritage.
- **Festival Highlights:**
  - Named after the hornbill, a globally revered bird central to Naga folklore.
- **Includes:**
  - Cultural displays like songs, dances, and traditional attire.
- **Arts and Crafts:** Traditional Naga Morungs, wood carvings, sculptures, paintings.
  - Food and Herbal Medicine Stalls.
  - Flower shows and exhibitions.
- **Sports and Games:** Naga wrestling, archery, and indigenous games.
- **Music Festival:** A parallel attraction for visitors.
- **Aim of the Hornbill Festival:**
  - To revive and protect Nagaland's rich culture.
  - To unite the people of Nagaland and promote tourism.

## Adhai Din Ka Jhonpra

### News Excerpt:

Recently, an Ajmer court submitted a petition to survey the revered Dargah Sharif has renewed similar demands for the historic Adhai Din Ka Jhonpra.



s Adhai Din Ka Jhonpra was commissioned by Qutbuddin Aibak. (Photo: V

### Adhai Din Ka Jhonpra:

- **Historical Background:** Commissioned by Qutbuddin Aibak, a general in the Ghurid army, who later established the Mamluk Dynasty (Delhi Sultanate) in 1206. Built following Muhammad of Ghor's victory over Prithviraj Chauhan in the Second Battle of Tarain.
- **Significance of Ajmer:** Ajmer (historically Ajaymeru) was the capital of the Chauhan dynasty. After the battle, Muhammad of Ghor sacked the city and destroyed local temples and institutions.
- **Transformation of Visaldeva's College:** According to historian Har Bilas Sarda, portions of Visaldeva's College were dismantled and repurposed to create the mosque.
- **Architectural Details:** Central Mihrab inscription indicates the mosque's completion in 1199, with further construction in 1200. Oldest surviving monument in Ajmer and the second-oldest completed mosque in North India, after the Quwwat-ul-Islam Mosque in Delhi. The screen wall facade, with seven corbelled arches, was completed by Iltutmish in 1213.
- **Name Origin:** Literal Meaning: "The shed of two-and-a-half days." Likely linked to a legend that the mosque was built in 60 hours, though historical evidence disproves this claim. According to Sarda, the name likely emerged in the 18th century, related to faqirs who used the site during the two-and-a-half-day-long Urs of their leader Panjaba Shah.
- **Architectural Legacy:** Recognized for its fusion of Hindu and Islamic architectural elements, a hallmark of early Delhi Sultanate architecture. Iconic screen wall and dome structures reflect the amalgamation of dismantled temple material with new Islamic motifs.
- **Broader Context:** Among North India's earliest mosques, reflecting the early architectural and cultural shifts introduced by the Delhi Sultanate. In contrast, older mosques existed in South India, introduced via Arab traders in the 7th century.

## Prehistoric rock-cut footprints and human figure unearthed at Kanhirapoil in Kerala's Kasaragod

### News Excerpt:

A remarkable archaeological discovery has come to light at Kanhirapoil in Madikkai panchayat where 24 pairs of prehistoric footprints and a human figure have been found carved into rock on private property.

### Highlights of the Recent Discovery of Carvings in Madikkai, Kerala:

- **General Overview**
  - **Time Period:** The carvings are believed to date back to the Megalithic period, providing insights into ancient cultural and artistic expressions.
  - **Discovery:** Initially reported by Satheesan Kaliyanam, a local archaeology enthusiast. The site's significance was confirmed by archaeologist Professor Ajith Kumar and history Professor Nandakumar Koroth after a site visit
- **Features of the Carvings**
  - **Footprints:** Sizes range between 6 to 10 inches, representing footprints of both children and adults. Oriented towards the west, symbolizing spiritual or cultural beliefs.
  - **Human Figure and Circular Pits:** A human figure is intricately etched at the end of the footprints. The carving is accompanied by four circular pits, possibly symbolizing ritualistic or symbolic elements.
  - **Symbolism:** According to Professor Ajith Kumar, the footprints represent souls of deceased individuals and were carved to honor them. Local beliefs associate the footprints with a goddess, signifying varying interpretations of the carvings.
- **Comparison and Significance:**
- **Similar Finds in Kerala and Karnataka:** Comparable to Avalakki Pera rock art in Udipi district, Karnataka.
- **Other notable sites in north Kerala include:**
  - Temple decorations at Erikulam Valiyapara, Kasaragod.
  - Running tiger carvings at Bangalam Government Higher Secondary School, Neeleswaram.
  - Human figures at Cheemeni Ariyittapara.
  - Bull figures at Ettukudukka, Kannur.
  - Celebrated carvings at Edakkal Caves, Wayanad.
- **Cultural Heritage:** Reinforces a shared cultural heritage in prehistoric north Kerala and its ties to ancient South Indian rock art traditions. Highlights ritualistic practices and artistic sophistication during the Megalithic period.
- **Archaeological and Historical Importance**
  - **Age:** The carvings, approximately 2,000 years old, illuminate the lives and artistic endeavors of early inhabitants in the region.

- **Historical Significance:** Sheds light on the spiritual and cultural dimensions of Kerala's prehistoric societies. Encourages further archaeological exploration to uncover additional artefacts and understand the region's ancient past.

## PM Modi to inaugurate 'Ashtalakshmi Mahotsav' to showcase eight northeastern States

### News Excerpt:

Recently, the Prime Minister inaugurated the 'Ashtalakshmi Mahotsav 2024', a three-day festival beginning December 6 at the Bharat Mandapam here to showcase the cultural, social, and economic fabric of the eight northeastern States.

### Key Highlights of the 'Mahotsav' for the Northeast Region:

- **Purpose and Focus:** The event offers a platform to showcase the vibrant textile industry, artisanal crafts, and unique Geographical Indication (GI) products of the northeastern states. It aims to foster business relationships between local artisans and buyers, generating on-spot sales and bulk orders.
- **Significance of the Northeastern Region:** The eight northeastern states—Assam, Arunachal Pradesh, Meghalaya, Manipur, Nagaland, Mizoram, Tripura, and Sikkim—are referred to as 'Ashtalakshmi', symbolizing prosperity and cultural richness. These states significantly contribute to India's cultural, social, and economic fabric and are envisioned as engines of growth for the country.
- **Task Forces and Economic Development:** Five task forces have been established to analyze and enhance the value chain of local products like bamboo and rubber. Efforts are underway to connect the region's products with national and global markets to maximize economic potential for farmers and artisans.
- **Banking and Investment Initiatives:** A bankers' summit will be held to improve banking infrastructure, providing better access to credit and financial services for entrepreneurs and start-ups. Investors will meet government representatives to explore opportunities in textiles, handicrafts, agriculture, and tourism.
- **Fashion and Design Initiatives:** A special fashion show will highlight a fusion of contemporary designs and traditional textiles, including **Muga silk gowns and Eri silk stoles**. Top designers will collaborate with local artisans to showcase creative ensembles, promoting sustainable fashion and the global potential of northeastern textiles. Discussions on topics like the **future of handloom and sustainable fashion will feature industry leaders, designers, and fashion experts**.
- **Cultural Performances:** Daily performances will showcase traditional art forms like:



- Bihu dances from Assam.
- Folk dances from Nagaland.
- Other indigenous cultural art forms from the region.



**Celebrating the  
RISE OF THE  
NORTH EAST INDIA**

**6th - 8th December, 2024**

- Handloom & Handicrafts
- Agri-Horti & GI Products
- Musical Extravaganza & Mesmerizing Tourism
- Fashion Show & Design Conclave
- Investors Round & Technical Sessions
- Indigenous Cuisine & Ashtalakshmi Grameen Haat

- **Infrastructure and Industrial Growth:** The northeastern region is becoming a focal point for industrial and infrastructural projects, including:
  - Setting up semiconductor industries.
  - Constructing mega bridges to enhance connectivity.
  - Expanding road, rail, and air networks.

## Paris' Notre-Dame cathedral set to reopen

### News Excerpt:

French President Emmanuel Macron visited renovation works at Paris' Notre-Dame cathedral recently ahead of its reopening on December 7, five and a half years after a devastating fire destroyed its roof and spire and caused major damage throughout.

### About Notre-Dame:

- A medieval Gothic masterpiece, Notre-Dame de Paris (Our Lady of Paris) is one of the French capital's most beloved and visited monuments.



- Its rib vaulting, flying buttresses, stunning stained-glass windows and carved stone gargoyles have long been celebrated in books and movies.
- The first stone was laid in 1163, and construction continued for much of the next century, with major restoration and additions made in the 17th and 18th century.
- Victor Hugo used the cathedral as a setting for his 1831 novel, "The Hunchback of Notre-Dame". Quasimodo, the main character, has been portrayed by Hollywood actors including Charles Laughton and also in an animated Disney adaptation.

### How did it Burn:

- On the evening of April 15, 2019, the cathedral's roof burst into flames. Soon, the fire had engulfed the spire and almost toppled the main bell towers.
- Around the world, TV viewers watched with horror as the medieval building burned.
- The roof collapsed but the bell towers and facade held. It remains unclear what exactly caused the fire.
- French authorities have said an electrical fault, or a burning cigarette may have been responsible.

### Cathedral rebuilt:

- Money poured in from all over the world, including from French luxury sector billionaires Francois Henri Pinault and the Arnault family. So much money has been donated – more than 840 million euros (\$882 million), according to Macron's office – that there will even be funds left over for further investment in the building. The damage has needed five years' worth of restoration work.

**About New Changes:** Officials say the cathedral will be more beautiful than ever, not only because the spire, roof and anything else destroyed by the fire was rebuilt by thousands of expert craftspeople, but also because the stone and paintings, which had blackened over the years, have been thoroughly cleaned. The furniture was also renovated and cleaned or replaced.

## Development plan for Ramappa Circuit and Somasila Retreat

### News Excerpt:

The Union government has approved loans to the tune of ₹141 crore to develop two tourism projects in Telangana: Ramappa Region Sustainable Tourism Circuit and Somasila Wellness & Spiritual Retreat Nallamala.



### About Ramappa Temple and Tourism Projects in Telangana:

- **Ramappa Temple - UNESCO World Heritage Site:**
  - The 13th-century Ramappa Temple (Kakatiya Rudreshwara) was inscribed as a UNESCO World Heritage Site in November 2021.
  - Located in Palampet, it is 68 km from Warangal and approximately 200 km from Hyderabad.
- **Union Tourism Ministry's Announcement:**
  - Union Tourism Minister Gajendra Singh Sekhawat announced approval of 40 projects across 23 States under the Special Assistance to States/Union Territories for Capital Investment (SASCI) scheme on November 29, 2024.
- **Two projects in Telangana received funding:**
  - ₹73.74 crore for the Ramappa Region Sustainable Tourism Circuit.
  - ₹68.10 crore for the Somasila Wellness & Spiritual Retreat Nallamala.
- **SASCI Scheme Highlights:**
  - Provides interest-free loans to States/UTs for 50 years.
  - Focuses on developing iconic tourist centers to global standards.
- **Ramappa Temple Complex:**
  - It comprises the Rudreshwara Temple, Kateshwara Temple, Kameshwara Temple, Pakashala, Nandi Mandapa, and an inscription.
  - Located on the scenic shores of Ramappa Lake.
- **Components of Ramappa Tourism Circuit:**
  - Includes sites like Incherla Village, Ramappa Island, Kota Gullu Temple, and lakefront development at Ghanpur Village.

- **Planned developments:**
  - Sculpture Garden Beautification.
  - Seating Manasapam.
  - On-site Landscaping.
- **Somasila Wellness & Spiritual Retreat:**
  - Proposed facilities include:
    - Wellness and Spiritual Retreat.
    - Viewing Towers.
    - Organic Café.
    - Interpretation Centre.
- **Tourism Development Corporation's Role:**
  - Managed by Telangana Tourism Development Corporation under the leadership of Managing Director N. Prakash Reddy.
  - Detailed infrastructure plans have been prepared for each project component.

## Jarawa Tribe of Andaman & Nicobar Islands

### News Excerpt:

The 19 members from the Jarawa Tribe in Andaman and Nicobar Islands has been included on the **electoral roll** of the Special Summary Revision-2025.

### Key Details About the Inclusion of Jarawas in the Electoral Roll:

- **Initiative Overview:** The inclusion of 19 Jarawas of the Jarawa Tribe in the electoral roll was part of the Systematic Voters' Education and Electoral Participation (SVEEP) programme.
- **Leadership:**
  - Led by Chief Secretary of Andaman and Nicobar Islands, Keshav Chandra, and District Election Officer of South Andaman, Arjun Sharma.
  - Vinayak Chamadia, Sub-Divisional Magistrate (SDM) of South Andaman, highlighted the initiative.
- **Special Summary Revision:** Took place at the hamlet of the Jarawas in Jirkatang, South Andaman. The revision is scheduled to continue until November 28, 2024.
- **Historical Significance:** Marks the first-ever participation of Jarawas in the election process.
- **Demographics:** The Jarawa population was recorded as 240 individuals as per the 2001 Census. They primarily inhabit the western coast of Middle Andaman and South Andaman Islands.
- **Lifestyle and Culture:**
  - **Nomadic hunters and gatherers:**
    - Hunt wild pigs and monitor lizards using bows and iron-tipped arrows.
    - Unlike other Andaman tribes, they do not use dogs for hunting.



- **Fishing:**
  - Men fish in coastal waters using bows and arrows.
  - Women catch fish using baskets.
- **Diet:**
  - Mollusks, fruits, roots, and honey constitute significant portions of their diet.
  - Shelter and Mobility:
    - Build temporary huts in camps and use crude rafts to cross creeks and streams.
- **History of Contact:**
  - The first friendly contact with the tribe occurred in 1974.
  - The Contact Team established non-hostile relations by bringing gifts such as coconuts, bananas, and other fruits.
- **Administrative Efforts:**
  - Emphasis on expanding electoral participation for the Jarawa population.
  - Reflects efforts to integrate the community into democratic processes while respecting their cultural heritage.

## Koraga tribal community in Kerala receives land titles under Operation Smile project

### News Excerpt:

The Revenue department in Kerala, utilising the corpus fund of the Scheduled Tribes Development department, has initiated steps to provide land titles (patta) to the Koraga community, a scheduled tribe (ST) group in Kasaragod and Manjeswaram taluks.

### About Operation Smile:

- **Objective:**
  - To address issues related to missing land documents and undefined land boundaries for the Koraga community in Kasaragod district.
  - Facilitate proper land documentation and ensure land ownership transfer to heirs of deceased titleholders.
  - Enhance socio-economic progress by improving access to government housing schemes and enabling cultivation of currently forest-covered lands.
- **Target Group:** The Koraga community in Kasaragod district comprises 1,706 individuals from 539 families.
- **Scope:** The initiative covers 193.557 hectares of land across 59 colonies in 16 villages.
- **Implementation:**
  - **Stakeholders Involved:**
    - Officials from Scheduled Tribes Development and Survey departments.
    - Gram panchayat, tribal extensions, and village office personnel.
    - Community elders and promoters.
- **Leadership:**

- Kasaragod District Collector K. Inbasekar directs the project.
- District Planning Officer T. Rajesh, District Survey Assistant Director Asif Aliyar, Kasaragod Tribal Development Officer K.K. Mohandas, and Assistant Tribal Development Officer K.V. Raghavan will oversee operations.
- The project is planned to be completed within three months.
- **Inauguration:**
  - **Date & Venue:** November 30, 2024, at the Collectorate Conference Hall, Kasaragod.
- **Expected Impact:**
  - Resolving land ownership issues for the Koraga community.
  - Improved access to government schemes and opportunities for land cultivation.
  - Enhanced socio-economic upliftment of the community.

## Lagacharla tribals meet SC/ST, NHRC, Women's Commission in New Delhi

### News Excerpt:

Recently, tribal residents of Lagacharla hamlet in the Kodangal constituency of the Vikarabad district called on the chiefs of the National SC and ST Commission, the National Human Rights Commission and Women's panel.

### About News:

- **The Lagacharla tribal community in Telangana** has been at the center of a significant controversy involving allegations of land acquisition issues and related atrocities.
- **Key Issues:**
  - **Land Acquisition and Alleged Atrocities:** The tribals have reported forcible land acquisitions by the state government for private projects, allegedly involving local officials and influential individuals. There have been claims of police raids, illegal arrests, and mistreatment, particularly targeting tribal women and children.
  - **Advocacy and Protests:** Representatives of the affected families have sought intervention from national authorities, including the National Human Rights Commission (NHRC) and the National Commissions for SCs and STs. They have also sought an audience with President Droupadi Murmu to highlight their plight.
  - **Legal and Human Rights Concerns:** The incidents have drawn attention to broader issues of land rights, tribal welfare, and the need for transparent and fair procedures in land acquisition processes.

## GOVERNMENT SCHEMES

### First phase of 'One Nation One Subscription' approved

#### News Excerpt:

The Union Cabinet approved the 'One Nation One Subscription' (ONOS) scheme, under which all centrally run and state-run higher education institutions will have access to reputed journals published by international publishers on a single platform.

#### National Subscription Scheme for Academic Journals:

- **Implementation and Coordination:** The scheme will be coordinated by INFLIBNET (Information and Library Network), an autonomous inter-university center under the UGC.
- **Current System:** Presently, there are 10 separate library consortia under various ministries. Institutions also individually subscribe to journals, leading to fragmented access and inefficiencies.
- **Unified Access Through ONOS:** The Open National Online Subscription (ONOS) will offer unified access to national and international journal publications for all government higher education institutions. Coverage includes universities, colleges, institutions of national importance, and R&D institutions under the central government.
- **Scope of the Scheme:**
  - **Budget allocation:** ₹6,000 crore for three years (until 2027). Access to 13,000 journals from 30 international publishers.
  - **Total coverage:** Around 6,300 institutions.
- **Included Publishers:** Key publishers include Elsevier ScienceDirect, Springer Nature, Wiley Blackwell Publishing, Taylor & Francis, Sage Publishing, Oxford University Press, Cambridge University Press, and BMJ Journals.
- **Financial Management:** INFLIBNET will make central payments to the included publishers. Institutions can still use their own budgets for subscriptions not covered under the scheme.
- **Objective:** Broaden research journal access, particularly for institutions with previously insufficient resources.
- **Operational Timeline:** The platform will become operational from January 1, 2025.

#### Current Access Methods for Journals by Higher Education Institutions (HEIs):

- **Access via Library Consortia:** HEIs currently access journals through 10 different library consortia, each administered by various ministries.

- **Library Consortium Definition:** A cooperative group of libraries that collaborate to share resources and fulfill common needs. **Example:** UGC-Info net Digital Library Consortium, managed by INFLIBNET Centre, provides access to selected scholarly electronic journals and databases.
- **Individual Subscriptions:** HEIs also subscribe to journals individually, adding to the resources accessed through consortia.
- **Current Coverage:** Approximately 2,500 HEIs have access to 8,100 journals through consortia networks and individual subscriptions.
- **Role of INFLIBNET:** The **INFLIBNET Centre, based in Gandhinagar**, operates under the **Ministry of Education and manages the UGC-Infonet Digital Library Consortium**, providing resources across various academic disciplines.

