



Weekly Current Affairs



To The Point

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The Immigration and Foreigners Bill, 2025: A Comprehensive Overhaul

Context: The Union Government has introduced the **Immigration and Foreigners Bill, 2025**, aiming to **revamp India's immigration laws**. This proposed legislation seeks to replace outdated pre- and post-independence immigration statutes with a **modernized framework**.



Key Features of the Bill:

1. Repeal of Outdated Laws:

The Bill proposes to **replace four existing laws**:

- **The Passport (Entry into India) Act, 1920**
- **The Registration of Foreigners Act, 1939**
- **The Foreigners Act, 1946**
- **The Immigration (Carriers' Liability) Act, 2000**

2. Establishment of Bureau of Immigration:

- A **Bureau of Immigration** (as per **Section 5**) will be set up, headed by a **Commissioner**.
- This Bureau will oversee **entry, exit, and regulation of foreigners** in India.

3. Expanded Powers of the Central Government:

Under **Section 7**, the **Central Government** is empowered to:

- **Designate specific entry and exit points** for foreigners.
- **Enforce travel and residency restrictions** in certain areas.
- **Mandate identity verification, biometrics, and medical screening**.
- **Restrict associations and activities** of foreigners for security purposes.

4. Punishments and Penalties:

- **Unauthorized Entry (Section 21):** Foreigners entering India without valid documents may face **up to five years in prison and/or a fine of ₹5 lakh**.
- **Carrier's Liability (Section 17):** Transport operators (airlines, shipping companies, etc.) must provide **passenger and crew details** to immigration officials when requested.

Concerns and Criticism:

1. Potential Violation of Fundamental Rights:

- Critics argue that **excessive government control** over foreigners could **infringe on human rights**, particularly for **asylum seekers** and **genuine travelers**.

2. Lack of an Appeal Mechanism:

- The **absence of a clear appeals process** raises concerns about **due process** and **natural justice**, as government directives under this law may be binding **without judicial review**.

Conclusion:

The **Immigration and Foreigners Bill, 2025**, is a significant attempt to **modernize India's immigration system**. However, **concerns over executive overreach** and **human rights implications** highlight the **need for safeguards**. Incorporating **legal recourse** and **judicial oversight** would help achieve a **balanced approach** to national security and immigration governance.

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Trends and Progress of Housing in India – 2024

Context: The National Housing Bank (NHB) has released the **Report on Trends and Progress of Housing in India, 2024**, highlighting key insights into the **housing finance market, government initiatives, and emerging opportunities**.



Key Findings of the Report:

1. Dominance of Banks in Housing Finance:

- **Banks account for 81%** of total housing loans.
- **Housing Finance Companies (HFCs) contribute 19%**, reflecting their limited reach compared to banks.

2. Distribution of Housing Loans Across Income Groups:

- **Economically Weaker Sections (EWS) & Low-Income Groups (LIG): 39%** of outstanding loans.
- **Middle-Income Groups (MIG): 44%** share.
- **High-Income Groups (HIG): 17%** of the total housing loan portfolio.

3. Low Adoption of Green Buildings:

- **Only 5%** of buildings in India are classified as **'green'**, signaling a need for more **eco-friendly construction** initiatives.

Government Initiatives Boosting the Housing Sector:

1. **Pradhan Mantri Awas Yojana-Gramin (PMAY-G):** Focuses on **affordable rural housing** for low-income families.
2. **Pradhan Mantri Awas Yojana-Urban (PMAY-U):** Supports **low-cost housing projects in urban areas**, addressing the housing shortage in cities.
3. **Urban Infrastructure Development Fund (UIDF):** Enhances **infrastructure financing** for affordable housing and urban development.
4. **Affordable Rental Housing Complexes (ARHCs):** Provides **housing solutions for migrant workers and the urban poor**.

Challenges in the Housing Finance Sector:

1. Regional Disparities in Credit Flow:

- **Western, Southern, and Northern states** receive the highest **housing finance disbursements**.
- **Eastern and Northeastern states** struggle with **low credit penetration**, making housing finance less accessible.

2. Limited Reach of Housing Finance Companies (HFCs):

- HFCs offer **flexible loan eligibility criteria** and **efficient services**.
- However, they **lack a strong branch network in rural and underdeveloped areas**, restricting their impact.

3. Slow Growth of Green Buildings:



- **Higher initial costs, lack of developer incentives, and limited sustainability awareness** hinder the adoption of **eco-friendly housing**.

Opportunities for Growth in the Housing Sector:

1. Technological Advancements in Construction:

- **AI, data analytics, and predictive modeling** are revolutionizing housing finance and project planning.
- **3D printing and digitization of land records** improve construction efficiency and transparency.

2. Rising Demand for Smart and Affordable Housing:

- **Metro, Tier-II, and Tier-III cities** are witnessing an **increase in housing demand**.
- **Government funding and urbanization trends** are expected to drive **significant growth** in the sector.