#### Features of the ONOS Scheme:

- **Unified Access Platform:** ONOS will consolidate journal access for all government higher education institutions (HEIs) under a single platform. The platform will become



**शिक्षा मंत्रालय**  
MINISTRY OF  
EDUCATION

## ONE NATION ONE SUBSCRIPTION

- **Cabinet Approval:** Central Sector Scheme to provide nationwide access to scholarly research and journals
- **Budget:** ₹6,000 crore allocated for 2025, 2026, and 2027
- **Digital Access:** Fully digital process managed via a unified "One Nation One Subscription" portal
- **Target Beneficiaries:** Nearly 1.8 crore students, faculty, and researchers in 6,300 institutions, including HEIs and central R&D institutions
- **Coordination:** Managed by INFLIBNET, an autonomous UGC centre

operational from January 1, 2025.

- **Access to Global Journals:** The platform will host 13,000 journals from 30 international publishers, including:
  - Elsevier ScienceDirect (including The Lancet).
  - Springer Nature.
  - Wiley Blackwell Publishing.
  - Taylor & Francis.
  - IEEE.
  - Sage Publishing.
  - American Chemical Society.

- American Mathematical Society.
- **Centralized Subscription Model:** The central government has negotiated a single subscription price with each publisher. A total outlay of ₹6,000 crore has been approved for three years (2025–2027).
- **Inclusive Access:** State and central government HEIs, including universities, colleges, and institutions of national importance, will be able to access these journals by simply registering on the platform.
- **Implementing Agency:** The INFLIBNET Centre (Information and Library Network), an autonomous body under the University Grants Commission (UGC), will implement the scheme.
- **Optional Individual Subscriptions:** HEIs needing journals not included in the 13,000 available on the platform can continue to subscribe individually.

#### Need for the ONOS Scheme:

- **Expanded Access:** The scheme aims to provide access to 55 lakhs to nearly 1.8 crore students, faculty, and researchers. This ensures equitable access to high-quality scholarly resources for institutions across all regions.
- **Better Bargaining Power:** A unified subscription model enhances negotiation leverage with publishers. Example: The government negotiated a significant cost reduction—from an estimated ₹4,000 crore annually to ₹1,800 crore annually for access to 13,000 journals.
- **Data-Driven Planning:** The scheme will allow the Centre to monitor journal usage, including access and download patterns. This data can support long-term planning, ensure full utilization of resources, and promote awareness of the platform among inactive institutions, encouraging better usage.

#### Conceptualization of the ONOS Scheme:

- **Rooted in NEP 2020:** The National Education Policy (NEP) 2020 emphasized research as pivotal for achieving educational excellence and national development. It highlighted the need to expand India's research capabilities and output across disciplines to reclaim its status as a global knowledge leader.
- **National Research Foundation (NRF):** The NEP strongly recommended the establishment of a National Research Foundation (NRF) to seed, fund, and promote R&D activities while fostering innovation within the higher education ecosystem.
- **Anusandhan National Research Foundation (2023):** The Anusandhan National Research Foundation (ANRF) was established in early 2023, reinforcing the focus on fostering research and innovation to support initiatives like ONOS.

#### Next Steps for ONOS (Way forward):

- **Negotiation of Article Processing Charges (APCs):** The central government plans to negotiate APCs with journal publishers, like how subscription rates were

standardized for ONOS. APCs are fees authors pay to cover publishing costs in open-access journals, such as editorial and peer-review expenses.

- **APC Expenditure in India:** In 2021, Indian authors collectively spent nearly ₹380 crore on APCs.
- **Cost Reduction Strategy:** The government aims to lower overall APC costs through bulk negotiation.
- **Formation of Expert Groups:** Subject-specific groups of experts from participating ministries will be formed to negotiate with publishers on APC rates for research papers.

## Pradhan Mantri Awas Yojana- Rural completes 8 years

### News Excerpt:

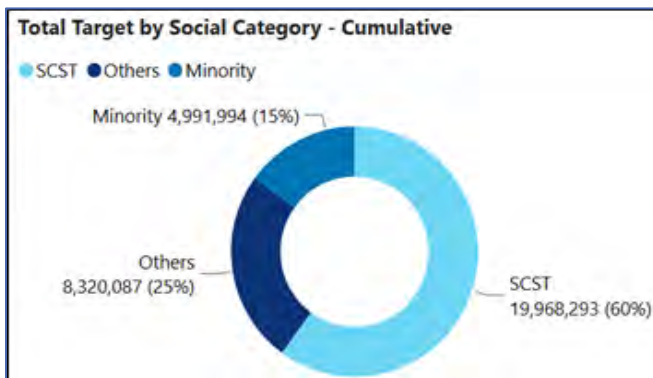
In May 2014, Prime Minister Narendra Modi's vision and the government's steadfast commitment to building and providing pucca houses for poor people in rural and urban areas culminated in the launch of Pradhan Mantri Awas Yojana—Urban (2015) and Gramin (2016).

### Pradhan Mantri Awas Yojana - Rural

- The Pradhan Mantri Awas Yojana – Rural (PMAY – Rural) was launched on **20th November 2016**, aiming to provide housing for the poorest segments of society. Beneficiaries are selected through a rigorous three-stage validation process that includes the **Socio-Economic Caste Census (SECC 2011) and Awaas+ (2018) surveys**, Gram Sabha approvals, and geo-tagging.
- The scheme has further **incorporated IT and Direct Benefit Transfer (DBT)** for efficient fund disbursement. It has also implemented region-specific housing designs, and evidence-based monitoring **through geo-tagged photos at various construction stages**.
- Originally targeting 2.95 crore houses to be completed by 2023-24, the scheme got extended with 2 crores more houses, with a total outlay of ₹3,06,137 crore for FY 2024-29 and ₹54,500 crore allocated for FY 2024-25.
- On **August 9, 2024, the Union Cabinet**, chaired by Prime Minister approved the proposal for financial assistance to be provided for the construction of **two crore more houses at the existing unit assistance of Rs.1.20 lakh in plain areas and Rs.1.30 lakh in Northeastern Region States and Hill States** of Himachal Pradesh, Uttarakhand, Union Territories of Jammu & Kashmir, and Ladakh.

### Progress under PMAY-G:

- **Under the Pradhan Mantri Awas Yojana - Gramin (PMAY-G)**, the Government has set an ambitious target to **build 3.32 crore houses**. As of November 19, 2024, 3.21 crore houses have been sanctioned, and 2.67 crore houses have been completed, significantly improving the living conditions of millions of rural families.



- The scheme has also placed a **special focus on women empowerment, with 74% of sanctioned houses owned by women solely or jointly**. Skilled employment has also been a priority, with almost 3 lakh rural masons trained in disaster-resilient construction, boosting their employability.
- The construction of houses is expected to benefit nearly **ten crore** individuals. The approval would facilitate the building of safe and secure houses of good quality with all the basic amenities for all people without housing and people living in dilapidated and kutcha houses.

#### Key Features of PMAY-G are:

- A minimum unit (house) size of 25 sq. mt., including a dedicated area for hygienic cooking.
- The beneficiaries construct quality houses using local materials and trained masons.

#### Institutional Loan for Construction:

- Loan up to ₹70,000 is available to eligible beneficiaries at a 3% reduced interest rate for the construction of their permanent house.
- The maximum principal amount for which subsidy can be availed is ₹2,00,000, ensuring that the construction cost is covered comprehensively.
- This additional loan support helps ease the financial burden on beneficiaries, making home construction affordable for rural households.

#### Convergence with Government Schemes for Enhanced Benefits:

- PMAY-G works in conjunction with various other government initiatives to ensure comprehensive support for rural households. These schemes aim to improve the quality of life by addressing multiple needs such as sanitation, employment, cooking fuel, and water supply.
- **Swachh Bharat Mission-Gramin (SBM-G):** Beneficiaries receive up to ₹12,000 to construct toilets, ensuring better sanitation facilities in rural homes.
- **MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act):** Eligible households can avail 95 days of employment as unskilled labour, specifically under Rural Mason Training, with a daily wage of ₹90.95.

- **Pradhan Mantri Ujjwala Yojana (PMUY):** Under this scheme, each house is entitled to a free LPG connection, promoting cleaner and safer cooking fuel.
- **Piped Drinking Water & Electricity Connections:** Beneficiaries are provided with access to piped drinking water and electricity connections, improving their living standards and reducing the health risks associated with unsafe water and irregular power supplies.
- **Social & Liquid Waste Management:** PMAY-G also converges with government programs for managing waste, ensuring better health and hygiene for the beneficiaries.

#### Payment Transfer Process:

- **To ensure transparency and efficiency, all payments under PMAY-G are made electronically.** Payments are directly transferred to the beneficiaries' bank accounts or post office accounts that are linked to Aadhaar, ensuring that funds reach the intended recipients without delays.
- **Technological innovation plays a pivotal role here.** The Awaas+ 2024 mobile app ensures transparent beneficiary identification with Aadhaar-based face authentication and 3D house designs in collaboration with the Central Building Research Institute (CBRI), enabling beneficiaries to choose suitable designs.

#### Eligibility Criteria for Beneficiaries:

- The beneficiaries of PMAY-G are identified using specific criteria, ensuring that the most deserving households, especially those facing housing deprivation, are prioritized. Under this scheme, the beneficiaries are identified through **SECC 2011 and Awaas+ (2018) surveys, verified by Gram Sabhas**. Over the last decade, the permanent waiting list of SECC 2011 has been saturated, and more than 20 states' Awaas+ 2018 lists are also completed.

#### The eligibility criteria are as follows:

- **Houseless Households:** All households without any shelter.
- **Households with Kuccha Houses:** Households living in homes with kuccha walls and kuccha roofs or houses with zero, one, or two rooms as per the Socio Economic and Caste Census (SECC) 2011.

#### Earmarking of Targets:

- PMAY-G also ensures targeted assistance for specific disadvantaged groups:
- **Scheduled Castes (SC) and Scheduled Tribes (ST):** The scheme reserves minimum 60% of targets for SC/ST households, with 59.58 lakh SC houses and 58.57 lakh ST houses completed.
- Another crucial initiative for fulfilling the objective of "Housing for All" is the **Dharati Aaba Tribal Village Utkarsh Abhiyan** which focuses on tribal development, covering 63,843 villages, benefiting over 5 crore tribal people across 30 States/UTs. This initiative addresses

housing and critical gaps in social infrastructure, health, education, and livelihoods, with 72.31 lakh tribal families already benefiting.

- 5% of the target is reserved for **differently abled beneficiaries, and another 5% prioritizes housing for families affected by natural disasters**, such as the Fani Cyclone in Odisha
- Minorities: **15% of** the total funds at the national level are earmarked for **Minority households**. The allocation of targets among States/UTs is based on the proportionate rural population of minorities according to the Census 2011 data.

#### Conclusion:

The Pradhan Mantri Awas Yojana – Gramin (PMAY-G) has made remarkable progress in transforming the living conditions of millions of rural families by providing safe and secure housing. With the recent approval for constructing two crore additional houses, the Government continues to reinforce its commitment to achieving "Housing for All," ensuring that every eligible household has access to quality housing and a dignified life.

## PM e-Vidya DTH Channel for Indian Sign Language

#### News Excerpt:

Recently, the Government of India launched Channel 31 on DTH, dedicated to Indian Sign Language (ISL) training for hearing-impaired students, special educators, interpreters, and relevant organizations.

#### More detail about news:

- The channel was inaugurated by Union Minister for Education, Shri Dharmendra Pradhan, along with Union Minister of State for Skill Development and Education, Shri Jayant Chaudhary.
- This initiative aligns with the National Education Policy (NEP) 2020, which calls for promoting and standardising ISL across India to create a more inclusive educational environment.
- NEP also emphasizes the respect and inclusion of local sign languages.
- According to the Census 2011, a total of 2.68 crore persons in India were reported as having disabilities out of which 19% have hearing disabilities.
- In 2023, WHO estimates that in India, approximately 63 million people suffer from significant auditory impairment.

#### Incorporating Indian Sign Language (ISL) into Indian Education System:

- **Indian Sign Language (ISL)** is a well-structured language that serves as the primary means of communication for hearing-impaired individuals.

- **In 2020, the Indian Sign Language Research and Training Centre (ISLRTC) signed an MoU** with the National Council of Educational Research and Training (NCERT) to translate textbooks for classes I–XII and other teaching materials into ISL.
- **This process is expected to be completed by 2026.** Along with on-air television training modules for students and educators, the government is working to integrate ISL into the Indian education system, fostering greater inclusion.

#### PM e-Vidya: A Comprehensive Digital Education Initiative:

- PM e-Vidya was launched as part of the Atmanirbhar Bharat Abhiyaan by the Ministry of Education on 17th May 2020.
- The initiative aims to provide multi-mode access to education through digital, online, and on-air platforms to minimise learning losses, especially in the wake of the COVID-19 pandemic.
- It supports the vision of the National Education Policy (NEP) 2020, ensuring equitable and quality education across the country.
- The initiative leverages technology to make education accessible to all students, including those in rural and remote areas, by providing a wide range of digital resources, courses, and interactive content.

#### Key Components of PM e-Vidya:

- **DIKSHA (Digital Infrastructure for School Education):** A national digital platform providing high-quality e-content, including QR-coded Energized Textbooks for all grades (one nation, one digital platform). It has recorded over 5.58 crore learning sessions, and 3.17 lakh pieces of e-content.
- **PM e-Vidya DTH TV Channels:** Initially 12 DTH channels, now expanded to 200 channels, providing supplementary education in multiple Indian languages for classes 1-12 across States/UTs.
- **SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds):** A national MOOC platform offering higher education courses with credit transfer provisions. It also offers school courses (9th–12th) via NIOS and NCERT. Currently, over 10,000 courses are available, with 4.1 lakh students enrolled for NCERT courses.
- **Radio, Community Radio & CBSE Podcast - Shiksha Vani:** These platforms are used to broadcast educational content to a wider audience, especially in areas with limited internet access.
- **Digitally Accessible Information System (DAISY):** E-content designed specifically for visually and hearing-impaired students, including audiobooks, sign language videos, and talking books, available on the NIOS website and YouTube.
- **Virtual Labs & Skilling e-labs:** 750 Virtual Labs for Science and Mathematics (Classes 6–12) and 75 Skilling

e-labs for simulated learning environments, enhancing critical thinking and creativity. The Virtual Labs are accessible on the DIKSHA platform.

- **e-Content for Teachers:** Various e-courses and digital resources for school and teacher education include interactive videos, audiobooks, and digital events like quizzes for teachers and students.

#### PM e-Vidya Wins UNESCO Recognition:

- PM e-Vidya, an initiative by the Department of School Education, Ministry of Education, leveraging ICT, was **recognized by UNESCO in 2022 for its impactful use during the COVID-19 pandemic.**
- The Central Institute of Educational Technology (CIET), **part of the National Council of Educational Research and Training (NCERT), received the UNESCO King Hamad Bin Isa Al-Khalifa Prize** for the Use of ICT in Education for 2021.
- This prestigious award **acknowledges innovative technological approaches to expand educational opportunities for all**, aligning with the **2030 Agenda for Sustainable Development, particularly Goal 4 on Education.**

**Conclusion:** The launch of the PM e-Vidya DTH Channel 31 dedicated to Indian Sign Language (ISL) marks a significant step towards an inclusive and accessible education system for hearing-impaired students in India. With its broad reach and integration into the PM e-Vidya framework, the ISL DTH channel has the potential to create a more equitable educational environment, where every learner, regardless of their hearing abilities, can access quality education.

## Ayushman Vay Vandana enrolment under AB-PMJAY touches 10 lakhs

### News Excerpt:

Recently, the Vay Vandana Cards have seen significant participation, with over 10 lakh senior citizens enrolling for the Ayushman Vay Vandana Card, ensuring themselves of free treatment and support under the scheme.

### Background:

- The Vay Vandana Card is an important aspect of Ayushman Bharat PM JAY initiative that strengthens the idea of making healthcare accessible to all.
- The Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY), launched by Prime Minister Narendra Modi on September 23, 2018, reflects India's commitment to Universal Health Coverage.
- This scheme, part of the broader Ayushman Bharat initiative, has redefined the nation's approach to healthcare by offering substantial health coverage to its most vulnerable citizens.
- Today, PM-JAY proudly holds the title of the world's largest health assurance scheme, extending comprehensive secondary and tertiary care hospitalisation benefits of up to ₹5 lakh per family

annually and encompassing nearly 55 crore individuals that form the bottom 40% of the Indian population.

- The households included are based on the deprivation and occupational criteria of Socio-Economic Caste Census 2011 (SECC 2011) for rural and urban areas respectively.

### PM JAY covers a broad range of services that include:

- Medical examinations, treatment, and consultations
- Pre-hospitalisation expenses
- Medicine and medical consumables
- Non-intensive and intensive care services
- Diagnostic and laboratory investigations
- Medical implantation services
- Accommodation and food services
- Treatment complications
- Post-hospitalisation follow-up care up to 15 days
  - Unlike its predecessor, the Rashtriya Swasthya Bima Yojana (RSBY), which limited coverage to families of five members, PM-JAY has no cap on family size or age. This inclusive structure also ensures that pre-existing diseases are covered from day one, allowing patients to receive treatment immediately upon enrolment.

### Progress of PM JAY (data as on 17 November 2024)

- **Since its launch, PM-JAY has made notable strides in its implementation:**
  - **Ayushman Cards Created:** A total of 35,45,10,568 cards have been generated.
  - **Authorised Hospital Admissions:** Cumulatively, 6,50,59,465 hospital admissions have been authorised, with 17,36,903 admissions in the last 30 days and 28,540 just yesterday.
  - **Hospitals Empanelled:** Currently, there are 30,745 empanelled hospitals, comprising 17,084 public and 13,661 private institutions.
  - **Authorised Hospital Admissions (Financial):** The total value of authorised admissions amounts to 81,979.07 crore INR, with 2,314.77 crore INR in the last 30 days and 47.25 crore INR yesterday.
- These figures highlight the extensive reach and impact of PM-JAY in providing accessible and affordable healthcare to millions across India.

### Vay Vandana Card: Transforming Elderly Care:

- A significant expansion to PM-JAY was approved by the Union Cabinet on September 11, 2024, which promises transformative health insurance coverage for senior citizens aged 70 and above. This move aims to extend benefits to approximately 6 crore senior citizens across 4.5 crore families.
- Under this expansion, it was announced that all senior citizens in this age group will receive a new distinct card under AB PM-JAY to access the scheme's benefits.



- The promise was soon fulfilled with the launch of a dedicated "Vay Vandana Card" for this age group. The Vay Vandana Card will grant eligible seniors' exclusive access to free health treatment in the hospital. This card is universal and there is no income limit, whether poor or middle class or upper class.
- The Vay Vandana card will also ensure that the out-of-pocket expenditure for the elderly at home be reduced largely by Ayushman Vay Vandana Card.

#### Progress:

- In a significant milestone, more than 10 lakh senior citizens aged 70 and above have enrolled for the newly launched Ayushman Vay Vandana Card, enabling them to access free healthcare benefits under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY).
- This achievement comes within three weeks of the card's rollout by Hon'ble Prime Minister, Shri Narendra Modi on October 29, 2024. Around 4 lakh enrolments under Ayushman Vay Vandana card are by females.
- Since the launch of the Ayushman Vay Vandana Card, treatments worth over Rs 9 crore have been authorized, benefiting more than 4,800 senior citizens aged 70 and above, including over 1,400 women.
  - These treatments cover a range of conditions, including coronary angioplasty, hip fractures/replacement, gallbladder removal, cataract surgery, prostate resection, and stroke, among others.