Conclusion:

The housing sector in India is undergoing rapid transformation, driven by **government initiatives, financial support, and technological advancements**. However, **regional disparities, limited credit access, and slow adoption of green housing** remain challenges. **Strategic investments in sustainable housing and financial inclusion** could unlock the full potential of India's housing market.



**Former Philippine President Duterte Arrested by ICC**

Context: Former Philippine President Rodrigo Duterte has been arrested following a warrant issued by the International Criminal Court (ICC). He faces charges of crimes against humanity linked to his controversial "war on drugs," which led to the deaths of over 6,000 suspects, primarily young, poor urban males, as noted by the United Nations.



This development follows the ICC's earlier arrest warrant against Russian President Vladimir Putin for alleged war crimes in Ukraine.

Understanding the International Criminal Court (ICC):**1. About the ICC:**

The International Criminal Court (ICC) is the world's first permanent international tribunal dedicated to investigating and prosecuting serious international crimes.

2. Establishment and Jurisdiction:

- Founded under the Rome Statute (1998)
- 125 member states
- Has jurisdiction over four core crimes:
 1. **Genocide** – Intentional extermination of a national, ethnic, racial, or religious group.
 2. **Crimes Against Humanity** – Widespread or systematic attacks against civilians.
 3. **War Crimes** – Severe breaches of the Geneva Conventions.
 4. **Crimes of Aggression** – State-led aggression violating sovereignty and territorial integrity.

3. When Can the ICC Exercise Jurisdiction?

- If crimes are committed by a national of a State Party or on the territory of a State Party.
- If a non-member state voluntarily accepts ICC jurisdiction.
- If the UN Security Council refers a case to the ICC (under Chapter VII of the UN Charter).
- If the ICC Prosecutor initiates an investigation (own initiative or State Party request).

4. Challenges in Enforcement:

- No independent police force – ICC relies on state cooperation for arrests and extraditions.
- Non-member states (e.g., U.S., Russia, China, India, Israel) are not legally bound to comply.

Why Has India Not Joined the ICC?**1. Sovereignty and Political Interference:**

- India opposes the ICC's power to prosecute non-member states, as it could undermine national sovereignty.
- Concerns over political misuse, given the ICC's subordination to the UN Security Council.

2. Broad Powers of the ICC Prosecutor:



- The **Prosecutor can initiate cases suo motu (on their own)**, which **India fears could be misused for political purposes**.

3. Exclusion of Key Security Threats:

- **Terrorism and nuclear weapons**—major security concerns for India—are **not included under ICC jurisdiction**.

4. Risk to Indian Armed Forces:

- Concerns that **Indian military personnel in conflict zones (Kashmir, Northeast, UN peacekeeping missions)** could be **unfairly prosecuted**.

5. Allegations of Western Bias:

- ICC has been **criticized for selective prosecution**, as **powerful countries (e.g., U.S., Russia, NATO) have largely escaped accountability** despite military interventions.

Conclusion:

The **arrest of former Philippine President Rodrigo Duterte** marks a **significant moment for international justice**, demonstrating the ICC's **commitment to prosecuting human rights violations**. However, the **ICC's credibility remains contested**, as **several major global powers, including India, have refused to join** due to concerns over **sovereignty, political bias, and selective justice**.

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India's \$1 Billion Boost to the Creators' Economy – Key Takeaways

Context: The Indian government has pledged a **\$1 billion** investment to strengthen the **creators' economy**, empowering digital content creators to **enhance their skills, upgrade production quality, and expand globally**. The announcement was made by **Information and Broadcasting Minister Ashwini Vaishnaw**.



What is the Creators' Economy?

The **creators' economy** refers to the **digital ecosystem** where **content creators, influencers, bloggers, independent artists, and educators** generate revenue through social media, digital platforms, and online businesses.

Often called the **Orange Economy**, this sector includes:

- **Video creators, podcasters, gamers, and independent writers**
- Monetization avenues like **brand collaborations, subscriptions, ads, and merchandise sales**

Why is India Investing in the Creators' Economy?

1. **Expanding Digital Market:** With **over 800 million internet users**, India is one of the **largest digital markets globally**. **Affordable data and smartphone penetration** have driven a massive increase in digital content consumption.
2. **Economic Growth & Job Creation:** The creators' economy fosters **self-employment and entrepreneurship**, reducing dependence on traditional job sectors.
3. **Strengthening India's Global Influence:** Indian content creators are gaining **international recognition**, showcasing the country's **cultural and linguistic diversity** on the global stage.
4. **Technology-Driven Growth:** Advancements in **AI, AR/VR, blockchain, and NFTs** are **reshaping monetization models**, making the digital economy more **profitable and sustainable**.
5. **Rise of Regional Content:** The demand for **vernacular and regional language content** is rapidly expanding, making the digital economy **more inclusive and accessible**.