#### Conclusion:

As India moves forward, initiatives like the Ayushman Vay Vandana Card reinforce the government's dedication to inclusive healthcare, ensuring that the elderly are supported and cared for with dignity. This continued focus on holistic and accessible health solutions cements PM-JAY's role as a cornerstone of the nation's health infrastructure and a model for universal healthcare globally.

## Centre announces ₹1,435-crore PAN 2.0 project

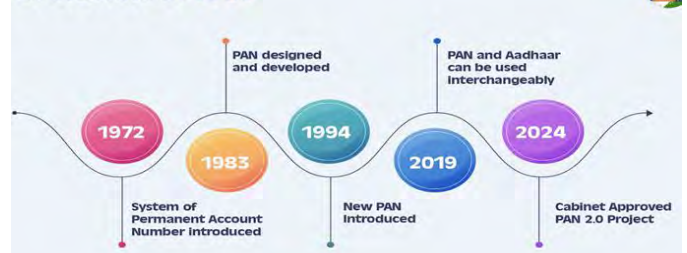
#### News Excerpt:

The Cabinet Committee on Economic Affairs (CCEA), chaired by the Prime Minister, approved the PAN 2.0 initiative. The government has allocated ₹1,435 crore for this project, aimed at overhauling the current PAN/TAN system to improve efficiency and taxpayer convenience.

#### About PAN 2.0:

- PAN 2.0 is a comprehensive upgrade of the Permanent Account Number (PAN) system, focusing on creating a seamless, digital experience for taxpayers.
- The initiative will integrate core and non-core PAN/TAN services into a unified, paperless platform, aligning with the government's Digital India programme.

## Evolution of PAN



- The system will feature a centralised portal for all PAN-related services and enhanced cybersecurity to protect user data.
- This revamped system aims to make PAN a common identifier for digital interactions across government systems, ensuring uniformity and ease of compliance.

#### Key Features of PAN 2.0:

- **System Modernisation:** The initiative will update the current framework with advanced technology to improve operational efficiency.
- **QR Code Integration:** PAN cards will now feature QR codes, enabling quick access to and verification of taxpayer details.
- **Unified Portal:** A single digital platform will consolidate all PAN-related services, making it easier for users to access and manage their accounts.
- **Improved Security:** Cybersecurity measures will be strengthened to safeguard taxpayer data against breaches and unauthorised access.
- **Eco-Friendly Operations:** By transitioning to a paperless system, the government aims to reduce environmental impact and cut operational costs.

#### Benefits for Taxpayers:

- **According to the official release, PAN 2.0 will offer several advantages to taxpayers, including:**
  - **Faster Service Delivery:** Reduced processing times for PAN-related services.
  - **Data Accuracy:** Improved data consistency and fewer errors in taxpayer information.
  - **Cost Savings:** The upgrade will be free of charge for existing PAN cardholders.
  - **Sustainability:** The project emphasises eco-friendly practices by minimising paper usage.
- The system will also focus on grievance redressal, addressing taxpayer queries more efficiently.

#### Information about PAN 2.0 and Existing PAN Cards

- **No Need for New PAN Cards:** Union Minister Ashwini Vaishnaw clarified that existing PAN cards will remain valid. Citizens will not need to apply for new PAN numbers. The purpose of the upgrade is to enhance the functionality of PAN cards without affecting the validity of current ones.
- **Upgrade Option for New Features:** Taxpayers will have the option to upgrade their PAN cards to include new QR code features at no additional cost.

- **Current PAN Card Statistics:** India has issued a total of 78 crore PAN cards, with 98% of these held by individuals.
- **Limitations of PAN/TAN 1.0:** The current PAN/TAN 1.0 system has been functional for years but lacks the technological advancements required for modern tax administration.
- **Introduction of PAN 2.0:** It aims to address these limitations by re-engineering business processes for taxpayer registration services. The upgrade aligns with India's broader push for e-Governance and digital transformation under the Digital India programme.

**Conclusion:**

The government has not yet announced the rollout date for PAN 2.0, but the initiative is expected to be a major step towards improving taxpayer services and strengthening the digital infrastructure. This upgrade promises to make India's tax system more efficient, secure, and accessible, benefiting individuals and businesses alike. Taxpayers are encouraged to stay informed through official updates from the Income Tax Department.

**National Mission on Natural Farming (NMNF)**

**News Excerpt:**

Recently, the Union Cabinet approved the launch of the National Mission on Natural Farming (NMNF) as a standalone Centrally Sponsored Scheme under the Ministry of Agriculture & Farmers' Welfare.

**About Natural Farming:**

- **Definition:** Natural farming is defined by the Agriculture Ministry as a "chemical-free" farming system. It exclusively relies on inputs derived from livestock and plant resources, avoiding synthetic fertilizers and pesticides.
- **Objective:** The aim is to promote sustainable agriculture by reducing reliance on chemical inputs and enhancing soil health and biodiversity.
- **Implementation Strategy:** The ministry plans to prioritize the adoption of natural farming in districts with high fertiliser consumption, aiming to reduce

dependency on chemical inputs and transition toward sustainable practices.

**About NMNF Initiative:**

- **Not a New Initiative:** The National Mission on Natural Farming (NMNF) is not entirely new. It is an enhancement of the Bhartiya Prakritik Krishi Paddhti (BPKP) launched during the NDA government's second term (2019-2024).
- **Connection to PKVY:** BPKP was introduced under the umbrella scheme Paramparagat Krishi Vikas Yojna (PKVY), which focuses on promoting organic and sustainable farming.
- **Ganga Belt Initiative:** Natural farming was also promoted along a five-kilometre belt of the Ganga River under the Namami Gange scheme during the financial year 2022-2023.
- **Renewed Focus in 2024:** After the NDA's return to power in June 2024, there was a renewed emphasis on natural farming. The government launched the NMNF within the first 100 days, signaling its intent to scale up efforts for promoting chemical-free farming practices.

**Area Covered Under Natural Farming:**

- **Total Area Covered:** An overall area of 22 lakh hectares has been brought under natural farming to date. A total of 34 lakh farmers are engaged in practicing natural farming.
- **Breakdown by Initiatives:**
  - **BPKP (Bhartiya Prakritik Krishi Paddhti):** Covers 4 lakh hectares.
  - **Namami Gange Scheme:** Covers 88,000 hectares.
  - **State Government Initiatives:** Cover approximately

**ational Mission on Natural Farming**  
Cabinet approves National Mission on Natural Farming (NMNF) as a standalone Centrally Sponsored Scheme under the Ministry of Agriculture & Farmers' Welfare

**Salient features**

- Mission to promote natural farming in mission mode across the country
- Total outlay of **Rs.2481 crore** (Government of India share - **Rs.1584 crore** and States' share - **Rs.897 crore**)
- To be implemented in **15,000 clusters in Gram Panchayats**, which are willing, & reach **1 crore farmers** and **initiate Natural Farming in 7.5 lakh Ha area**
- Preference to be given to areas having prevalence of practising NF farmers, SRLM / PACS / FPOs, etc

**National Mission on Natural Farming**  
Cabinet approves National Mission on Natural Farming (NMNF) as a standalone Centrally Sponsored Scheme under the Ministry of Agriculture & Farmers' Welfare

**Salient features**

- Need-based **10,000 Bio-input Resource Centres** will be set-up to provide easy availability and accessibility to ready-to-use natural farming inputs for farmers
- Around **2000 NF Model Demonstration Farms** shall be established at Krishi Vigyan Kendras, Agricultural Universities and farmers' fields
- Farmers to be provided easy simple certification system and dedicated common branding to provide access to market for their natural farming produce

17 lakh hectares.

- **Future Goals of NMNF:** The National Mission on Natural Farming (NMNF) aims to bring an additional 7.5 lakh hectares under natural farming practices.

## Differences Between the National Mission on Natural Farming (NMNF) and Earlier Initiatives:

- **Higher Budgetary Allocation:** NMNF has a total outlay of ₹2,481 crore, with the Central Government contributing ₹1,584 crore and the States contributing ₹897 crore till 2025-26 (15th Finance Commission period).
- **Expanded Farmer Target:** NMNF aims to reach over one crore farmers, significantly higher than earlier initiatives.
- **Establishment of Ecosystem:** The mission emphasizes creating an ecosystem for sustainable natural farming, including common scientific standards and easy farmer-friendly certification processes.
- **National Branding:** Envisions a single national brand for naturally grown, chemical-free produce, promoting market recognition and trust.
- **Model Demonstration Farms:** Proposes setting up 2,000 Natural Farming (NF) Model Demonstration Farms at Krishi Vigyan Kendras (KVKs), Agricultural Universities, and farmers' fields. These farms will be supported by trained Farmer Master Trainers.
- **Comprehensive Farmer Training:** Provides on-site training to willing farmers in Model Demonstration Farms, focusing on the NF package of practices, preparation of NF inputs, and other sustainable farming methods.

## Reasons for Promoting Natural Farming:

- **Reducing Fertiliser Dependency:** Aims to combat the excessive use of chemical fertilisers in agriculture.
- **Cost Reduction for Farmers:** Helps farmers lower the input costs of cultivation by reducing dependency on externally purchased inputs.
- **Improving Soil Health:** Rejuvenates soil health, fertility, and quality, ensuring long-term agricultural productivity.
- **Climate Resilience:** Builds resilience to climate risks like waterlogging, floods, and droughts.
- **Health Benefits:** Reduces health risks associated with exposure to fertilisers and pesticides. Provides healthy and nutritious food for farmers' families and consumers.
- **Legacy for Future Generations:** Contributes to a sustainable environment and ensures a healthier planet for future generations.
- **Soil Biodiversity:** Improves soil carbon content and water use efficiency, increasing soil microorganisms and overall biodiversity.

**Conclusion:** The success of NMNF will depend on effective implementation, adequate support to farmers, and robust monitoring and evaluation mechanisms. By addressing the challenges associated with transitioning to natural farming, such as access to inputs, knowledge, and markets, the government can accelerate the adoption of these practices and contribute to a greener and more sustainable future for Indian agriculture.

## In 'life certificate' month, how Govt's Jeevan Pramaan has been faring

### News Excerpt:

Every November, retirees, including from the government, Defence services, Railways, public sector undertakings, and many higher education institutions, etc. must submit a "life certificate" to continue to receive their pensions for another year.

### Key Points on Digital Life Certificates (DLCs) and the Jeevan Pramaan Campaign:

- **Purpose of Digital Life Certificates (DLCs):**
  - Introduced in 2014 to allow pensioners to submit life certificates without physically visiting banks, post offices, or pension disbursing authorities.
  - DLCs can be generated online and sent directly to the relevant pension-disbursing authorities.
- **Third Annual DLC Campaign (November 1-30):**
  - Organised by the Department of Pension and Pensioners' Welfare (DoPPW) under the Ministry of Personnel, Public Grievances, and Pensions.
  - 1,900 camps being held in 800 cities and towns in India and at Indian missions abroad.
  - Additional camps organised by post offices and banks for pensioners.
- **Number of Pensioners: Total central government pensioners: 64.88 lakh (as of March 31, 2023), including:**
  - Civilian pensioners: 10.09 lakh
  - Defence pensioners: 31.92 lakh
  - Railways pensioners: 15.25 lakh
  - Telecom pensioners: 4.56 lakh
  - Postal pensioners: 3.04 lakh
- **DLC Generation Statistics:**
  - Last year's campaign generated 1.47 crore DLCs, including 45.46 lakh for central government pensioners.
  - Over 48.10 lakh DLCs generated in the first 11 days of this year's campaign (November 1-11), with:
    - 31.02% using face authentication (up from <20% last year).
    - 63% opting for fingerprint authentication.
      - First-week data (November 1-8): 37.60 lakh DLCs:
- **Age distribution:**
  - 45% for pensioners aged 60-70 years.
  - 28% for those 70-80 years.
  - 21% for those under 60 years.
  - Highest DLCs generated in Maharashtra, followed by Tamil Nadu, West Bengal, Uttar Pradesh, and Karnataka.
- **Process of Generating a DLC:**
  - Uses Aadhaar-based biometric authentication.

- **Options for authentication:**
  - Fingerprint scanning via a biometric device.
  - Face authentication (introduced in 2021).
- **Requirements:**
  - Aadhaar linked to a mobile number.
  - Aadhaar registered with the pension disbursing authority.
  - Biometric device for self-generation via the Jeevan Pramaan app or website.
- **Key Takeaways:**
  - Significant increase in face authentication adoption.
  - Facilitates convenience and ensures pensioners do not need to travel.
  - Focus on improving accessibility through widespread camps and advanced biometric options.

## "Bhu-Neer" Portal for ground water withdrawal permits

### News Excerpt:

The Ministry of Jal Shakti launched the newly developed "Bhu-Neer" portal during the concluding ceremony of India Water Week 2024.

### About Bhu-Neer:

- The "Bhu-Neer" is an advanced portal developed by **Central Ground Water Authority (CGWA), under the Ministry of Jal Shakti**, in collaboration with the **National Informatics Centre (NIC)**, for improved groundwater regulation across the country.
- This portal will serve as a one-stop platform for managing and regulating groundwater resources, aimed at ensuring transparency, efficiency, and sustainability in groundwater usage.
- "Bhu-Neer" is designed to provide **comprehensive details regarding the legal framework governing groundwater extraction, regulations at the state and national levels.**
- Its centralized database will allow users to access critical information on groundwater compliance, policies, and sustainable practices.
- The portal is developed with several user-friendly features to offer streamlined process flow to the project proponents seeking groundwater withdrawal permits.
- Having a simplified yet informative interface, and features like PAN based single Id system, NOC with QR code etc., "Bhu-Neer" marks a significant improvement over its previous version NOCAP.

## Global Engagement Scheme

### News Excerpt:

Ministry of Culture implements "Global Engagement Scheme" to **promote India's rich cultural heritage and**

**enhance India's image in the global arena in a concerted manner.**

### Key Point:

- **Festival of India (FoI):**
  - **Purpose:** To promote Indian culture and people-to-people connections.
  - **Artist Participation:** Diverse artists, including folk artists, classical musicians, dancers, and theater performers, participate in these festivals.
  - **Financial Support:** Folk artists receive performance fees for their participation in FoIs.
  - **Uttarakhand's Participation:** One troupe from Uttarakhand has participated in a FoI in Cuba and the Dominican Republic.
- **Financial Assistance for Veteran Artists:**
  - **Support for Senior Artists:** The scheme provides financial assistance to senior artists aged 60 and above.
  - **Uttarakhand Beneficiaries:** Four artists from Uttarakhand have received support under this scheme in the past two years.
- **Government Initiatives:**
  - **Empanelment of Artists:** The Ministry of Culture maintains a panel of artists for various art forms, including folk arts.
  - **Collaboration with International Organizations:** The Ministry collaborates with organizations like IIRI to promote Indian culture and agriculture.
  - **Policy and Regulatory Framework:** The government is working to create a conducive environment for the growth of the seed industry and agriculture sector.

## MISCELLANEOUS:

### RS-28 Sarmat intercontinental ballistic missile, known as 'Satan 2'.

#### News Excerpt:

Russia is set to deploy the RS-28 Sarmat intercontinental ballistic missile, known as 'Satan 2', to replace older missiles.

#### About Sarmat Missile:

- **Key Points about the RS-28 Sarmat ("Satan 2") Missile**
- **Successor to R-36 ICBMs:** The RS-28 Sarmat is a next-generation intercontinental ballistic missile (ICBM), replacing the Soviet-era R-36, which NATO dubbed "Satan."
- **Strategic Importance:** Designed to be the backbone of Russia's silo-based strategic deterrent, it is one of the world's most powerful nuclear weapons.
- **Payload:** Carries up to **15 nuclear warheads, configured as Multiple Independently Targetable Re-**

Russia's new intercontinental-range ballistic missile (ICBM), the super-heavy thermonuclear-armed RS-28 Sarmat, will replace the SS-18, the biggest and deadliest Soviet missile of the Cold War

**RS-28 SARMAT**  
(SS-X-30 Satan 2)

Basing: Silo-based  
Length: 36m  
Diameter: 3m  
Weight: 200 tonnes  
Speed: Mach 20.7 (25,000 km/h)  
Range: 10,000+ km  
In Service: 2020-21

**Payload:** Designed to carry more than 10 nuclear warheads known as **MIRVs (Multiple Independently Targetable re-entry Vehicles)**

Each MIRV, which can be aimed at different targets, has explosive yield of up to 750 kilotons. **Hiroshima atomic bomb was around 15 kilotons**

Sarmat can make circumterrestrial flight and hit targets on other side of planet from unexpected direction within one hour

Sarmat can also deliver new **Avangard** hypersonic glide vehicle (HGV), capable of carrying nuclear payload at 20 times speed of sound

Avangard's high speed, low trajectory and mid-flight manoeuvrability could make it immune to interception by America's THAAD shield system

Propulsion: PDU-99 liquid-fuelled rocket engine

**Entry Vehicles (MIRVs),** enabling simultaneous strikes on multiple targets.

- **Specifications:**
  - **Range:** 6,200 to 11,180 miles, capable of targeting regions across Europe and the U.S.
- **Power and Destruction**
  - **Destructive Potential:**
    - Capable of carrying warheads up to 2,000 times more powerful than the bombs dropped on Hiroshima and Nagasaki.
  - **Targets:** Can strike major cities in the UK, Europe, and other regions globally.
- **Historical Context and Comparison**
  - **Introduced by Vladimir Putin:** Announced in 2018, alongside other advanced weapons like the Kinzhal and Avangard hypersonic missiles, as a response to the U.S. Prompt Global Strike system.
  - **Unmatched Capability:** President Putin claims it has no global equivalent in power and stealth.

## Traditional wedding sari gharchola gets GI tag

### News Excerpt:

Recently, the Government of India (GoI) granted the geographical indication (GI) tag for the gharchola, a traditional sari worn during weddings.

### About Gujarati Gharchola Saris:

- **Traditional Significance:** Gharchola saris are traditionally worn during weddings in Hindu and Jain communities, marking their cultural and ceremonial importance.
- **Color Symbolism:** Historically, these saris were crafted in auspicious colours such as red, maroon, green, and yellow, which hold special significance in Hindu customs.
- **Modern Evolution:** Gujarat's weavers have started blending modern designs and techniques with traditional craftsmanship, resulting in more elegant and appealing gharcholas.
- **Increased Demand:** This evolution in design has led to a surge in demand, with gharcholas now available at Garvi Gurjari sales centres across Gujarat.
- **Geographical Indication (GI) Tag:** The GI tag for gharcholas confirms their authenticity and uniqueness, while also providing a vital marketing tool to promote these culturally significant garments globally.



## Indian Chemical Council Wins 2024 OPCW-The Hague Award

### News Excerpt:

The 2024 OPCW The Hague Award was conferred upon the **Indian Chemical Council (ICC)** at a ceremony during the 29th Session of the Conference of the States Parties (CSP) of the Organisation for the Prohibition of Chemical Weapons (OPCW) at the Hague.

### Key Points on the 2024 OPCW-The Hague Award to the Indian Chemical Council (ICC):

- **Award Details:** The 2024 OPCW-The Hague Award was presented to the Indian Chemical Council (ICC) during the 29th Session of the Conference of the States Parties (CSP) of the Organisation for the Prohibition of Chemical Weapons (OPCW) in The Hague on November 25, 2024. This marks the first time the award recognizes a chemical industry body.