Challenges in the Creators' Economy:

Despite its potential, the creators' economy faces multiple roadblocks:

- **Unstable revenue streams** due to changing platform algorithms
- **Limited brand collaborations** and sponsorships
- **Intellectual property issues** such as content piracy and lack of legal protections

Government Initiatives to Support Creators:

1. **\$1 Billion Investment:** The government's fund will focus on **skill development, production enhancement, and global outreach** for Indian creators.
2. **Encouraging Digital Entrepreneurship:** Policies like **Digital India, Make in India, and Startup India** are promoting **digital business opportunities**.

Local Manufacturing Boost:

Production Linked Incentive (PLI) schemes are supporting **domestic manufacturing** of content creation tools like **smartphones, cameras, and laptops**.

**Infrastructure & Regulatory Support:**

- 5G rollout and improved broadband services to enhance streaming and content creation quality.
- Promoting regional languages to broaden audience reach.
- AI-based content moderation and digital skill training to ensure quality and ethical content.

WAVES 2025: A Game-Changer for the Orange Economy

The government is set to host the **World Audio Visual and Entertainment Summit (WAVES) 2025**, a global platform for collaboration, innovation, and business expansion in the media and entertainment sector.

Key Highlights of WAVES 2025:

- Encouraging international partnerships and co-productions
- Bridging creativity, media, and technology to reshape the industry
- Positioning India as a global leader in digital entertainment

The summit will also strengthen cultural diplomacy, promoting unity and global cooperation through creative industries.

Final Thoughts:

India's \$1 billion investment in the creators' economy marks a significant shift towards digital entrepreneurship and cultural influence. With government support, advanced technology, and growing digital consumption, the country is set to become a powerhouse in the global creative economy.

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**Aadhaar-Voter ID Linkage: Election Commission's High-Level Meeting**

Context: The Election Commission of India (ECI) is set to hold a **high-level meeting** with officials from the **Union Home Ministry, Law Ministry, and the Unique Identification Authority of India (UIDAI)** to discuss **linking Aadhaar with Voter ID**. This move comes amid concerns raised by the **Opposition** regarding **irregularities in electoral rolls**.

**What is the Elector's Photo Identity Card (EPIC)?**

- Issued to **all registered voters** as an identification document.
- However, **voting rights are granted only if the voter's name is in the electoral roll**.
- Introduced in 1993, governed by the **Registration of Electors Rules, 1960**.

EPIC Number Structure:

- A **unique 10-digit alphanumeric code**, consisting of:
 - 3 alphabetic characters
 - 7-digit numeric sequence
- Used to **link a voter to their photo, constituency, and polling station**.
- Designed to **prevent impersonation and electoral fraud**.

Issues with EPIC:

- The **Election Commission admitted** that **duplicate EPIC numbers** occurred due to **manual data entry and decentralized systems** before ERONET.
- **ERONET 2.0**, an **updated web-based platform**, is expected to **eliminate duplicate EPIC numbers**.

Aadhaar-Voter ID Linkage: Background & Legal Framework**Key Legal Developments:**

- **2015 Supreme Court Ruling:** The SC halted **Aadhaar-EPIC linking**, ruling that Aadhaar could not be **mandatory for government benefits**.
- **2021 Amendment:** The **Representation of the People Act, 1951**, was **amended** to **allow Aadhaar-Voter ID linkage**.
- **2022 Data Collection Begins:** The ECI started **voluntary collection of Aadhaar details** but has not yet used them for **electoral roll revisions**.

Purpose of Aadhaar-Voter ID Linkage:

- **Eliminate Duplicate Voter Registrations** – Aadhaar can help detect **multiple registrations** and **clean electoral rolls**.
- **Enhance Electoral Roll Integrity** – Aimed at **preventing fraud and electoral manipulation**.

Key Meeting Details – March 18, 2025:**Participants:**

- **Chief Election Commissioner (CEC):** Gyanesh Kumar
- **Election Commissioners:** Sukhbir Singh Sandhu, Vivek Joshi



- **Union Home Secretary:** Govind Mohan
- **Legislative Department Secretary:** Rajiv Mani
- **UIDAI CEO:** Bhuvnesh Kumar

Agenda:

- Discuss **Aadhaar-EPIC linkage** amid concerns over **voter list irregularities**.
- Address the **Opposition's allegations of voter list manipulation**.

Opposition's Concerns & Allegations:

Allegations of Electoral Roll Manipulation:

- **Trinamool Congress (TMC):** Claims that **identical EPIC numbers exist across multiple states**.
- **Rahul Gandhi & INDIA Bloc:** Raised concerns about **discrepancies** in Parliament.

ECI's Response:

- **Acknowledged errors** in EPIC numbering.
- **Assured correction of duplicate EPICs** within three months.
- Clarified that **identical EPIC numbers do not necessarily indicate fake voters**.