- **Award Presentation:**

- The award was conferred by: Ambassador Fernando Arias, Director-General of OPCW.
- Mr. Jan van Zanen, Mayor of The Hague.
- Mr. D. Sothi Selvam, Director General of ICC, received the award on behalf of the Council.
- Indian Ambassador and Chairperson of India's National Authority Chemical Weapons Convention (NACWC) were present at the event.

- **About the Chemical Weapons Convention (CWC) and OPCW:**

- The CWC was established in 1997 and has 193 member states.
- OPCW serves as the implementing body for the Convention, aiming for a world free of chemical weapons.
- India is an original signatory of the CWC.
- NACWC oversees the implementation of the Convention within India.
- OPCW received the Nobel Peace Prize in 2013 for efforts to eliminate chemical weapons.
- The OPCW-The Hague Award, established in 2014, recognizes significant contributions toward the goals of the CWC.

- **Indian Chemical Council (ICC):**

- Represents over 80% of India's chemical industry, valued at \$220 billion.
- Recognized for promoting chemical safety, compliance with the CWC, and enhanced security practices in India.
- **Known for initiatives like:**
  - Chemical Weapons Convention Helpdesks to improve compliance and simplify e-filing for chemical declarations.
  - 'Nicer Globe' initiative for chemical transportation safety, providing real-time monitoring and emergency response.
  - 'Responsible Care' (RC) Programme and the introduction of the Security Code of RC.

- **Significance:** The award acknowledges ICC's efforts in ensuring chemical safety and security across India's chemical industry, one of the largest in the world. Demonstrates ICC's commitment to responsible industrial stewardship and advancing the objectives of the CWC.

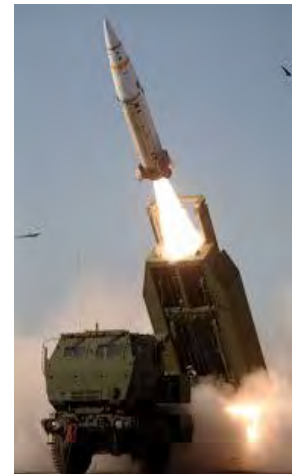
## Army Tactical Missile Systems (ATACMS)

### News Excerpt:

The United States has confirmed providing long-range Army Tactical Missile Systems (ATACMS) to Ukraine to aid its war effort against Russia.

### About ATACMS:

- According to manufacturer Lockheed Martin, "The ATACMS is a conventional surface-to-surface artillery weapon system capable of striking targets well beyond the range of existing Army cannons, rockets and other missiles."
- Its **maximum range is 300km.**
- Notably, this is not the first time that the ATACMS system has been delivered, although the earlier systems had much shorter ranges of around 160 km.
- For instance, in October 2023, the US provided missiles with cluster munitions. When fired, they would open in the air and release hundreds of "bomblets" rather than a single warhead, the Associated Press reported at the time
- ATACMS missiles are fired from the High Mobility Artillery Rocket System (HIMARS) and Multiple Launch Rocket System (MLRS) M270 platforms, which the US and the United Kingdom earlier provided to Ukraine.



## Daniel Barenboim and Ali Abu Awwad presented Indira Gandhi Peace Prize

### News Excerpt:

The Indira Gandhi Prize for Peace, Disarmament, and Development for 2023 was presented to classical pianist and conductor Daniel Barenboim and Palestinian peace activist Ali Abu Awwad.

### About News:

- **Prize Recipients:**



- **Mr. Daniel Barenboim:** Recognized for fostering peace through musical and cultural dialogue initiatives.
- **Mr. Ali Abu Awwad:** Honored for his advocacy for dialogue and non-violence through his organization, Roots, founded after his imprisonment in Israel.

- **Acceptance Speech by Mr. Awwad:** Recounted his 17-day hunger strike in an Israeli prison in 1990 with his mother.
- **Shared personal loss and resilience:**
  - His brother was killed by Israeli soldiers, but he chose to let go of revenge.
  - Highlighted finding humanity among Jewish victims of Palestinian attacks.
  - Advocated for non-violence, stating that the Palestinian struggle should connect through Jewish hearts, not harm their bodies.
- **Remarks by Dignitaries:**
  - **Shiv Shankar Menon, former Foreign Secretary:** Described the initiatives of Mr. Barenboim and Mr. Awwad as "exemplary."
  - **Hamid Ansari, former Vice-President of India,** Praised Mr. Barenboim for using music to bridge cultural and political divides. Commended Mr. Awwad for promoting non-violent resistance and dialogue, inspiring reconciliation in the Israel-Palestinian conflict. Stressed that young people in the West Asian region, especially Palestine, are primary victims of the conflict and that such efforts signify resilience and hope.

## PHILOSOPHY OF THE MONTH

### Understanding Proudhon's Theory of Mutualism: An Interactive Q&A

#### Q: What is mutualism, and how does it differ from capitalism and state socialism?

A: Mutualism is **an economic and social theory** that emphasizes voluntary cooperation, **fair exchange**, and cooperative ownership. Unlike capitalism, which often profits **from labor exploitation**, **mutualism** envisions a society where individuals and communities collectively own resources for mutual benefit. Unlike state socialism, it **rejects centralized control**, **promoting decentralized management** and mutual respect.

#### Q: Who was Pierre-Joseph Proudhon, and what contributions did he make to mutualism?

A: Pierre-Joseph Proudhon was a French philosopher who coined the term "mutualism" in the mid-19th century. While famously declaring "**Property is theft!**" Proudhon believed in reimagining property to serve collective well-being rather than abolishing it. His ideas were inspired by worker-led cooperative production, aiming for a society transformed by peaceful economic action.

#### Q: How does mutualism approach the concept of property?

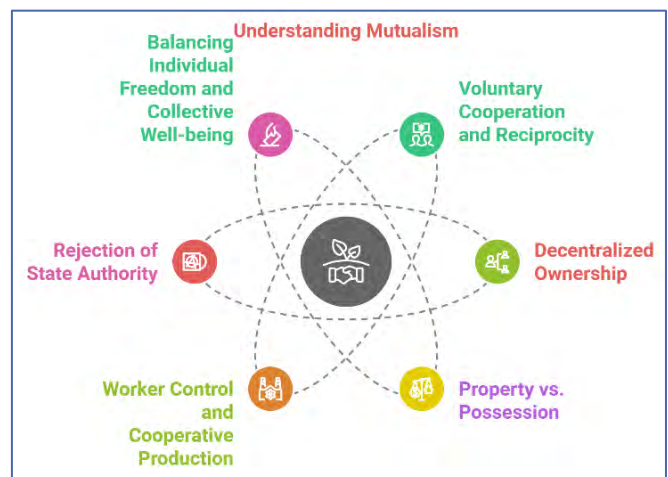
A: Proudhon differentiated between "**property**" (which allows control over others and is exploitative) and

"**possession**" (using resources for personal benefit without infringing on others' freedoms). Mutualism supports ownership based on usage rather than profit, promoting fair and reciprocal exchanges devoid of state-imposed inequality.

#### Q: What is the relationship between mutualism and anarchism?

A: Mutualism aligns with anarchism by rejecting state-enforced property rights and centralized authority. It exists in the **space between individualist anarchism (emphasizing personal freedom) and social anarchism (advocating collective resource management)**. Proudhon envisioned a society organized without a state, through free contracts and mutual exchanges, blending individual freedom with collective responsibility.

#### Q: What are the key critiques of mutualism?



A: Critics argue that mutualism may not effectively **challenge broader structural inequalities** due to its focus on small-scale property ownership. Some believe it's idealistic, questioning its feasibility in large-scale implementation. Marxists criticize it for **not adequately addressing core capitalist** issues like exploitation and class struggle, contending that it can overlook the realities posed by larger economic forces.

#### Q: How does mutualism balance individual freedom with collective well-being?

A: Mutualism aims to empower individuals by allowing them to **pursue personal interests** within a framework that supports mutual aid and collaboration. It emphasizes cooperative associations and **mutual respect, fostering an economic and social** environment based on mutual aid rather than competition.

#### Q: Does mutualism have practical applications today?

A: Yes, mutualism's principles can be seen in **cooperatives, communal land ownership, and shared resources**, promoting fairness and community-driven initiatives. Its focus on **decentralized management and equitable**

**distribution** holds potential for addressing modern social and economic challenges. While critiques exist, mutualism remains a significant part of anarchist and socialist discourse, offering an alternative to conventional systems.

Despite its critiques, **mutualism represents a radical, alternative vision for reshaping economic and social interactions, emphasizing egalitarianism without central authority.** Its historical and theoretical contributions remain significant, particularly within anarchist and socialist discourse.

### THEMATIC ESSAY

1. Knowledge will give you Power but Character Respect
2. We have to build a better man before we can build a better society

### CONTEMPORARY ETHICS CASE STUDY

Sunita Devi, a 25-year-old freelance researcher and disability activist, experienced significant barriers while taking a crucial government-run exam for entry-level teaching positions at Indian universities. Due to her rare congenital condition causing stiff joints, the exam center's lack of wheelchair accessibility created immense difficulties. Additionally, after enduring the four-hour exam, she discovered that it was cancelled due to a question paper leak on social media and the dark net.

Similarly, Pappu Chourasia, a 19-year-old aspiring doctor, faced a similar setback after dedicating two years of intense

preparation for the National Eligibility Cum Entrance Test (NEET-UG). Following widespread allegations of cheating and paper leaks, many students, including Pappu, were left in a state of anxiety and uncertainty about their future.

These incidents reflect a broader issue within India's examination system, plagued by frequent paper leaks and cheating scandals. The education ministry and other authorities have been criticized for their handling of the situation, leading to widespread distrust among students and their parents.

- (a) Analyze the potential consequences of the widespread distrust in the examination system on the future aspirations of students and their personal well being. How can this issue be mitigated to restore confidence in the system?
- (b) Examine the responsibilities of the Education ministry and the National Testing Agency (NTA) in ensuring the integrity of examinations. How should they address the recurring issues of paper leaks and cheating?
- (c) Consider the broader societal implications of these examination scandals. What steps could be taken to prevent such incidents in the future?



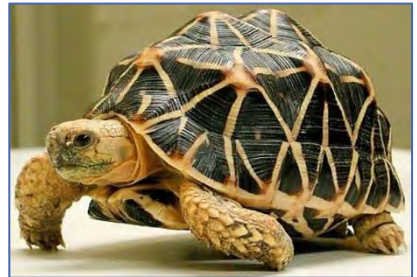
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**(Answer in 250 words) 20**





**SPECIES IN NEWS**

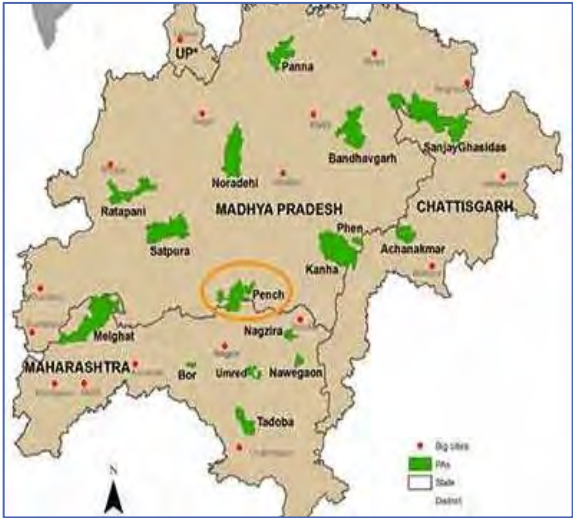
<p><b>World's largest goat, markhor, spotted in Kashmir</b></p> <p><b>News Excerpt:</b> Recently, an injured male markhor, a rare and endangered wild goat, was rescued near a village in north Kashmir.</p> <p><b>The species is listed under Schedule I of the Wildlife (Protection) Act, 1972, and is classified as 'Near Threatened' on the IUCN Red List of Threatened Species.</b></p> <p><b>Further, it is included in Schedule I of both the Indian Wildlife Protection Act (1972) and the Jammu and Kashmir Wildlife (Protection) Act, 1978.</b></p>	<p><b>About Markhor:</b></p> <ul style="list-style-type: none"> <li>Considered the <b>world's largest wild goat</b>, the Markhor(Capra falconeri) is a <b>highly endangered species</b>.</li> <li>They are found in the moist to semi-arid mountain regions of <b>Pakistan, India, Afghanistan, Uzbekistan, Turkmenistan, and Tajikistan</b>.</li> <li>In Jammu and Kashmir, its population is concentrated in areas such as <b>Shopian, the Banihal Pass, Shamsbari, the Kazinag Uri, and the Pir Panjal range in Poonch</b>.</li> <li>Its population has been mainly affected by constant human activity and natural factors.</li> </ul> <p><b>Indian Initiatives for Markhor:</b></p> <ul style="list-style-type: none"> <li>Under the <b>Kashmir Markhor Recovery Project</b>, the <b>Wildlife Trust of India</b> has been making efforts to improve the population of markhors.</li> <li>A National Park dedicated solely to Markhors has been established, along with the extension of the <b>Hirpora Wildlife Sanctuary</b> and the creation of <b>the Tattakuti Sanctuary</b> for the species.</li> <li>Acknowledging their importance, the UN General Assembly proclaimed 24 May the International Day of the Markhor, starting in 2024.</li> </ul>
<p><b>Star tortoise's conservation prospects</b></p> <p><b>News Excerpt:</b> Researchers have identified two distinct groups of Indian star tortoises.</p> <p>The Indian star tortoise is listed in <b>Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and in Schedule I of the Wildlife (Protection) Act 1972.</b></p>	<p><b>About Indian Star tortoise's:</b></p> <ul style="list-style-type: none"> <li>The study identified two <b>genetically distinct groups</b> of Indian star tortoises: northwestern and southern.</li> <li>Endemic to the subcontinent, Indian star <b>tortoises reside in arid pockets of northwest India (bordering Pakistan), South India, and Sri Lanka</b>. However, members of the species have also been found in people's homes as far afield as Canada and the U.S.</li> <li>The increasing demand for them as pets has entangled them in one of the largest global wildlife trafficking networks.</li> <li>Despite this, officials have already seized hundreds of tortoises being smuggled through the Chennai and Singapore airports and across the India-Bangladesh border this year.</li> </ul>
<p><b>'KAALINGA' WILL BE THE SCIENTIFIC NAME FOR 'KAALINGA SARPA'</b></p> <p><b>News Excerpt:</b> Karnataka's own king cobra found in the Western Ghats and known as 'Kaalinga Sarpa' in the local parlance will get its name etched in the scientific world.</p> <p><b>Status - IUCN : Vulnerable WPA 1972: Schedule II</b></p>	<p><b>Discovery of Ophiophagus Kaalinga (Western Ghats King Cobra Lineage):</b></p> <ul style="list-style-type: none"> <li><b>Official Naming:</b> The Western Ghats lineage of the king cobra has been officially named Ophiophagus Kaalinga. This name is inspired by its distinct habitat and characteristics.</li> <li><b>Historical Context:</b> Previously, all king cobras across South and Southeast Asia were classified as a single species, Ophiophagus hannah, named in 1836 by Danish naturalist Theodore Edward Cantor.</li> <li><b>Research Initiative:</b> A nearly decade-long research led by noted herpetologist Dr. P. Gowri Shankar identified four distinct lineages of king cobra:             <ul style="list-style-type: none"> <li>Western Ghats lineage (Ophiophagus Kaalinga).</li> <li>Indo-Chinese lineage.</li> <li>Indo-Malaysian lineage.</li> <li>Luzon Island lineage in the Philippine Archipelago.</li> </ul> </li> </ul>




	<ul style="list-style-type: none"> <li>● <b>Methodology:</b> The research involved extensive sampling across various countries and regions. DNA mapping was used to differentiate the lineages. Over 200 samples were studied, making it one of the most comprehensive genetic studies on king cobras.</li> <li>● <b>Formal Naming Ceremony:</b> On November 22, the Western Ghats lineage "Kaalinga" and Luzon Island lineage "Salvatana" were formally named in Bengaluru, acknowledging their unique traits.</li> <li>● <b>Significance:</b> This discovery marks a significant milestone as genetic differences between lineages were overlooked for 186 years. The findings were published in the European Journal of Taxonomy in September, shedding light on the rich biodiversity of the Western Ghats.</li> </ul>
<p><b>'CRITICALLY ENDANGERED' AFRICAN PENGUINS</b></p> <p><b>News Excerpt:</b> Conservationists and veterinarians are worried their efforts aren't sufficient to stop the decline of the African Penguin, listed as <b>critically endangered</b> by the <b>International Union for Conservation of Nature</b>.</p> <p><b>Status IUCN - Critically Endangered</b></p>	<p><b>Key Information on the African Penguin:</b></p> <ul style="list-style-type: none"> <li>● <b>Threatened Status:</b> The African Penguin was recently listed as critically endangered by the International Union for Conservation of Nature (IUCN). Fewer than 10,000 breeding pairs remain worldwide, primarily in South Africa, compared to 42,500 in 1991.</li> <li>● <b>Future Risks:</b> Conservationists predict the species could become extinct in the wild by 2035 without significant intervention.</li> <li>● <b>Challenges in Conservation:</b> Despite dedicated efforts, such as weekly rescues, the decline continues <b>due to environmental degradation</b>. Veterinarians emphasize the need for a healthy environment to sustain the species.</li> <li>● <b>Urgency:</b> The rapid decline of the African Penguin population highlights the critical need for intensified conservation measures.</li> </ul> <p><b>Factors and Efforts Addressing Decline of African Penguins</b></p> <ul style="list-style-type: none"> <li>● <b>Primary Causes of Decline:</b> <ul style="list-style-type: none"> <li>○ <b>Nutritional Deficiency:</b> The major threat is insufficient food, mainly sardines and anchovies, leading to starvation and unsuccessful breeding.</li> <li>○ <b>Other Threats:</b> Include climate change, habitat disturbances, predators, diseases, oil spills, and environmental degradation.</li> </ul> </li> <li>● <b>Impact of Starvation:</b> Starving penguins abandon breeding due to lack of sufficient nutrition, significantly affecting population growth.</li> <li>● <b>Indicator Species:</b> Penguins are viewed as indicators of ecosystem health, highlighting the interconnection between human well-being and environmental conservation.</li> </ul> 
<p><b>RARE 'CAT SNAKE' SPOTTED IN BIHAR'S VALMIKI TIGER RESERVE</b></p> <p><b>News Excerpt:</b> According to reports, the common cat snake, or Boiga trigonata, is far less venomous than other snake species and is also considered extremely rare.</p> <p><b>Status: IUCN - Least Concern</b></p>	<p><b>Key Points About the Common Cat Snake Spotted in Bihar:</b></p> <ul style="list-style-type: none"> <li>● <b>Species Overview:</b> Common cat snakes are mildly venomous and known for their <b>distinct eyes, resembling those of a cat</b>. Their eyes bulge slightly from the sockets, which is both attractive and somewhat frightening.</li> <li>● <b>Rarity:</b> These snakes are among the rarest species and are infrequently seen in the wild.</li> <li>● <b>Nocturnal Behavior:</b> Active at night (nocturnal hunters). During the day, their pupils form narrow vertical slits, which dilate and become almost round as night falls.</li> <li>● <b>Venom and Prey:</b> <ul style="list-style-type: none"> <li>○ Mildly venomous but not life-threatening to humans.</li> <li>○ Their venom is effective against small animals such as lizards, frogs, rats, and birds.</li> </ul> </li> </ul> 