Government & ECI's Stand on Aadhaar-EPIC Linkage:

Voluntary Nature of Aadhaar Submission:

- **Law Ministry (2024):** Aadhaar submission remains **voluntary**.
- **Form 6B:** Provides two options – **submit Aadhaar** or **declare non-availability**.

Existing Data Collection & Future Steps:

- **As of January 2025:**
 - India has **99 crore** registered voters.
 - **66.23 crore** Aadhaar numbers have been collected under Supreme Court directives.
- **Upcoming De-duplication Process:**
 - ECI to **update software** to **identify and replace duplicate EPICs**.
 - **New EPICs** will be issued in **non-election states** first.

Conclusion: Impact on Electoral Reforms

The ECI's **high-level meeting** aims to **address electoral integrity concerns** through **Aadhaar-Voter ID linkage**. While the **Opposition** calls it a **delayed response**, the **Election Commission** insists that this initiative will **strengthen electoral transparency and credibility**. The meeting's **outcome** could **shape the future of India's electoral system**.

**ISRO Successfully Undocks SpaDeX Satellites, Advancing India's Space Capabilities**

Context: In a groundbreaking achievement, the **Indian Space Research Organisation (ISRO)** has successfully **undocked the SpaDeX (Space Docking Experiment) satellites, SDX01 (Chaser) and SDX02 (Target)**, nearly two months after their historic docking. The **maneuver was executed at 9:20 AM on March 14, 2025**, reinforcing **India's position as the fourth nation**—after the **United States, Russia, and China**—to develop advanced space docking technology.

**About the SpaDeX Mission:**

SpaDeX (Space Docking Experiment) is an ambitious **ISRO mission** aimed at demonstrating India's ability to autonomously **dock and undock satellites in orbit**. The key phases of the experiment included:

- **Docking (January 16, 2025):** Two **220-kg satellites (SDX01 and SDX02)** were maneuvered into the same orbit and progressively brought together.
- **Power Sharing:** Once docked, the satellites operated as a **single composite unit**, successfully sharing power and resources.
- **Undocking (March 14, 2025):** The **capture levers were released**, and the satellites were **commanded to separate**, completing the **undocking phase**.

ISRO officials conducted **rigorous testing and analysis** before executing the undocking maneuver, ensuring a flawless execution in India's **first-ever docking mission**.

Why This Technology Matters?

1. **Chandrayaan-4 and Lunar Sample Return Missions:** ISRO's upcoming **Chandrayaan-4** mission will involve retrieving **lunar surface samples**, requiring:
 - **Docking in Lunar Orbit:** The **ascender module** carrying Moon samples will **dock with a transfer module**.
 - **Docking in Earth Orbit:** The **transfer module** will **dock with a re-entry module**, ensuring a **safe return of lunar samples to Earth**.
2. **India's Space Station – Bharatiya Antariksha Station:** By 2035, India plans to launch its own space station. This station will be constructed in **multiple phases**, requiring **successful docking and undocking of five modules in space**.
3. **Human Spaceflight & Resupply Missions:** For future **human spaceflight** programs, ISRO's docking technology will be **essential** for:
 - **Astronaut transport** to space stations.
 - **Cargo resupply missions** similar to those conducted for the **International Space Station (ISS)**.

Bharatiya Docking System – A Major Innovation: One of the most significant breakthroughs of the **SpaDeX mission** is the development of **Bharatiya Docking System**, which features:



- **International Standards Compliance:** Inspired by the **International Docking System Standard (IDSS)** used for ISS docking.
- **Efficient Design:** Unlike the ISS docking system with 24 motors, ISRO's system operates with just two motors.
- **Androgynous Docking Mechanism:** Both the Chaser and Target satellites have identical docking systems, ensuring seamless docking and undocking.

This indigenous innovation **strengthens India's self-reliance in space technologies**, paving the way for future deep-space missions.

What's Next? ISRO's Future Plans:

- **Further docking and undocking experiments** to enhance system precision.
- **Integration of docking systems into key missions**, including:
 - **Gaganyaan** (India's first human spaceflight mission).
 - **Lunar exploration and satellite servicing projects.**
- **Enhancing automation** in docking technology for upcoming **interplanetary missions.**

Conclusion:

The successful **undocking of the SpaDeX satellites** marks a **major milestone** for ISRO, establishing its capabilities in **autonomous space docking technology**. This achievement is **crucial for India's ambitions in lunar exploration, space station construction, and human spaceflight missions.**

With the **Bharatiya Docking System**, ISRO has taken a **giant leap toward self-sufficiency in space exploration**, positioning India as a **global leader in advanced space technologies.**

TOGETHER WE SCALE HEIGHTS

Uniyala keralensis: Kerala's Botanical Gem

Context: Researchers have identified a **new plant species**, now officially named **Uniyala keralensis**, in honor of the **Indian state of Kerala**. This fascinating species belongs to the **Asteraceae family** and is found exclusively in the **southwestern region of India**.

Unique Characteristics:

Uniyala keralensis is a **versatile shrub**, varying in size from **one to three meters** in height. It stands out with its **delicate light purple florets**, adding charm to its natural surroundings. This species is distinguished by:

- **Larger leaves**, providing a unique texture
- **Elongated petioles**, the slender stalks attaching leaves to stems
- **Fewer lateral veins**, differentiating it from closely related species



Past, Present & Future:

- **Past:** The plant has likely existed for centuries, quietly thriving in the biodiverse landscapes of Kerala, unnoticed by science until recently.
- **Present:** The species currently flourishes in **open landscapes** along the **western mountain slopes** of the **Agasthyamala Biosphere Reserve (ABR)**, at elevations between **700 and 1,400 meters**. It **blooms and bears fruit from August to April**.
- **Future:** With ongoing **habitat changes and climate fluctuations**, further studies are required to assess its long-term survival. Conservation measures may be necessary to ensure its sustainability.

Population & Conservation Status:

The known population consists of around **5,000 individuals** spread across **four subpopulations**, covering an area of approximately **250 km²**. However, due to limited data, **Uniyala keralensis** has been classified as **Data Deficient (DD)** under the **IUCN Red List Criteria (2024)**.

This **exciting discovery** adds to the **rich biodiversity of Kerala**, reinforcing the importance of **botanical research and conservation**. With more scientific exploration, **Uniyala keralensis** could become a symbol of Kerala's **natural heritage and ecological significance**.



Raisina Dialogue: Shaping the Future of Global Diplomacy

Context: The **Raisina Dialogue 2025** is set to bring together global leaders, including **New Zealand Prime Minister Christopher Luxon**, foreign ministers from **at least 18 nations**, top corporate executives, and foreign policy experts. This high-profile gathering will take place in **New Delhi**, reinforcing its status as a premier platform for global discussions.

What is the Raisina Dialogue?

The **Raisina Dialogue** is **India's leading conference on geopolitics and geo-economics**, dedicated to addressing the world's most pressing challenges.



- **Inspired by the Munich Security Conference and the Shangri-La Dialogue**, it serves as a global forum for policy discussions.
- It has been held **annually since 2016** in **New Delhi**, growing in prominence each year.
- The dialogue is designed as a **multi-stakeholder platform**, bringing together **heads of state, cabinet ministers, government officials, business leaders, media professionals, and academics** for in-depth discussions on global affairs.
- **Hosted by the Observer Research Foundation (ORF) in collaboration with the Ministry of External Affairs, Government of India**, the event is backed by numerous organizations committed to fostering meaningful international dialogue.

Past, Present & Future:

- **Past:** Since its inception in 2016, the Raisina Dialogue has evolved into a major diplomatic forum, attracting influential voices from around the world. Each year, it has tackled critical issues such as security, trade, technology, and sustainability.
- **Present:** The **2025 edition** will focus on the theme **"Kalachakra: People. Peace. Planet."**, highlighting the interconnectedness of humanity, global stability, and environmental sustainability.
- **Future:** With the world facing complex geopolitical shifts, climate challenges, and emerging technologies, the **Raisina Dialogue is expected to play an even greater role in shaping policies and fostering global cooperation** in the coming years.

This **prestigious conference** not only strengthens **India's diplomatic leadership** but also provides a **crucial platform for global dialogue**, ensuring that diverse perspectives contribute to the resolution of global challenges.

**PM-YUVA 3.0: Nurturing the Next Generation of Indian Authors**

Context: The Ministry of Education, Department of Higher Education has recently launched **PM-YUVA 3.0** – the **Prime Minister's Scheme for Mentoring Young Authors**. This initiative is designed to **foster a culture of reading, writing, and literary excellence** among India's youth.

What is PM-YUVA 3.0?

PM-YUVA 3.0 is a prestigious mentorship program aimed at **young and aspiring writers below the age of 30**. The scheme provides guidance and support to **budding authors**, helping them articulate their perspectives on **India's past, present, and future** through literary works.

**Key Objectives:**

- Develop a **new generation of Indian writers** who can contribute meaningful narratives.
- Encourage young minds to write on significant themes such as:
 - **The Contribution of the Indian Diaspora in Nation-Building**
 - **Indian Knowledge Systems**
 - **Makers of Modern India (1950-2025)**
- Offer a **platform for emerging authors** to express their ideas and showcase India's rich heritage and evolving identity.

Past, Present & Future of PM-YUVA

- **Past:** The earlier editions, **PM-YUVA 1.0 and 2.0**, successfully mentored **talented young writers** and created a **vibrant literary movement**. The initiative has already given rise to impactful books on India's history, culture, and contemporary affairs.
- **Present:** The **PM-YUVA 3.0 edition** is set to be **bigger and better**, offering structured mentorship, **financial support**, and **global exposure** to selected writers.
- **Future:** By shaping **India's literary landscape**, this scheme aims to cultivate a **strong intellectual foundation** for the nation, ensuring **future generations have access to insightful, well-researched works** reflecting **India's diversity and dynamism**.