**PLACES IN NEWS - INDIA**

<p><b>56th Tiger Reserve of the country notified in Chhattisgarh</b></p> <p><b>News Excerpt:</b> Union Ministry for Environment, Forest and Climate Change, informed the Nation about the notification of the Guru Ghasidas-Tamor Pingla Tiger Reserve, Chhattisgarh, as the 56th Tiger Reserve of the country.</p>	<p><b>Key Information About Guru Ghasidas-Tamor Pingla Tiger Reserve</b></p> <ul style="list-style-type: none"> <li>• <b>Notification Details:</b> The Guru Ghasidas-Tamor Pingla Tiger Reserve was notified by the Government of Chhattisgarh on the advice of the National Tiger Conservation Authority (NTCA). It became <b>India's 56th tiger reserve</b> and is located in the <b>Manendragarh-Chirmiri-Bharatpur, Korea, Surajpur, and Balrampur districts of Chhattisgarh.</b></li> <li>• <b>Size and Area:</b> <ul style="list-style-type: none"> <li>○ Total area: 2,829.38 sq. km.</li> <li>○ Core/Critical Tiger Habitat: 2,049.2 sq. km., comprising the Guru Ghasidas National Park and Tamor Pingla Wildlife Sanctuary.</li> <li>○ Buffer Zone: 780.15 sq. km.</li> <li>○ It is the <b>third-largest tiger reserve</b> in India after Nagarjunasagar-Srisailem (Andhra Pradesh) and Manas (Assam).</li> </ul> </li> <li>• <b>Landscape Connectivity:</b> Forms a landscape complex of nearly 4,500 sq. km with the Sanjay Dubri Tiger Reserve (Madhya Pradesh). Connected to Bandhavgarh Tiger Reserve (Madhya Pradesh) to the west and Palamau Tiger Reserve (Jharkhand) to the east.</li> <li>• <b>Geographical Features:</b> Located in the Chota Nagpur Plateau and partly in the Baghelkhand Plateau. Characterized by diverse terrains, dense forests, and water streams, creating critical habitats for tigers and other wildlife.</li> <li>• <b>Biodiversity:</b> Documented species: 753 (365 invertebrates and 388 vertebrates) as per the Zoological Survey of India. Includes 230 bird species and 55 mammal species, many of which are threatened.</li> </ul> 
<p><b>Chhattisgarh's Barnawapara Wildlife Sanctuary</b></p> <p><b>News Excerpt:</b> According to the Additional Principal Chief Conservator of Forest (Wildlife), the state has conducted two surveys to find out if Barnawapara Wildlife Sanctuary can sustain a larger tiger population.</p>	<p><b>Key Points:</b></p> <ul style="list-style-type: none"> <li>• <b>Tiger's Return to Barnawapara:</b> A young male tiger has been spotted in Barnawapara Wildlife Sanctuary after nearly 40 years.</li> <li>• <b>Reviving Tiger Population:</b> Forest authorities plan to introduce two female tigers to establish a breeding population.</li> <li>• <b>Chhattisgarh's Tiger Conservation Efforts:</b> The state is working to increase its tiger population, with recent successes in Achanakmar Tiger Reserve.</li> <li>• <b>Challenges and Opportunities:</b> <ul style="list-style-type: none"> <li>○ Protecting the tiger's habitat and prey base is crucial.</li> <li>○ Preventing poaching and human-wildlife conflict are key challenges.</li> <li>○ Successful tiger conservation can boost tourism and local economies.</li> </ul> </li> <li>• <b>Lessons from Achanakmar:</b> The experience of Achanakmar Tiger Reserve highlights the importance of habitat improvement and protection measures in increasing tiger populations.</li> </ul> 
<p><b>Madhya Pradesh gets its eighth tiger reserve in Ratapani</b></p> <p><b>News Excerpt:</b> The Ratapani Wildlife Sanctuary in Madhya Pradesh was declared a tiger reserve following in-principle approval from the</p>	<p><b>About the Ratapani Tiger Reserve Notification</b></p> <ul style="list-style-type: none"> <li>• <b>Economic and Ecotourism Benefits:</b> Expected growth in employment opportunities and improvement in livelihoods due to the promotion of ecotourism. Local communities benefit from eco-development programs aimed at supporting inhabitants of the region.</li> <li>• <b>Management and Conservation:</b> Designation as a tiger reserve allows the state to receive funding from the National Tiger Conservation Authority (NTCA). This funding will aid in better wildlife management and conservation initiatives.</li> <li>• <b>Geographical Details:</b></li> </ul>

<p>Ministry of Environment, Forest, and Climate Change through the National Tiger Conservation Authority.</p>	<ul style="list-style-type: none"> <li>○ <b>Core Area:</b> 763.8 square kilometers (critical tiger habitat).</li> <li>○ <b>Buffer Area:</b> 507.6 square kilometers.</li> <li>○ <b>Total Area:</b> 1,271.4 square kilometers.</li> <li>○ Covers nine revenue villages, integrated into the buffer zone, ensuring villagers' rights are unaffected.</li> <li>● <b>Significance:</b> The sanctuary includes the Bhimbetka Rock Shelters, a UNESCO World Heritage Site. It also features teak forests and historical and religious destinations in the Vindhya hills. Located in Raisen district, approximately 50 kilometers from Bhopal.</li> <li>● <b>Legal Notification:</b> Issued under Section 38V of the Wildlife (Protection) Act, 1972, recognizing the core area as a critical tiger habitat. Villagers' rights within the sanctuary remain safeguarded under this notification.</li> <li>● <b>State-Wide Tiger Reserve Context:</b> Ratapani becomes the eighth tiger reserve in the state. Madhav National Park has also received approval for tiger reserve status, with formal notification expected soon.</li> </ul> 
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<p><b>'Vadhavan port will be a game changer for India'</b></p> <p><b>News Excerpt:</b> The Vadhavan greenfield port, which is under construction near <b>Dahanu in Maharashtra</b>, will double India's container trade from the current levels upon completion. Scheduled to be finished by 2034, <b>it is projected to be among the top 10 ports in the world</b>, according to Chairman of the Jawaharlal Nehru Port Authority (JNPA).</p>
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<p><b>About the Vadhavan Major Port Project</b></p> <ul style="list-style-type: none"> <li>● <b>Approval and Governance:</b> Approved by the Union Cabinet chaired by Prime Minister Narendra Modi. To be established <b>at Vadhavan near Dahanu, Palghar District, Maharashtra.</b></li> <li>● <b>Implementing Body:</b> The project will be executed by Vadhavan Port Project Limited (VPPL).</li> <li>● <b>Shareholding:</b> <ul style="list-style-type: none"> <li>○ Jawaharlal Nehru Port Authority (JNPA): 74%.</li> <li>○ Maharashtra Maritime Board (MMB): 26%.</li> </ul> </li> <li>● <b>Port Features:</b> Type: All-weather Greenfield deep draft major port.</li> <li>● <b>Core Components:</b> <ul style="list-style-type: none"> <li>○ Nine container terminals (each 1,000 meters long).</li> <li>○ Four multipurpose berths (including a coastal berth).</li> <li>○ Four liquid cargo berths.</li> <li>○ Ro-Ro (Roll-on/Roll-off) berth.</li> <li>○ Coast Guard berth.</li> </ul> </li> <li>● <b>Infrastructure Details:</b> <ul style="list-style-type: none"> <li>○ Total project cost: ₹76,220 Crore, including land acquisition.</li> <li>○ Reclamation of 1,448 hectares of sea area.</li> <li>○ Construction of a 10.14 km offshore breakwater.</li> <li>○ Container and cargo storage areas.</li> </ul> </li> <li>● <b>Capacity and Connectivity: Handling Capacity:</b> 298 million metric tons (MMT) per annum, including: 23.2 million TEUs (Twenty-foot Equivalent Units) of container handling capacity.</li> <li>● <b>Mode of Development:</b> Core infrastructure, terminals, and commercial infrastructure to be developed in Public-Private Partnership (PPP) mode.</li> </ul> 
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**PLACES IN NEWS - WORLD**

**MAP NOT TO SCALE**

**LAKE KARIBA**  
It is the world's largest human-made lake. A drought has drained the reservoir of Kariba Dam, which powers the economies of Zambia and Zimbabwe.

**MARBURG VIRUS OUTBREAK IN RWANDA**  
Marburg virus disease: Public health officials around the world are monitoring the spread of a deadly virus in Rwanda, for causing 'bleeding eye disease'

**ANTIGUA AND BARBUDA**  
The Prime Minister met with the Prime Minister of Antigua and Barbuda, on the sidelines of the 2nd India-CARICOM Summit in Georgetown, Guyana.

**NIGERIA**  
During Prime Minister official visit to Nigeria, the two countries decided to strengthen their maritime security cooperation.

**TANZANIA**  
The third edition of the Joint Defence Cooperation Committee (JDCC) meeting between India and Tanzania took place in Goa.

**EGYPT**  
India-Egypt recently concluded their 13th round of Foreign office consultations in New Delhi.

**MALDIVES**  
Mangroves in Maldives drowning in salt water thanks to rising seas,

**INDIA-BOSNIA AND HERZEGOVINA**  
India-Bosnia and Herzegovina held their 4th Foreign Office Consultations (FOC) in Sarajevo.

**KYRGYZSTAN AND TAJIKISTAN FINALISE BORDER AGREEMENT**  
The Kyrgyzstan and Tajikistan reached an agreement, resolving long-standing border disputes (970-kilometre border).

**KHORLOCHHU HYDROPOWER PROJECT - BHUTAN**  
The 600 MW project is being developed on the Kholongchhu River in the eastern part of Bhutan.

# YOJANA SNAPSHOT - JANUARY

## Year End Special

### Introduction

Since its **independence** in 1947, India has undergone an **incredible transformation**, carving out a rightful place for itself in the **regional and global spheres**. India's sustained **policies and reforms**, complemented by its cultural and historical **legacy**, have positioned it as a key player in shaping the **global order**.

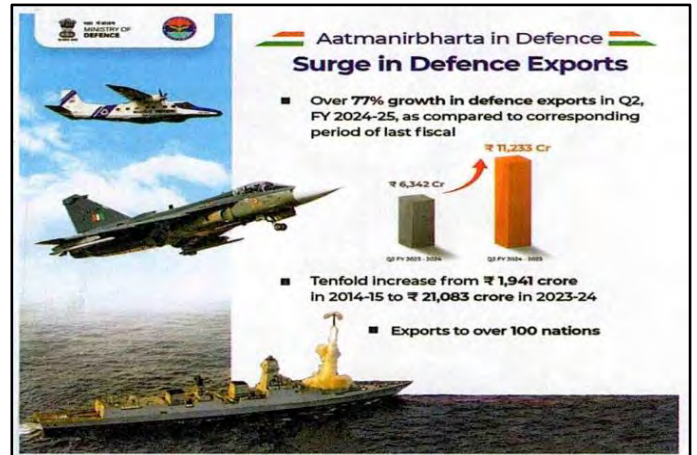
### Economic Growth

- **From 'Fragile Five' to Top 5 Global Economy:** By 2024, India had become the fifth-largest global economy, a feat achieved through structural reforms like the **Goods and Services Tax (GST)**, **Insolvency and Bankruptcy Code**, and **Production Linked Incentive (PLI)** schemes.
- Due to its transparent governance and stable policies, **Morgan Stanley** and other global financial institutions now regard India as a leading investment destination.
- **Financial Inclusion:** The **Unified Payments Interface (UPI)** is a flagship initiative of India's digital economy, achieving **16.58 billion transactions** worth **\$279.4 billion in October 2024** alone.
- **Industrial and Defence Growth:** India's defence production has increased 174% from ₹46,429 crore in 2014-15 to **₹1,27,265 crore in 2023-24**. Defense exports have surged **30 times**, growing from ₹686 crore in FY 2013-14 to ₹21,083 crore in FY 2023-24.
- **Global Innovation Index (GII):** India's ranking has improved from 81st in 2015 to **39th in 2024**, reflecting its focus on innovation-driven growth through investments in R&D, a vibrant startup ecosystem, and favourable government policies.

### Defence Capabilities

- **Maritime Strength and Security:** India's ports have improved efficiency dramatically, with **Median Turnaround Time (MTT)** reduced to **0.9 days** in 2024, compared to **1.5 days in the US** and **1.7 days in Australia**.
  - **9 Indian ports** are ranked in the **Top 100 Global Ports**, with Visakhapatnam and Mundra in the Top 30.
- **Defence and Nuclear Triad:** **INS Arighaat** (2024), India's second Arihant-class SSBN, strengthens its nuclear deterrence, showcasing its self-reliance in defence technology.
  - Launching the fourth **SSBN submarine** further demonstrates India's focus on safeguarding its maritime interests.
- **Military Exercises:** **Milan 2024** was the largest-ever naval exercise, with participation from 51 countries, 35 ships, and 50 aircraft, reflecting India's operational capabilities.
  - **Tarang Shakti 2024**, India's first **multinational air force exercise**, featured cutting-edge indigenous

platforms like the Tejas alongside global assets like the **F-35 and Rafale**.



### Sustainable Development and Environmental Leadership

- **International Solar Alliance (ISA):** India-led ISA has been a game-changer in promoting solar energy. It has mobilised funds and provided technological support to member countries for renewable energy adoption.
- **Infrastructure Development:** India's investments in ports, railways, and renewable energy projects, both domestically and internationally, reflect its commitment to sustainable development.
- **Climate Leadership:** India's contributions to renewable energy and global climate policy demonstrate its role as a responsible global leader who aligns economic growth with environmental sustainability.

### Soft Power and Global Advocacy

- **Voice of the Global South:** India hosted the **Voice of the Global South Summit**, amplifying the concerns of developing nations on global platforms. The inclusion of the African Union in the G20 highlights India's commitment to representing the interests of the Global South.
- **Cultural Diplomacy:** India's rich heritage, cultural exchanges, and inclusive governance have strengthened its global soft power, fostering goodwill across continents.

### India's emergence as a hub of Knowledge and Technology

**Innovation Ecosystem**

- Gross Expenditure on R&D (GERD)** doubled to ₹1,27,380.96 crores in 2020-21, with a significant contribution of 36.4% from the private sector.
- Research Output:** India is a leader in global research output, excelling in computer science, engineering, and health sciences. The number of scientific publications increased 2.5 times from 2010 to 2020.
- Global Innovation Index (GII):** India's rise in the Global Innovation Index (GII) from 81st in 2015 to 39th in 2024 showcases its innovation capabilities.
- Startup India:** Fostering entrepreneurship, resulting in over **100 unicorns** and a vibrant startup ecosystem.
- Atal Innovation Mission (AIM):** It established 10,000 Atal Tinkering Labs (ATLs) in schools to promote hands-on learning in technology. It has launched 72 Atal Incubation Centres (AICs) to support startups and catalyse innovations.

**Economic Impact of Technology**

- Agriculture:** Precision farming, AI-based monitoring, and drones improve productivity and yields.
- Healthcare:** Platforms like eSanjeevani expand access, AI aids early diagnosis, and Covaxin showcases India's vaccine innovation.
- Manufacturing:** Industry 4.0 technologies and Make in India enhance competitiveness in electronics, automotive, and aerospace.
- Digital Economy:** 5G, AI, IoT drive smart cities and financial inclusion, with UPI achieving 15 billion+ transactions in Sept 2024.

**Social Impact of Technology**

- Digital Inclusion:** Aadhaar, DigiLocker, and CSCs streamline services and improve rural connectivity.
- Education:** NEP 2020 and EdTech platforms democratize access, fostering reskilling and upskilling.
- Healthcare:** Telemedicine and AI-driven diagnostics improve integration and reach in underserved areas.

**Strategic Impact of Technology**

- Defence:** Indigenous programs like IGMDP and INS Vikrant strengthen self-reliance in defence technologies.
- Space Exploration:** ISRO's missions like Chandrayaan-3 and Gaganyaan highlight technological prowess, with privatisation driving innovation.

**Emerging Technologies**

- National Quantum Mission (NQM):** Focused on advancing quantum computing and its cryptography and materials science applications.
- National Supercomputing Mission (NSM):** Boosting computational capabilities with supercomputers like PARAM Shivay.
- Deep Ocean Mission:** India's focus on seabed exploration and sustainable resource utilisation underlines its commitment to sustainability. With the capability to reach depths of 6,000 meters, this mission highlights advancements in ocean sciences.

**Reaping India's Demographic Dividend:**

**India's Demographic Transition: A Growth Opportunity**

**Rising Working-Age Population:** India's working-age population (15-64 years) increased from 59% in 2011 to 63% in 2021 and is expected to remain stable over the next 15 years. This demographic dividend allows economic growth, provided the workforce is well-educated, skilled, and productive.

**Economic Aspirations:** By 2047, India aims to achieve a GDP of \$30 trillion (at 2047 prices) with a per capita income of \$18,000 annually. To achieve this, India must increase real per capita income sixfold in the next 23 years, requiring annual GDP growth above 6%.

**Employment Landscape: Key Trends**

- Job Creation:** 80 million jobs were added between 2017-18 and 2021-22 (20 million annually), and unemployment rates declined due to government policies.
- LFPR:** Increased from 57.9% (2022-23) to 60.1% (2023-24).
- WPR:** Improved from 56% (2022-23) to 58.2% (2023-24).
- Youth Unemployment:** It dropped from 17.8% (2017-18) to 10% (2022-23), but skill deficits remain challenging for high-productivity sectors.
- Women's Participation:** FWFP rose from 24.5% (2019) to 37% (2023), mainly in agriculture, including unpaid family labour.
- Sectoral Distribution:** Agriculture employs 46.6% of workers, highlighting the need for significant growth in non-farm employment to reduce dependence on low-productivity jobs.

**Key Challenges:**

- Structural Transformation:** Slow industrialisation limited worker transition from agriculture; economic shift lags behind demographic changes.
- Labor Productivity & Wages:** Real wage growth depends on improved human capital, better work practices, and rising productivity, leading to higher earnings and quality jobs.
- Small Firms:** 99% of MSMEs are micro-enterprises, limiting growth, productivity, and employment contribution compared to global peers.
- Informality:** 90% of jobs are informal, lacking social protection and stable incomes, with 83% of employment in the informal sector.
- Non-Farm Employment:** Expanding non-farm jobs is critical to reduce reliance on low-productivity agriculture.

**Policy Initiatives and Government Response:**

- Youth and Women Employment Incentives:** Wage subsidies for new labour force entrants. Establishment of working women's **hostels** and **creches** to support female employment. Women-specific **skilling programs** and market access for women-led SHGs and enterprises.
- Boosting MSMEs:** Recognising MSMEs as critical for employment generation, policies aim to - scale up MSMEs, enhance technological adoption, and promote entrepreneurship in rural and semi-urban areas.

- **Skilling and Education:** Addressing skill gaps through initiatives like Skill India Mission (Equipping youth with industry-relevant skills) and focusing on **STEM education** to prepare a future-ready workforce.

**Future Directions: Strategic Actions**

- **Formalisation of Employment:** Strengthen social protection formalisation policies and improve wages and productivity in informal jobs.
- **State-Level Interventions:**
  - **Younger States (e.g., Bihar, UP):** Focus on labour-intensive job creation.
  - **Aging States (e.g., Kerala, Tamil Nadu):** Prioritize automation and high-skill industries.
- **Export-Oriented Manufacturing:** Incentivize global supply chain integration through investments in infrastructure, ease of doing business, and trade policies.
- **Women's Workforce Participation:** Promote employment in high-value sectors, provide affordable childcare, provide workplace flexibility, and support women-led enterprises.

**India's Geopolitical Influence in a Multipolar World**



**Strategic Diplomacy and Multilateral Leadership**

- **Multilateral Leadership:** Hosted the 2023 G20 Summit, addressing climate action, healthcare, and digital infrastructure aligned with UN SDGs. Launched the International Solar Alliance (119 signatories), CDRI, and proposed reforms for NMFT to combat terrorism financing.
- **Neighbourhood First:** Strengthened ties with neighbours through trade, connectivity, and security, including cooperation with Bangladesh and renewed relations with the Maldives under President Muizzu.
- **Indo-Pacific & Maritime Strength:** India ensures a free, open, and rules-based maritime order as a net security provider in the Indian Ocean Region.
- **Westward Expansion:** Projects like IMEC connect India to Europe via the Arabian Peninsula. Infrastructure investments, especially in East Africa, deepen India-Africa ties.

- **Development Partnerships:** Since 2008, India has provided \$951 billion in grants and credit lines to 78 countries. Vaccine Maitri delivered 301 million doses to 99 countries, enhancing global goodwill.

**India's Role in Global Conflict Resolution**

**Ukraine Conflict:** PM Modi's visits to Moscow and Kyiv (2024) reiterated that "this is not an era of war." India advocates peace and diplomacy as solutions to global conflicts.

**China Relations:** The Breakthrough Agreement (2024) restored patrolling rights along the Line of Actual Control (LAC) to pre-Galwan clash status, with high-level dialogues resuming during the BRICS Summit.

**Pakistan Relations:** India maintains a firm zero-tolerance policy on terrorism but remains open to peaceful dialogue contingent on Pakistan eschewing terrorism.

**India's G20 Presidency: A Diplomatic Milestone**

- India's leadership of the **2023 G20 Summit** marked a significant achievement amid geopolitical tensions like the Ukraine war and the Gaza conflict. Key outcomes included:
  - Consensus on economic development and achieving UN SDGs.
  - Highlighting global challenges like healthcare, climate action, and digital infrastructure, particularly for the Global South.
  - Sharing best practices in disaster management, vaccine distribution, and digital technologies showcased India's leadership.



**Conclusion**

India's way forward focuses on **inclusive growth, strengthening MSMEs, labour-intensive industries, and green infrastructure.** Enhancing **skills and education, bridging digital divides, and investing in emerging technologies** like AI and space will drive innovation. Balancing **strategic autonomy** with global partnerships and multilateral reforms is key. Formalising employment and **targeted state-level policies** will ensure **equitable progress**, enabling India to leverage its demographic dividend and achieve its **\$30 trillion economic vision by 2047.**



## KURUKSHETRA SNAPSHOT - JANUARY

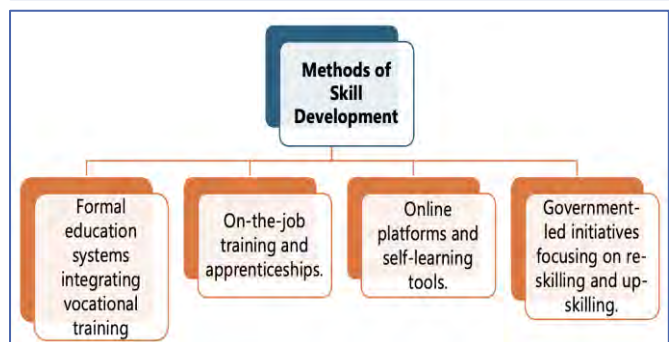
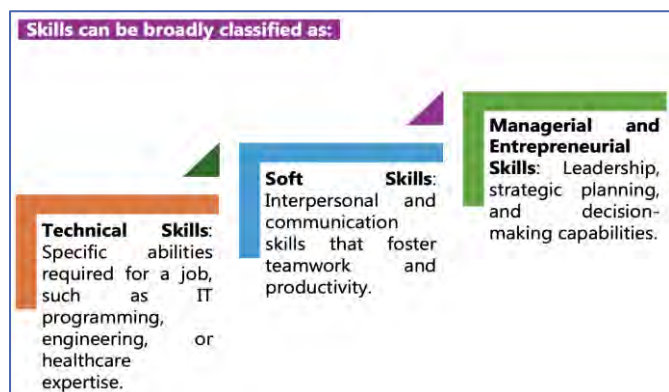
### Skill and Entrepreneurship

#### Introduction

Skill development and entrepreneurship are **indispensable** for the **socio-economic transformation** of any country. In every sector, from **agriculture to manufacturing, services to social enterprises**, a **specific skill set** combined with **entrepreneurial abilities** is crucial to achieving optimal results. With **over 65% of its population** below the age of 35, India is uniquely positioned to benefit from its demographic dividend. In his Independence Day address, PM Modi declared India's commitment to becoming the **"Skill Capital of the World,"** emphasising the nation's focus on skilling and entrepreneurship to achieve inclusive growth.

#### Understanding Skill Development

- Skill development is **acquiring, improving, and mastering** new abilities to adapt to dynamic environments and meet market demands.



#### Understanding Entrepreneurship

- Entrepreneurship involves **identifying opportunities, creating innovative solutions,** and **managing ventures** to generate economic and social value. Entrepreneurs drive:
  - **Job Creation:** Startups and SMEs contribute significantly to employment.
  - **Economic Dynamism:** Foster innovation, improving productivity and market competitiveness.
  - **Social Impact:** Address societal challenges with creative solutions, such as clean energy or education.

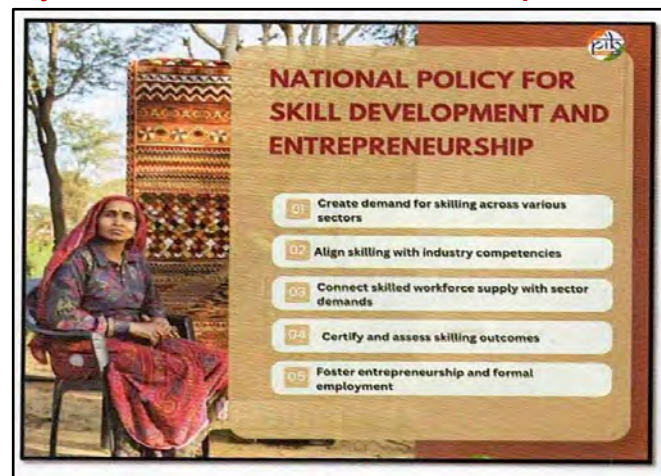
### Skill Development and Entrepreneurship: A Symbiotic Relationship

- Skill development lays the **foundation for entrepreneurship** by equipping individuals with the expertise to innovate and execute ideas.
- Conversely, entrepreneurship **promotes using skills and exploring** untapped potential, creating a cycle of social and economic benefits.

#### Global Perspectives on Skilling

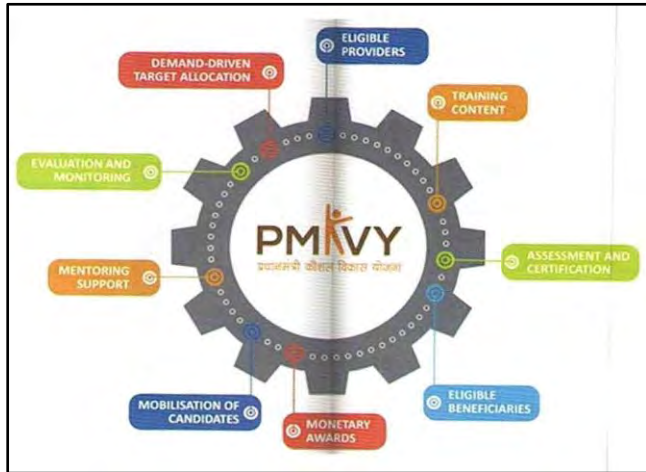
- **UNESCO:** Advocates for skilling as part of the Education for Sustainable Development Goals (SDGs). Emphasises skilling to reduce poverty, promote social inclusion, and prepare individuals for the global economy.
- **ILO (International Labour Organization):** It highlights skilling as a tool for:
  - Economic resilience.
  - Poverty reduction.
  - Building responsive and flexible labour markets.
- **World Economic Forum (WEF):** Links skill development to the Fourth Industrial Revolution. Recommends up-skilling and re-skilling initiatives to bridge skill gaps. Identifies critical 21st-century skills such as:
  - Digital literacy.
  - Creativity.
  - Problem-solving.
  - Adaptability.
- **World Bank:** The Bank views skilling as essential for human capital development. It promotes "21st-century skills," including reading, mathematical abilities, socio-emotional intelligence, and digital proficiency. The Bank focuses on skill development in developing nations to boost productivity and inclusivity in rapidly changing markets.

#### Key Government Initiatives for Skill Development



- **National Education Policy (NEP) 2020:** It combines academic and practical learning with no rigid separation between skill and academic streams. It introduces skill modules from Grade VI and promotes hands-on learning at secondary levels.

- **Samagra Shiksha:** Implements over 88 NSQF-aligned vocational courses in schools. Utilises infrastructure of hub schools, polytechnics, and ITIs for nearby schools, ensuring resource efficiency.
- **Pradhan Mantri Kaushal Vikas Yojana (PMKVY):** Provides free short-term training programs focusing on new-age skills like Artificial Intelligence (AI), Machine Learning (ML), Industry 4.0, and Green Economy. It aims to train school dropouts, unemployed youth, and marginalised groups. Achieved training of 1.48 crore individuals, including 65 lakh women.



- **Craftsmen Training Scheme (CTS):** Long-term training across industrial trades through 14,930 ITIs nationwide. Trained over 79.5 lakh individuals, including 10.56 lakh women.
- **SANKALP (Skill Acquisition and Knowledge Awareness for Livelihood Promotion):** A World Bank-supported initiative to improve the quality and inclusivity of short-term skill training programs.
- **PM VISHWAKARMA Scheme:** Tailored for traditional artisans and craftsmen, offering modern tools, credit support, and skill enhancement for sustainable livelihoods.

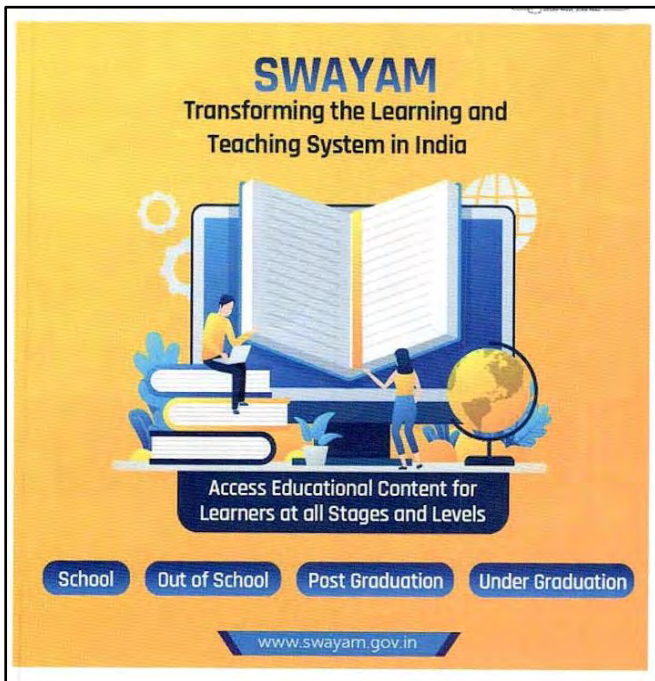
**Entrepreneurship Initiatives**

- **Startup India:** Launched in 2016 to foster a robust startup ecosystem. Supported by programs like Atal Innovation Mission (AIM), Startup India Seed Fund, and the Standup India Scheme. Facilitates funding, mentorship, and industry-academia collaboration to spur innovation.

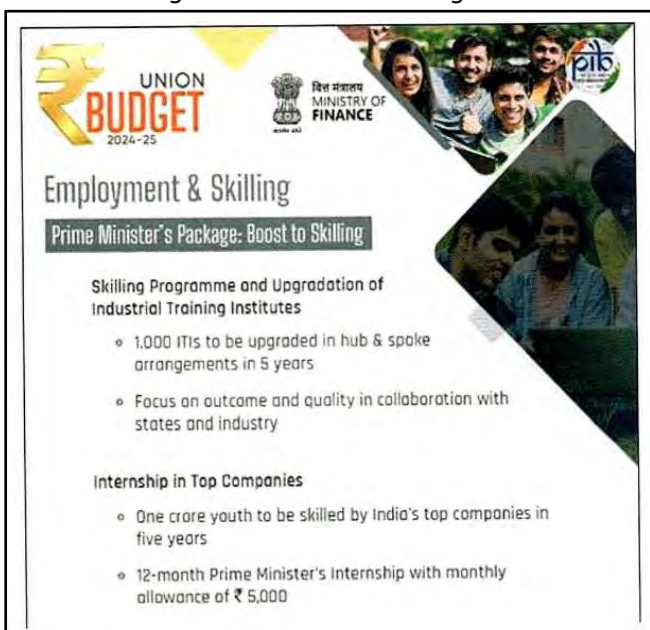
- **BHASKAR Platform:** A centralised digital registry for startups and entrepreneurs, enabling networking, resource sharing, and collaboration.
- **National Apprenticeship Promotion Scheme (NAPS):** Incentivizes industrial apprenticeship programs to enhance workforce readiness.

## Technological Advancements in Skilling

- **Scalability:** Platforms like **SWAYAM**, **Coursera**, and **DIKSHA** offer Massive Open Online Courses (MOOCs), which offer advanced training in fields such as AI, machine learning, and data science to millions simultaneously.



- **Accessibility:** Mobile internet penetration has democratised education in rural areas. Platforms like **Unacademy** and **YouTube** make high-quality resources available to learners from diverse socio-economic backgrounds.
- **Customisation and Personalization:** AI-driven platforms like **TCS iON** offer tailored learning experiences. Adaptive assessments and interactive modules align with individual career goals.



## Challenges in Skill Development and Entrepreneurship

- **Low Vocational Training Penetration:** Only 3.7% of India's workforce has formal training (2022-23), far behind the U.S. (52%) and South Korea (96%).
- **Skill-Opportunity Mismatch:** Industries face skilled labour shortages while youth unemployment persists.
- **Changing Job Market:** Rapid technological advancements demand continuous learning and re-skilling.
- **Infrastructure Deficits:** Inadequate training centres and resources, especially in rural and semi-urban areas.
- **Social Perception:** Vocational training and entrepreneurship remain undervalued compared to academic careers.
- **Standardisation Issues:** Inconsistent quality in training and certification programs.
- **Trainer Shortage:** A lack of skilled trainers hampers effective implementation.

## Significance of Women's Entrepreneurship

- **Economic Significance:** Boosting workforce participation adds USD 0.7 trillion to GDP. Women-led businesses generate 10% more revenue than male-led ones. Promoting rural growth addresses poverty and unemployment.
- **Social Benefits:** Women-led businesses employ three times more women, fostering gender equity. They empower rural women, reducing migration and strengthening local economies. They drive community development through mentorship and inclusive workplaces.
- **Empowerment and Equality:** Entrepreneurship promotes financial independence, decision-making, and societal respect. It provides opportunities for marginalised women, reduces inequality, and enhances social cohesion.

## Current State of Women Entrepreneurs

- **Low Ownership and Active Participation:** Women own only **20% of enterprises**, but most are registered under their names to easily access government benefits or finance. There are far fewer actively operated women-owned enterprises, limiting their impact on the economy.
- **Micro-Enterprises and Informal Sector Dominance:** About **82% of women-led enterprises** are micro-units operating as sole proprietorships. A significant portion exists in the **informal sector**, lacking access to formal financing, mentorship, and growth opportunities.
- **Rural-Urban Divide:** Rural women-owned enterprises (22.24%) slightly outnumber urban enterprises (18.42%), reflecting effective rural initiatives. Rural entrepreneurship is critical in curbing urban migration and building resilient rural economies.

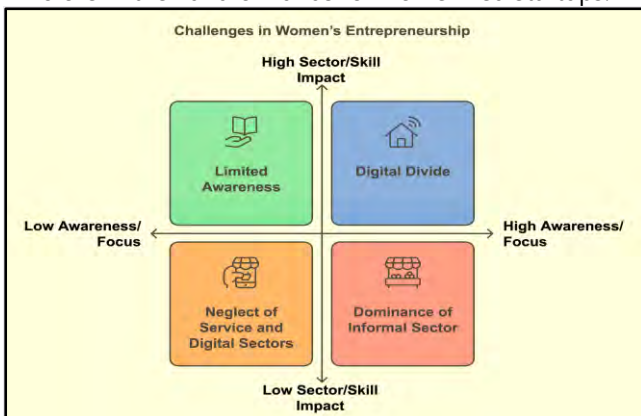
## Government Initiatives to Promote Women's Entrepreneurship

- **Skill Upgradation & Mahila Coir Yojana (MCY):** Empowers rural women in the coir industry with a 2-month training and ₹3,000 stipend. Supports coir units via PMEGP.

- **Start-Up Village Entrepreneurship Programme (SVEP):** Supports SHG members in starting non-farm enterprises. Established 2.08 lakh enterprises across 29 states/UTs.



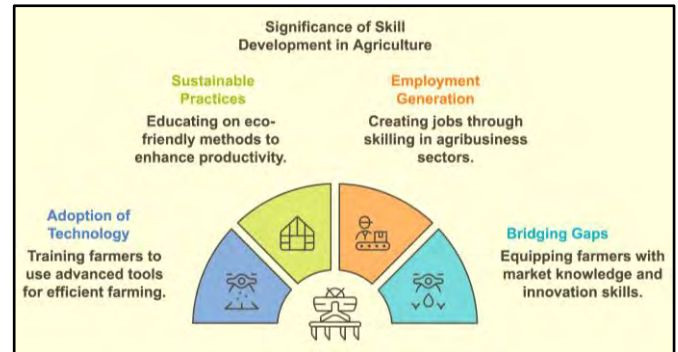
- **Mahila Shakti Kendra (MSK):** Provides skill development, employment, digital literacy, and access to government schemes for rural women.
- **Women Enterprise Development Scheme (WED):** Offers loans up to ₹15 lakh at 8% interest, targeting northeastern women entrepreneurs.
- **Annapurna Yojana:** Provides ₹50,000 loans for working capital in food services, with a 36-month repayment period.
- **Start-Up India Initiative:** Recognized 86,713 startups, with 46% having a female director and reserved ₹1,000 crore in the Fund of Funds for women-led startups.