Exciting Features of PM-YUVA 3.0:

- **Selection Process:**
 - Participants must submit a **10,000-word book proposal**, including a **2,000-3,000 word synopsis**, a **chapter outline**, **sample chapters (7,000-8,000 words)**, and **references**.
 - A **panel of experts** appointed by **National Book Trust (NBT), India** will select **50 talented authors**.
 - **Previous PM-YUVA winners (1.0 & 2.0)** are **ineligible** for this edition.
- **Mentorship & Exposure:**
 - Selected writers will work with **renowned authors and literary experts**.
 - They will participate in **literary festivals**, fostering an exchange of ideas on national and global platforms.
- **Book Publishing & Recognition:**



- The books will be **published by the National Book Trust, India** and **translated into multiple Indian languages** to promote 'Ek Bharat Shreshtha Bharat'.
- A **royalty of 10%** will be granted upon successful publication.
- **Financial Support:**
 - Each selected author will receive a **monthly scholarship of 50,000 for six months**, totaling **3 lakh**.
 - Authors will be given **opportunities to promote their books**, encouraging a **reading and writing culture across India**.

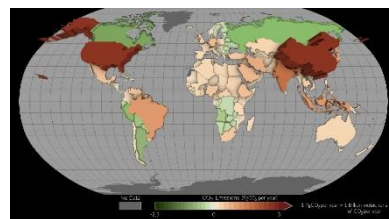
A Step Towards a Literate & Informed India:

PM-YUVA 3.0 is not just a **writing program**—it is a **nation-building initiative** that empowers **young storytellers to shape India's literary and intellectual future**. By fostering **original voices and diverse perspectives**, this scheme ensures that **India's rich heritage and progressive journey** continue to inspire generations to come.



Impact of Greenhouse Gas Emissions on Satellite Sustainability

Context: A groundbreaking study published in *Nature Sustainability* has revealed a critical link between **rising greenhouse gas (GHG) emissions** and the **long-term sustainability of satellites** in Earth's orbit. The study warns that increasing emissions could significantly **reduce the number of satellites that can safely operate in space**, posing a challenge for global communications, navigation, and scientific research.



How Greenhouse Gas Emissions Affect Earth's Upper Atmosphere:

The **upper atmosphere** comprises the **mesosphere (50-85 km)** and the **thermosphere (85-600 km)**.

- **Rising GHG levels** cause more **infrared radiation** to escape into space, leading to **cooling and contraction** of the atmosphere.
- **Atmospheric contraction** reduces **air density** in **Low Earth Orbit (LEO)**, which affects satellite movement.
- **Lower air density** leads to **weaker atmospheric drag**, allowing **space debris** to **remain in orbit longer**.
- The accumulation of **non-deorbiting debris** **increases the risk of satellite collisions**, worsening **space congestion** and making future satellite missions more challenging.

Projected Impact on Satellite Sustainability:

Researchers from **MIT Cambridge** analyzed different **emission scenarios**, using **greenhouse gas levels from the year 2000** as a baseline. Their findings indicate:

- Under the **worst-case emission scenario (SSP5-8.5)**, the number of **sustainable satellites in LEO** could **drop by 50-66% by 2100**.
- **Deorbiting rates of satellites and debris** are expected to **decline** under **moderate-to-high CO₂ emission scenarios**, further exacerbating congestion in orbit.

Understanding the Shared Socio-economic Pathway (SSP5-8.5):

The **SSP5-8.5 scenario** is one of the **five Shared Socioeconomic Pathways (SSPs)** used in **climate modeling** by the **Intergovernmental Panel on Climate Change (IPCC)**. It represents an extreme **high-emission future** with:

Key Features:

✓ Severe Climate Impact

- CO₂ concentration rises drastically, leading to a **global temperature increase of 4-5°C by 2100**.
- More frequent **extreme weather events**, **rising sea levels**, and **biodiversity loss**.

✓ Fossil Fuel Dependency

- Energy demand continues to be met by **coal, oil, and gas**.
- **Minimal adoption of renewable energy**, leading to worsening environmental conditions.

What Lies Ahead?

- If **GHG emissions** continue at current rates, the **space environment** will face unprecedented challenges:
- **Increased risk of satellite collisions** due to prolonged orbital debris lifespan.
- **Higher costs and risks for future satellite launches and operations**.
- **Potential disruptions in global satellite-dependent systems**, including **GPS**, **climate monitoring**, and **communication networks**.

Urgent Action is Needed!

- The study underscores the **need for sustainable space management**, reduced emissions, and better **debris mitigation strategies** to ensure **satellite sustainability** for future generations.