**Recommendations for Improving Women's Entrepreneurship**

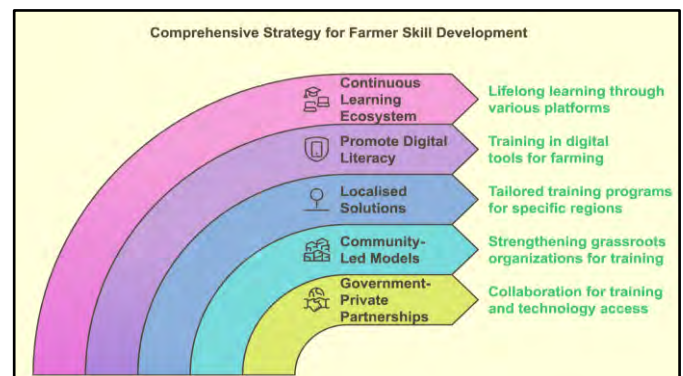
- **Develop Comprehensive Ecosystems:** Integrate promotion, business support, market linkages, finance, skills, and mentorship for sustainable women entrepreneurship.
- **Enhance User Experience:** Improve online platforms with multilingual interfaces, clear guidelines, video tutorials, SMS updates, and effective grievance redressal.
- **Strengthen Last-Mile Connectivity:** Utilize CSCs and female frontline workers to assist rural women in accessing schemes.

- **Generate Gender-Disaggregated Data:** Analyze scheme uptake to identify gaps and improve policies.
- **Focus on Formalization:** Simplify processes to transition women-led businesses to the formal sector for better access to finance and markets.
- **Target Growth Sectors:** Prioritize support for the digital economy, services, and high-growth industries like renewable energy and healthcare.



**Government Initiatives for Skill Development in Agriculture**

- **Mahila Kisan Sashaktikaran Pariyojana (MKSP):** Trained 1.77 crore women farmers in sustainable practices.
- **Sub-Mission on Agricultural Mechanization (SMAM):** Trained 52,080 farmers (2020–2023) on modern machinery use.
- **Krishi Vigyan Kendras (KVKs):** Provided skill-building to 48.07 lakh farmers (2020–2023) through technology dissemination.
- **Skill Training for Rural Youth (STRY):** Short-term 7-day programs upgrading skills in agriculture and allied sectors.
- **PM Formalization of Micro Food Processing Enterprises (PMFME):** Trained 54,767 beneficiaries in food processing and entrepreneurship (as of Nov 2023).
- **National Beekeeping and Honey Mission:** Promotes beekeeping as a profitable venture through skill development.
- **State-led Initiatives:** Women contribute 60–80% of India's food production. Initiatives like Jeevika (Bihar) and Mahila Lakhpati Scheme (MP) promote women-led SHGs and FPOs.



### Way Forward for Promoting Skill Development and Entrepreneurship

- **Regional Innovations and Localized Solutions:** Promote state-specific initiatives like:
  - **Haryana:** Established 50 incubation centres focusing on sectors like automotive and agriculture, offering real-world training environments.
  - **Madhya Pradesh:** Introduced skill education at all school levels with career exploration modules.
  - **Sikkim:** Integrated organic farming into school curricula, turning barren lands into productive fields.
- **Industry Collaboration:** Align training programs with industry requirements through partnerships with organisations like NASSCOM, enhancing workforce readiness for emerging sectors.
- **Technology-Driven Solutions:** Leverage AI, virtual simulations, and digital platforms like Skill India Digital Hub (SIDH) to provide personalised, hands-on training.
- **Future-Ready Skills:** To prepare for technological disruptions, prioritise courses in AI, cybersecurity, blockchain, renewable energy, and other high-growth industries.
- **Youth Engagement and Lifelong Learning:** Encourage rural youth entrepreneurship in agriculture and allied industries while fostering a culture of continuous up-skilling and re-skilling to adapt to evolving markets.

## DTE SNAPSHOT - JANUARY

### PROFIT AND PROTECT

#### Introduction

The **16th Conference of the Parties (COP16)** to the **Convention on Biological Diversity (CBD)** ended on November 1 after an 11-hour extended plenary session, leaving several key issues unresolved. A critical point of contention was **Target 13** of the Kunming-Montreal Global Biodiversity Framework (KMGBF), which seeks to operationalise benefit-sharing mechanisms using **Digital Sequence Information (DSI)** on genetic resources.

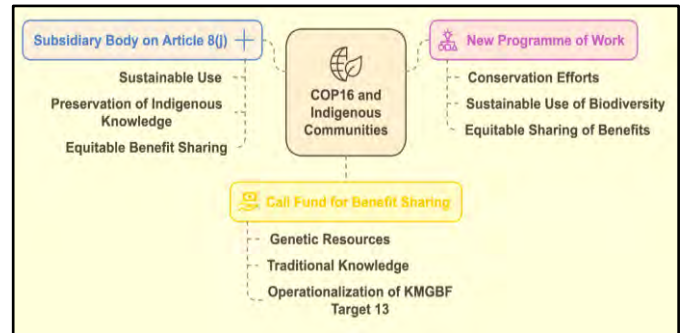
#### Status of Global Biodiversity Efforts

- **Progress Since COP15:** The **Kunming-Montreal Global Biodiversity Framework (KMGBF)** targets protecting **30% of land and marine areas** by 2030. Current protection levels (as of 2024) are **17.6%** of terrestrial and inland waters and **8.4%** of marine and coastal areas.
- **National Biodiversity Strategies:** Only **44 Parties** have submitted revised **National Biodiversity Strategies and Action Plans (NBSAPs)**. Funding remains a major hurdle, with **Target 19** (\$200 billion annual mobilisation by 2030) deferred to future meetings.

#### About Digital Sequence Information (DSI)

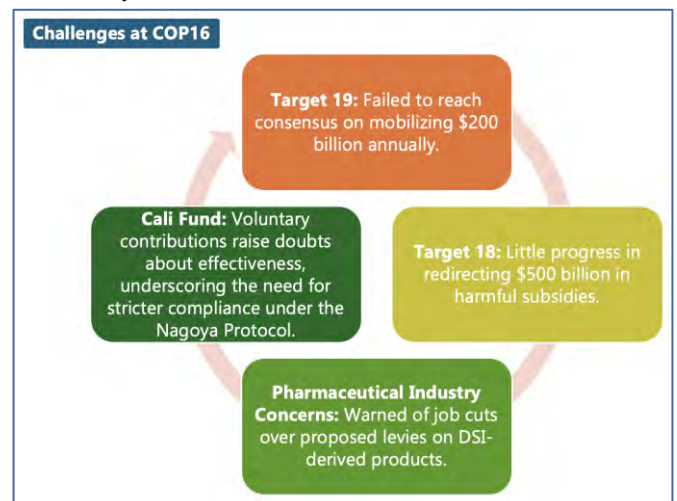
- **DSI** refers to **genetic data** such as **nucleotide sequences** (DNA and RNA) and protein sequences of organisms.

- It allows industries to manufacture drugs, cosmetics, and other products without using the actual organisms.
- **Challenges with DSI**
  - Its **non-physical nature** complicates benefit-sharing, as traditional access and benefit-sharing (ABS) frameworks like the **Nagoya Protocol (2014)** did not clarify rights over DSI.
  - A significant amount of DSI is stored in **public repositories**, often without the consent or knowledge of indigenous communities—a form of **biopiracy**.



#### Operationalising the Cali Fund

- The 16th Conference of the Parties (COP16) established the **voluntary Cali Fund** to address gaps in the **Nagoya Protocol** by ensuring fair and equitable benefit-sharing from the use of DSI, particularly for Indigenous Peoples and Local Communities (IPLCs).
- Industries with significant **revenues** (over \$50 million) or **profits** (exceeding \$5 million) are required to contribute **1% of profits** or **0.1% of revenue** to the fund. However, the non-binding nature raises concerns about compliance.
- At least **50% of the funds** will support IPLCs, including women and youth, with 10% allocated to resource-poor countries for technical development.
- **India secured safeguards** ensuring national sovereignty over DSI and recognition of domestic legislation despite resistance from developed nations like Switzerland and Norway.



**Conclusion:**

The **16th Conference of the Parties (COP16)** highlighted the **persistent challenges** in global biodiversity governance, including unresolved funding and benefit-sharing mechanisms. While establishing the Cali Fund and **enhanced roles for IPLCs** marked progress, the voluntary nature of commitments and lack of consensus on critical targets limit the framework's effectiveness. Strengthened **global cooperation** and compliance mechanisms will be essential to achieve meaningful biodiversity outcomes by 2030.

**DISCREDITED AGAIN****Introduction**

Former executives of **C-Quest Capital**, a Washington-based company, were indicted in the **largest carbon credit fraud case** to date. Accused of manipulating data from emissions-reduction projects, they secured carbon credits worth **tens of millions of dollars** and an investment of **\$170 million**. The fraud brings into question the credibility of the **Voluntary Carbon Market (VCM)**, which has been a critical yet unregulated mechanism for global climate mitigation.

**About Carbon Credits**

- A carbon credit represents **1 tonne of carbon dioxide (CO<sub>2</sub>)** or equivalent greenhouse gases (GHGs) avoided or removed from the atmosphere.
- Credits are issued for activities such as:
  - **Avoiding emissions** (e.g., efficient cookstoves or lighting systems).
  - **Removing emissions** (e.g., afforestation projects).
- Businesses purchase these credits to offset their emissions or meet climate goals.

**About Voluntary Carbon Market (VCM)**

- Unlike **compliance markets**, which are government-regulated, VCM operates in an **unregulated ecosystem**.
- **Key players:**
  - **Project developers:** Implement emissions-reduction projects.
  - **Verification and Validation Bodies (VVBs):** Audit and validate project claims.
  - **Standard setters:** Certify offsets, define standards, and manage registries.
- **Popular standard-setting organisations:** Verra and Gold Standard.

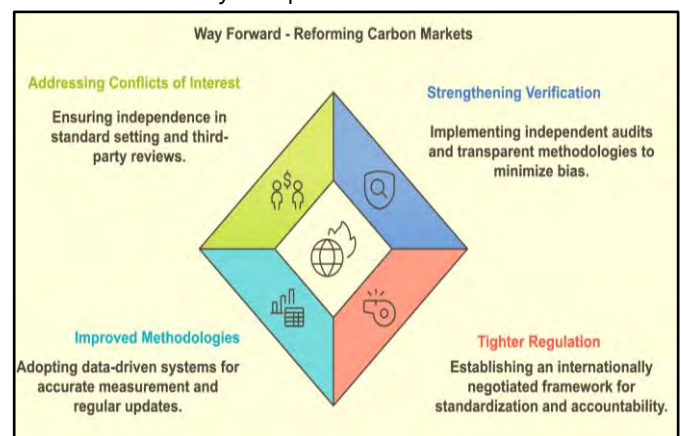
**The Fraud at C-Quest Capital**

- C-Quest executives **manipulated data** on efficient **cookstove projects in Africa and Southeast Asia** to inflate carbon credits, which were sold in the global voluntary carbon market (VCM).
- **Key variables**, such as fuel savings and operational stoves, were exaggerated, and **thermal efficiency standards** were misrepresented.

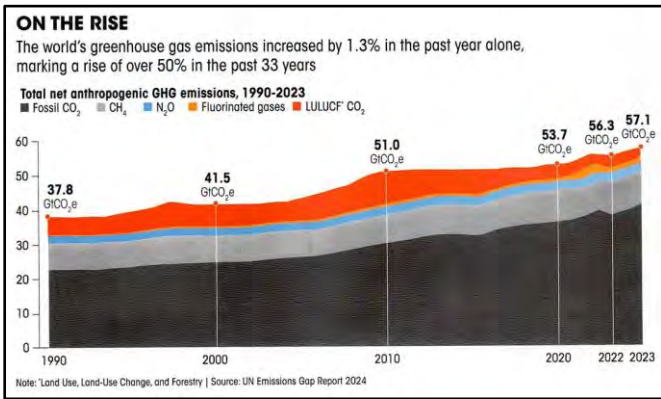
- As a Verra board member, Newcombe **proposed methodology** changes to inflate emissions-reduction claims, leading to a 354% rise in C-Quest's credits (2022-2023).
- In 2023, internal investigations exposed the fraud, and Verra **cancelled over 5 million carbon credits**.
- **Implications of the C-Quest Fraud:**
  - The fraud **exposed vulnerabilities** in the voluntary carbon market, raising concerns about the **credibility** of carbon credits and their role in genuine emissions reductions.
  - It **eroded trust** in carbon markets, which is vital for Paris Agreement climate goals.
  - The US Commodity Futures Trading Commission (CFTC) issued its first **enforcement action** in response, prompting calls for stricter regulations and closing loopholes to prevent future abuses.

**Structural Issues in Voluntary Carbon Markets**

- Voluntary Carbon Markets (VCM) face **conflicts of interest**, with developers hiring validators and standard setters relying on certification fees. This can lead to **inflated claims**, like the C-Quest fraud.
- **Poor methodologies**, such as biased surveys and outdated biomass values, exaggerate credits significantly.
- The **lack of regulation, transparency, and oversight** further exacerbates issues, making carbon credits difficult to verify and prone to misuse.

**ALMOST OUT OF REACH****Introduction**

The **UNEP Emissions Gap Report 2024** warns that the world remains on a trajectory of 2.6°C to 3.1°C **warming** by the century's end unless governments urgently intervene. Global **greenhouse gas (GHG) emissions** rose by **1.3% in 2023** compared to 2022, reaching an all-time high of **57.1 GtCO<sub>2</sub>e**. The world has already warmed by about **1.3°C**, and experts fear breaching the **1.5°C threshold** within the next decade.



**Emissions Gap: Current Status**

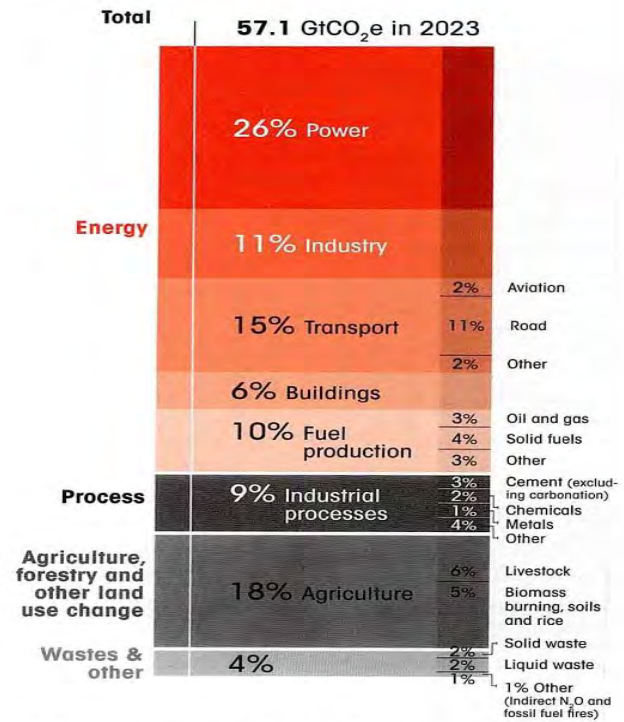
- The emissions gap is the **difference** between current emissions based on countries' climate commitments (Nationally Determined Contributions or NDCs) and the levels needed to limit warming to 2°C or 1.5°C, as per the **Paris Agreement (2016)**.
- Current Gaps:**
  - For 2°C Target:**
    - Gap by 2030: 16 GtCO<sub>2</sub>e
    - Gap by 2035: 21 GtCO<sub>2</sub>e
  - For 1.5°C Target:**
    - Gap by 2030: 24 GtCO<sub>2</sub>e
    - Gap by 2035: 32 GtCO<sub>2</sub>e
- Emissions Reductions Needed:** To limit warming to 1.5°C, emissions need to fall by 42% by 2030 and 57% by 2035 relative to 2019 levels. For the 2°C target, reductions of 28% by 2030 and 37% by 2035 are required.

**Key Observations from the Report**

- Global Emissions Trends:** Despite the Paris Agreement, emissions are increasing instead of decreasing. The world needs to achieve 7.5% annual emissions cuts by 2035 to stay within the 1.5°C pathway.
- Sectoral Emissions Contributions:**
  - Power Sector:** The largest contributor to global emissions.
  - Transport, Agriculture, and Industry:** Significant contributors.
  - Non-CO<sub>2</sub> Gases:** Emissions of methane rose by 1.3%, F-gases by 4.2%, and nitrous oxide by 1.1% in 2023.
- Renewable Energy Growth:** Renewable energy capacity grew by 50% in 2023, but the pace is insufficient to offset fossil fuel consumption.
- Carbon Budget Crisis:** The carbon budget, which determines allowable CO<sub>2</sub> emissions to stay within temperature thresholds, is depleting rapidly. Wealthy countries' indiscriminate fossil fuel use has shrunk the budget, leaving less room for developing nations to grow sustainably.
- Last Call:** The UNEP report calls the February 2025 NDC deadline and the COP29 summit in Baku the last real opportunities to limit warming to 1.5°C.

**PROBLEM AREAS**

Energy sector was the largest driver of greenhouse gas emissions globally in 2023, responsible for 68% of the total



**Why the 1.5°C Target is Technically Achievable**

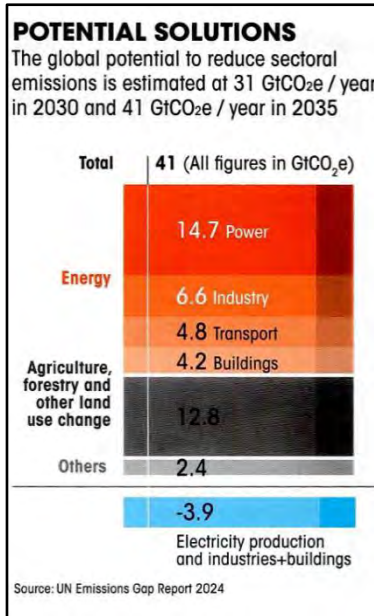
- Solutions Across Sectors:**
  - Renewable Energy:** Solar and wind energy could contribute 27% of emissions reductions by 2030 and 38% by 2035.
  - Forests:** Reducing deforestation, reforestation, and improved forest management could provide 20% of the potential reductions.
  - Agriculture and Industry:** By 2035, investments in these sectors must increase by 171-198 times and 109-145 times, respectively.
- Cost of Closing the Gap:** Estimated at \$200 per tonne of CO<sub>2</sub>e. Mitigation investments must increase sixfold, alongside reforms in the global financial system and stronger private-sector participation.
- Financial Needs:** Incremental investments from 2021 to 2050 are estimated at \$0.9–2.1 trillion annually, representing 0.81–1.9% of global GDP.

**India's Role in Climate Action**

- Current Progress:** India is likely to meet its current NDCs, which are less ambitious compared to its potential.
- Need for Leadership:** As one of the largest emitters with one of the lowest per capita emissions, India can set an example by formulating sectoral targets in its next NDCs and identifying investments needed for emissions cuts and adaptation strategies.

**Challenges**

- **Current NDCs and Their Shortfalls:** Even if all nations fully implement their NDCs, emissions would fall by only 4% (unconditional) and 10% (conditional) by 2030 compared to 2019 levels. This is far short of the 28% (2°C) and 42% (1.5°C) reductions required.
- **Focus on Non-CO<sub>2</sub> Gases:** Major economies have yet to include non-CO<sub>2</sub> gases like methane and F-gases in their NDCs. These gases are critical, contributing significantly to global warming.
- **Challenges for Developing Nations:** India and other emerging economies require international support and finance to meet ambitious climate goals.