Anthropologists Call for a New Framework to Identify Scheduled Tribes

Context: Experts and **anthropologists** are advocating for a **paradigm shift** in how **tribes** are identified in India. Instead of a **rigid binary classification**, they propose a **"spectrum of tribalness"** that assesses communities on multiple dimensions.

This demand gains significance amid **rising claims for Scheduled Tribe (ST) status**, including those by the **Meitei community in Manipur**.



Obsolete Criteria: A Need for Change

Currently, the **Union government** follows the **Lokur Committee (1965)** criteria, which include:

- **Primitive traits**
- **Distinctive culture**
- **Geographical isolation**
- **Shyness of contact with the larger community**
- **Backwardness**

However, experts argue that these criteria are **outdated, condescending, and ineffective**. No community fully meets these definitions, making them unsuitable for modern **policy decisions**.

A New Approach: Spectrum-Based Classification:

Scholars propose **moving away from rigid criteria** and introducing a **matrix or spectrum-based system** with **weighted indicators** to determine a community's degree of tribalness.

Both the **Anthropological Survey of India (AnSI)** and the **National Commission for Scheduled Tribes (NCST)** are actively working on a **systematic classification tool** for better assessment.

Proposed Indicators for Tribal Identity:

Experts suggest incorporating both **tangible and intangible** aspects, including:

- **Social institutions** – Marriage patterns, kinship structures, classification of relatives
- **Rituals and traditions**
- **Language and dialects**
- **Material culture** – Traditional headgear, weaponry, artifacts
- **Self-identification** by the community itself

A potential classification tool may include **over 150 indicators**, providing a **more holistic** approach than the **existing five criteria**.

Concept Note & Policy Impact:

- A **concept note** highlights the **challenges in defining tribes** and emphasizes the **need for a refined classification system**. This tool will enable **Tribal Research Institutions (TRIs)** to prepare **accurate ethnographic reports**, aiding in **policymaking and governance**.

Rising Demands for ST Status & Social Conflicts:

- Currently, **India recognizes 756 ST entries**, including sub-entries. Since the **2011 Census**, **27 new communities** have been added. However, **hundreds of communities** continue to demand **ST status**,



leading to **inter-community tensions**—for instance, the **Meitei vs. Kuki-Zo & Naga tribes** in Manipur.

Civilizational vs. Evolutionary Approach:

- Experts recommend shifting from an **evolutionary model** (used in **Australia and China**) to a **civilizational or historical model**. This ensures that communities are understood **as they perceive themselves**, rather than being categorized **as the "other"** by external observers.

Conclusion: Towards a Fair and Inclusive System

A **revised classification framework** will enable **better governance, equitable distribution of benefits, and conflict resolution**. The focus should be on **cultural identity, historical factors, and self-identification**, rather than relying on **outdated colonial-era definitions**.

This **progressive approach** will help ensure that **tribal communities** receive the **recognition and support** they truly deserve.





Deep-Sea Creatures Rising to the Surface: A Warning from the Ocean?

Context: In recent months, **deep-sea creatures** like the **anglerfish** and **oarfish**, typically found in the ocean's darkest depths, have been appearing near the surface in various locations. This unusual phenomenon has sparked **scientific inquiry** and **public concern**, with some linking it to **climate change**, **seismic activity**, and **oceanic disruptions**.



The Black Sea Devil: A Rare Surface Encounter:

One of the most **astonishing sightings** occurred in **February 2025**, when the **Black Sea Devil anglerfish** was filmed alive near the surface off the coast of **Tenerife**.

Unique Features of the Anglerfish:

- Resides in the **bathypelagic zone** (Midnight Zone), where sunlight never reaches.
- Uses a **bioluminescent lure** to attract prey.
- Has **razor-sharp teeth** and an expandable stomach to consume prey **twice its size**.
- Exhibits **extreme sexual dimorphism**—males, significantly smaller, attach to females as **permanent parasites**.

The Oarfish: A Harbinger of Disaster?

The **oarfish**, a **long, ribbon-like deep-sea fish**, has been linked to **earthquake predictions** in folklore.

Myth vs. Science

- In **Japanese folklore**, the oarfish is called **Ryūgū no Tsukai** or "**Messenger of the Sea God**".
- Sightings occurred before the **2011 Fukushima earthquake**, fueling beliefs that they **predict seismic activity**.
- **Recent sightings** in **Baja California** and the **Canary Islands** have reignited similar fears.

Scientific Facts about Oarfish:

- Typically found at depths of **200 to 1,000 meters**.
- Holds the title of **longest bony fish**, reaching up to **36 feet (11 meters)**.
- Swims using **amiiform movement**, undulating its dorsal fin while keeping its body straight.
- Feeds on **zooplankton, shrimp, jellyfish, and small fish**.

Scientific Explanations: Why Are Deep-Sea Creatures Rising?