**Way Forward**

- **Phasing Out Fossil Fuels:** Wealthy nations must take the lead in reducing fossil fuel consumption to free up the carbon budget for developing countries.
- **Scaling Up Renewables:** Rapid solar and wind energy deployment is essential to meet global emissions reduction targets.
- **Investing in Land Use and Forestry:** Reforestation and sustainable land use practices must be prioritised to achieve a significant portion of emissions reductions.
- **Reforming Financial Systems:** Climate financing must increase substantially, supported by private-sector involvement and international reforms.
- **Addressing Non-CO<sub>2</sub> Gases:** Methane, nitrous oxide, and F-gases must be included in NDCs and targeted with specific mitigation strategies.

**Water Diviners**

**Introduction**

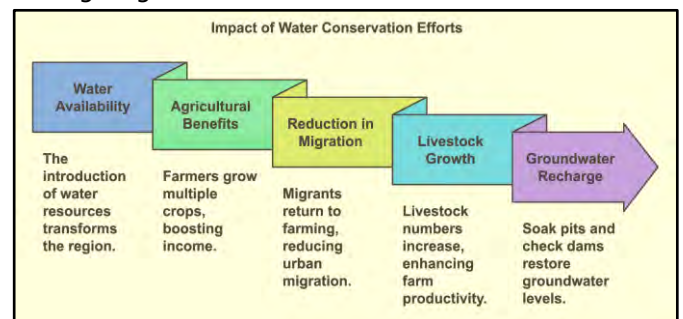
Bundelkhand, a drought-prone region, has historically faced acute water scarcity, which has impacted agriculture, livelihoods, and social dynamics. Jal Sahelis (Water Friends), a network of over 1,100 women, is driving water conservation and revival efforts across six districts in Bundelkhand. These women address water issues at the village and regional levels, ensuring sustainability and empowerment.

**Origins of the Jal Saheli Initiative**

- Initiated by **Parmarth Samaj Sevi Sansthan** in 2011, the idea stemmed from a woman’s observation that while men decide the location of water resources, women are responsible for arranging water for households.
- The model encourages women to work with **panchayats** to resolve water issues and select active women such as **Jal Sahelis** to lead community-driven water initiatives.
- Started in three districts, the initiative now spans **six districts of Uttar Pradesh** (Jalaun, Hamirpur, Jhansi, Lalitpur) and **Madhya Pradesh** (Chhatarpur, Tikamgarh).

**Achievements of Jal Sahelis**

- **Agraatha Pond Rejuvenation:** Kiran Ahirwar mobilised 300 women to construct a channel, filling a 30-hectare pond and addressing Agraatha’s water scarcity.
- **Bheda Water Conservation:** Initiatives like soak pits, wastewater reuse, and fish farming boosted rainwater conservation and community participation through regular Pani Chaupal meetings.
- **Bachhedi River Revival:** Rejuvenated the 30-km river with check dams, desilting, waterbodies, and tree plantation, ensuring irrigation for 200 hectares year-round.
- **Khudar River Revival:** The 44-km river was revived with stop dams and gates, recharging water sources and irrigating 400 hectares of farmland.



**Way Forward**

- **Scaling the Model:** Expand the Jal Saheli network to other water-scarce regions.
- **Policy Integration:** Include women-led water initiatives in national policies for water conservation.



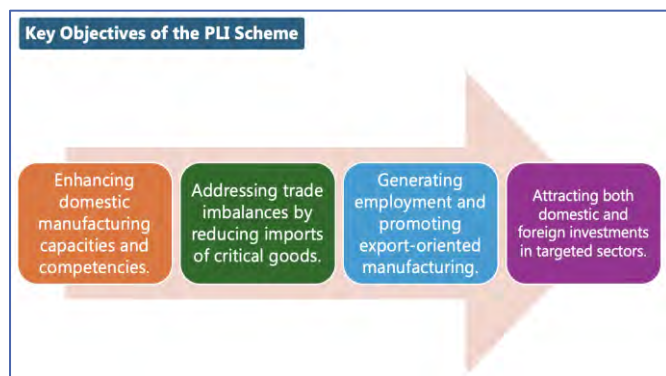
- **Capacity Building:** Train more women in technical skills for water management.

## EPW SNAPSHOT - JANUARY

### Assessing India's Production-Linked Incentives

#### Introduction

The Production-Linked Incentive (PLI) Scheme is a cornerstone of India's **Self-Reliant India (Aatmanirbhar Bharat)** initiative. It aims to enhance domestic manufacturing capabilities, attract investments, and integrate Indian industries into global supply chains. Announced for 13 sectors with a budgetary outlay of ₹1.97 lakh crore, the PLI scheme reflects the government's ambition to address weaknesses in the manufacturing sector and reduce import dependency.



#### Challenges of the PLI Scheme

- **Design and Implementation Issues:** Incentives promote **simple assembly** over deeper domestic value addition. **Base year dependency** inflates benefits for minor production increases. **Disbursement is slow** due to administrative delays, with only 2.25% of funds allocated.
- **Impact on MSMEs:** Rigid criteria like high incremental targets and mandatory greenfield projects hinder MSME participation, and overlapping regulations further burden small enterprises.
- **Misalignment with Comparative Advantages:** Focusing on capital-intensive sectors like electronics ignores labour-intensive industries like textiles and leather. Emphasising advanced technologies excludes India's unskilled workforce.
- **Trade Policy Challenges:** **High tariffs** and import restrictions raise costs and reduce competitiveness in global value chains. Misaligned trade policies limit access to critical inputs for PLI-supported sectors.
- **Sectoral and Structural Issues:** A **one-size-fits-all approach** ignores sector-specific needs and limits economies of scale. High input costs, as seen in the shipping container industry, undermine competitiveness.

Sectors	Orientation	Nature of Workforce
Advanced chemistry cell	Capital-intensive	Highly skilled
Mobile manufacturing	Capital-intensive	Low and assembly skills
Critical key starting materials	Capital-intensive	Highly skilled
Pharmaceutical	Capital-intensive	Highly skilled
Medical devices	Capital-intensive	Highly skilled
Automobiles and auto components	Capital-intensive	Highly skilled
Specialty steel	Capital-intensive	Moderate skilled
Telecom and networking products	Capital-intensive	Highly skilled
Electronic/technology products	Capital-intensive	Highly skilled
White goods	Capital-intensive	Highly skilled
Food products	Labour-intensive	Low skilled
Technical textiles	Capital-intensive	Low skilled
Solar modules	Capital-intensive	Highly skilled
Drones and drone components	Capital-intensive	Highly skilled

Source: Authors' construction.

- **Risk of Subsidy Dependence:** Expanding to labour-intensive sectors fosters reliance on subsidies over long-term efficiency.

#### Way Forward - Policy Recommendations

- **Focus on Domestic Value Addition:** Link incentives to the extent of value addition to strengthen domestic supply chains and intersectoral linkages.
- **Encourage Labour-Intensive Industries:** The scheme should align with India's comparative advantage by prioritising labour-intensive sectors that generate large-scale employment.
- **Incentivize Technological Depth:** Support R&D and high-value manufacturing to enhance global competitiveness.
- **Reduce Input Costs:** Ensure competitive access to imported raw materials and intermediate goods to lower manufacturing costs.
- **Streamline Regulatory Approvals:** Simplify bureaucratic processes to facilitate faster implementation and disbursement of incentives.
- **Promote Economies of Scale:** Facilitate the growth of medium-sized enterprises to bridge the gap between MSMEs and large firms.
- **Sectoral Selection Based on Linkages:** Prioritize sectors with strong backward and forward linkages to maximise economic spillovers.

#### The BRICS Plan for a New Financial Architecture

##### Introduction

The emergence of BRICS (Brazil, Russia, India, China, and South Africa) as a multilateral organisation has contributed to a gradual democratisation of the global financial landscape. BRICS was founded to reform the Bretton Woods system and offer a greater voice to emerging economies. Its approach is rooted in decolonised multilateralism, emphasising interdependence, pluralism, and development linked to the global South.

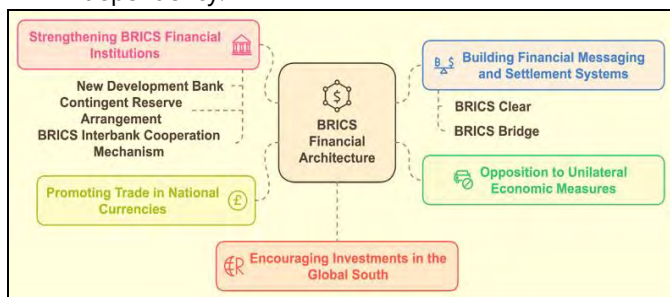
##### 16th BRICS Summit (Kazan, Russia)

- The Kazan Summit marked a milestone with its expansion into "BRICS+" by engaging aspiring members.

- The Final Declaration emphasised multipolarity, diversity, and strategic autonomy while avoiding confrontation with the West.

**Rationale for a New Financial Architecture**

- **Critique of the Bretton Woods Institutions**
  - Western-dominated institutions like the IMF and World Bank impose conditionalities that limit the sovereignty of developing nations.
  - The Kazan Declaration highlights the need for reform while rejecting unilateral sanctions and economic measures without UN approval.
- **Multipolarity as a Strategic Imperative**
  - A multipolar financial architecture allows countries to diversify their reserves, trade in local currencies, and strengthen fiscal and monetary autonomy.
  - Confiscating \$300 billion in Russian reserves has underscored the importance of alternatives to dollar dependency.



**New Initiatives by BRICS**

- **Technology Sharing:** Creating a "New Technology Platform" to bridge technological gaps and support the global South.
- **Food Security:** The BRICS Grain Initiative addresses food shortages caused by sanctions, focusing on least-developed nations.
- **Climate and Green Initiatives:** Opposition to protectionist measures like the EU's carbon tax while supporting international climate agreements.
- **Health and Vaccine Development:** Calls for greater cooperation in medicine and vaccine accessibility, reflecting lessons from the COVID-19 pandemic.
- **Transportation and Logistics:** Proposals for a unified transport and logistics platform align with initiatives like the Belt and Road Initiative and INSTC.



**Conclusion**

BRICS' expansion and initiatives at the Kazan Summit underscore its commitment to a multipolar financial architecture, fostering strategic autonomy and reducing reliance on Western-dominated systems. By prioritising trade in national currencies, strengthening financial institutions, and supporting the global South, BRICS advances decolonised multilateralism while promoting cooperation and equitable development.

**Excavating the 'Minority Character' of an Institution**

**Introduction**

The debate over whether the Aligarh Muslim University (AMU) qualifies as a minority institution under Article 30 of the Indian Constitution has been a long-standing legal and political issue. The Supreme Court judgment in Aligarh Muslim University v Naresh Agarwal (2024) revisits this contentious subject but leaves the final determination to a future bench.

**Historical Context of AMU**

- **From MAO College to AMU:** The Muhammadan Anglo-Oriental (MAO) College, established by Sir Syed Ahmed Khan, was converted into AMU in 1920 through the Aligarh Muslim University Act. AMU was one of three universities explicitly mentioned in the Indian Constitution (along with BHU and the University of Delhi), indicating its unique status.
- **Intentions Behind Establishment:** AMU was conceived to promote education among Muslims and as an institution of broader national character. Figures like Jawaharlal Nehru and Maulana Abul Kalam Azad envisioned AMU shedding its "communal" identity over time.
- **AMU Act Amendments (1965 and 1972):** The 1965 amendment gave the government greater administrative powers, sparking debates over state interference. The 1972 amendment aimed to address concerns over AMU's minority character but fell short of categorically restoring it.
- **1981 Amendment:** This amendment sought to nullify the impact of the S Azeez Basha judgment and reestablish AMU as a minority institution. However, subsequent legal challenges persisted.

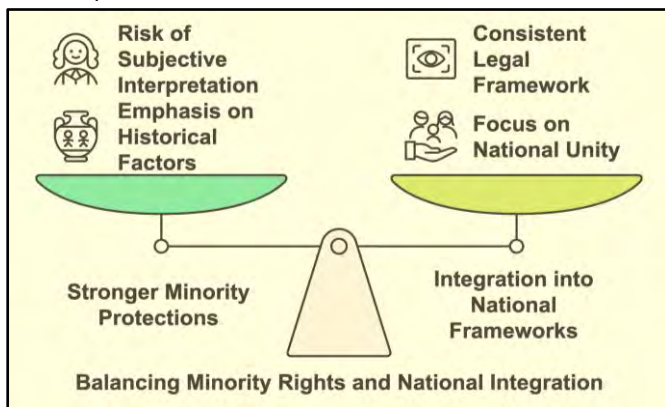
**Legal Journey of AMU's Minority Character**

- **The S Azeez Basha Judgment (1968):** The Supreme Court held that AMU was not a minority institution since it was established by a legislative act (AMU Act, 1920) rather than directly by the Muslim community. This judgment significantly undermined AMU's claim to minority status.
- **Challenges and Revisions**
  - **Allahabad High Court Rulings (2005):** The court ruled that the 1981 amendment did not restore AMU's minority character, disallowing 50% reservation for Muslim students.

- **Supreme Court References:** In 1981 and again in 2005, the question of AMU's minority status was referred to larger benches, leading to the 2024 Naresh Agarwal judgment.
- **Naresh Agarwal Judgment (2024)**
  - **Majority Opinion:** The court rejected S Azeez Basha's reasoning, holding that the AMU Act of 1920 did not negate the institution's minority character. Chief Justice D.Y. Chandrachud outlined five factors to determine minority character, focusing on establishment and administration.
  - **Dissenting Opinions:** Justices Dipankar Dutta and S.C. Sharma maintained that AMU's establishment by legislation precluded it from being considered a minority institution.
  - **Future Role:** The majority left the application of these tests to a future five-judge bench, refraining from conclusively affirming AMU's minority status.

**Constitutional Framework and Challenges**

- **Article 30:** Grants linguistic and religious minorities the right to establish and administer educational institutions free from state interference. The ambiguity arises in AMU's case due to its establishment via a legislative act.
- **Key Legal Tests**
  - **Chief Justice Chandrachud's Framework:** Three factors for establishment: intent, purpose, and implementation. Two factors for administration: retention of minority character and promotion of minority interests.
  - **Justice Surya Kant's Expanded Criteria:** Six factors for establishment and eleven for administration, making the assessment more complex.
- **Practical Difficulties:** Applying these tests to a pre-independence institution like AMU requires examining historical records and administrative practices. The subjective nature of these tests leaves room for interpretive differences.



**Persistent Backwardness of the Rural Economy**

**Introduction**

The rural economy in India continues to face significant backwardness, with issues such as poverty, unemployment, and agrarian distress dominating the landscape. Despite

numerous policy measures by successive governments, the rural economy's challenges remain unresolved, necessitating urgent and targeted interventions.

**Understanding the Rural Economy**

- **Dominance of Rural Population:** As of the 2011 Census, 68.85% of India's population resided in rural areas. Projections indicate that even by 2045, the rural population will constitute over 50% of the total population.

**Table 1: Rural and Urban Population in India, 1981–2011**

Census Year	Population (million)		
	Rural	Urban	Total
1981	525.6 (76.70)	157.7 (23.30)	683.3
1991	630.6 (74.30)	215.8 (25.70)	846.4
2001	742.6 (72.20)	286.1 (27.80)	1,028.7
2011	833.1 (68.85)	377.1 (31.15)	1,210.2

Figures in brackets indicate the percentage of the total.  
Source: Census of India (2012b).

- **Minimal Urbanization:** Between 1981 and 2011, the share of the rural population declined only marginally, reflecting a slow pace of urbanisation and economic transformation. States like Bihar, Assam, Himachal Pradesh, and Odisha had over 80% rural population in 2011.
- **Housing and Basic Amenities:** 39% of rural households lived in one-room houses, and 4.3% had no exclusive rooms. Only 30.8% of rural households had access to tap water compared to 70.8% in urban areas. Electricity reached just 53.2% of rural households, with 43.2% relying on kerosene for lighting. 86% of rural households used firewood, crop residue, or cow dung cakes as cooking fuel, highlighting energy poverty.

**Table 2: Rural and Urban Poverty in India, 2004–05 to 2011–12**

Year	Rural		Urban	
	Percentage	Number (in lakh)	Percentage	Number (in lakh)
2004–05	41.8	3,266.6	25.7	807.6
2009–10	33.8	2,782.1	20.9	764.7
2011–12	25.7	2,166.6	13.7	531.2

Based on Tendulkar methodology.  
Source: Planning Commission (2014).

- **Rural Poverty:** Rural poverty was 41.8% in 2004–05 and declined to 25.7% in 2011–12. However, six states had rural poverty ratios exceeding 35% in 2011–12.
- **Low Consumption Levels:** Rural Monthly Per Capita Consumption Expenditure (MPCE) remained significantly lower than urban MPCE, indicating a wide disparity in living standards.

**Rural Employment and Income**

- **Rural Workforce Characteristics:** 63% of rural workers were self-employed, mostly in low-income household

enterprises. Casual labour constituted 24.8% of rural employment, characterised by seasonal and irregular work. Only 12% of rural workers were salaried employees, often without job security or benefits.

**Table 3: Rural and Urban Monthly Per Capita Expenditure, 2011–12**

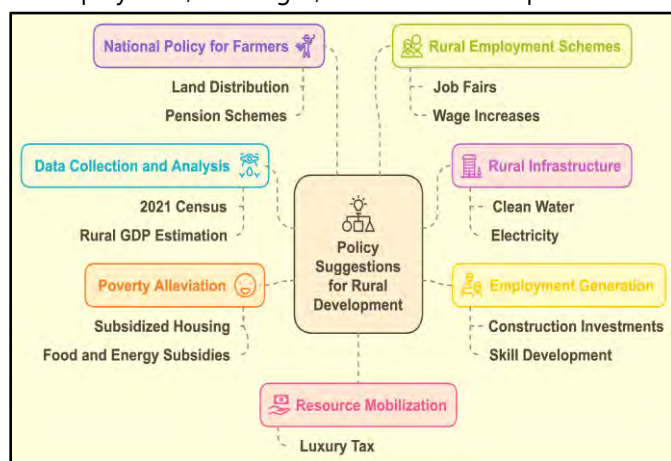
	Average MPCE (₹)	Share of Food Expenditure (%)
Rural	1,430	52.9
Urban	2,630	42.6

Source: Ministry of Finance (2023).

- **Sectoral Employment Patterns:** Agriculture employed 58.4% of rural workers but provided mostly seasonal and low-income jobs. Non-agricultural sectors like construction, manufacturing, and services provided limited opportunities due to insufficient investments.
- **Wage Disparities and Earnings:** Female workers earned significantly less than their male counterparts across all employment categories. Casual labourers' daily wages were inadequate to meet the basic needs of rural households.
- **Rising Unemployment:** Between 2011–12 and 2022–23, rural unemployment increased, with youth and educated individuals facing the highest rates. Unemployment among graduates was particularly high, reflecting a mismatch between education and available jobs.

**Agrarian Distress**

- **Marginal Farmers:** Marginal and small farmers (86% of all farmers) cultivated only 43% of the total agricultural area, making farming economically unviable.
- **Land Inequality:** Semi-medium, medium, and large farmers (13% of farmers) cultivated 53% of agricultural land, highlighting disparities in landholding.
- **Agricultural Labourers:** Agricultural labourers outnumber cultivators and face issues like irregular employment, low wages, and lack of social protection.



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