While folklore suggests these sightings **foretell disasters**, scientists offer **logical explanations**:

1. Climate Change & Warming Oceans:

- The **ocean absorbs nearly 90%** of excess heat from **global warming**, affecting marine **currents** and **oxygen levels**.
- Deep-sea creatures may be forced into **shallower, cooler waters** to **survive**.

2. Underwater Seismic Activity:

- Some researchers believe **seismic shifts** release **gas bubbles, electrostatic charges, or toxic compounds** like hydrogen peroxide.



- These disturbances could **disorient deep-sea species**, causing them to surface.

3. El Niño & La Niña Effects:

- These **climate cycles** alter **temperature and ocean currents**, leading to **unpredictable marine movements**.

4. Increased Human Observation:

- With **advancements in technology** and **social media**, rare deep-sea sightings are now **more widely documented**, giving the **impression** that they are happening more frequently than before.

Conclusion: A Wake-Up Call from the Ocean?

The **rise of deep-sea creatures to the surface** is a **rare but growing phenomenon**. Whether it signals **ecological distress**, **climate change impacts**, or simply an increase in human awareness, it **underscores the need for deeper oceanic research**.

While **folklore and myths** add an element of mystery, science provides **critical insights**—suggesting that these creatures may be revealing **hidden changes** in the planet's most uncharted realm: the **deep sea**.





Expanding Mangrove Forest Cover: A Vital Step for Climate Resilience

Context: Tamil Nadu has witnessed a **remarkable increase in mangrove forest cover**, nearly **doubling** from **4,500 hectares in 2021 to 9,039 hectares in 2024**. This growth is attributed to **new plantations** and the **preservation of existing mangroves**, reinforcing their role in coastal protection and climate resilience.



Understanding Mangroves:

Mangroves are **salt-tolerant plants** that thrive in **tropical and subtropical intertidal regions**. They serve as **natural bio-shields**, safeguarding coastlines from extreme climatic events while supporting diverse marine and terrestrial ecosystems.

Key Features of Mangroves:

- **Adaptation to Coastal Conditions:** These plants survive in **brackish water** and **wet, loose soil**, utilizing **tangled prop roots** to withstand tides and stabilize sediments.
- **Ecosystem Support:** Mangroves enhance **water clarity**, improve **soil fertility**, and serve as **habitats for endangered species** like the **Royal Bengal Tiger** and **river dolphins**.

Significance of Mangroves:

1. Climate Change Mitigation:

- They **stabilize coastlines**, **reduce erosion**, and **protect coastal communities** from rising sea levels and natural disasters.
- Mangroves act as **carbon sinks**, storing **four times more carbon** than terrestrial forests, making them crucial for achieving **net zero emissions**.

2. Natural Disaster Defense:

Mangroves act as **the first line of defense** against **tropical storms, cyclones, and hurricanes**, slowing down winds and reducing land impact.

3. Socio-Economic Contributions:

- They provide **livelihood opportunities** for millions, particularly in **small-scale fishing communities**.
- Mangroves support **sustainable timber** and **fuelwood collection**, ensuring economic and environmental balance.

Threats to Mangrove Ecosystems:

Mangrove forests are under threat due to **rapid urbanization, industrial expansion, and unsustainable resource extraction**. Major challenges include:

- **Coastal land conversion** for **agriculture and aquaculture**, disrupting natural tidal flows.
- **Deforestation** driven by **timber, fodder, and fuelwood demands**.
- **Industrial pollution and encroachments** in Coastal Regulation Zone (CRZ) areas.

Conservation Initiatives:

1. MISHTI Initiative:

The Government of India launched the **MISHTI (Mangrove Initiative for Shoreline Habitats & Tangible Incomes)** program to promote **large-scale mangrove plantations**. It is implemented through:

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- MGNREGS (Mahatma Gandhi National Rural Employment Guarantee Scheme)
- CAMPA Fund (Compensatory Afforestation Fund Management and Planning Authority)
- Other financial sources

MISHTI aligns with India's Nationally Determined Contributions (NDCs) to create an additional 2.5-3 billion tonnes of carbon sink by 2030.

2. Mangrove Alliance for Climate (MAC):

India joined the Mangrove Alliance for Climate (MAC) at COP27 in Egypt, reinforcing global efforts to combat climate change through mangrove conservation.

Way Forward: Strengthening Mangrove Conservation

- **Sustainable Livelihoods:** Promoting eco-tourism and carbon credit programs can provide economic benefits while ensuring mangrove protection.
- **District-Specific Planning:** Localized strategies for mangrove preservation and expansion should be developed based on regional ecological needs.
- **Community Participation:** Engaging local communities in conservation efforts is essential for long-term sustainability.

Conclusion:

Mangroves are nature's frontline protectors, playing a pivotal role in climate resilience, biodiversity conservation, and coastal stability. Their protection is not just an environmental necessity but an economic and social imperative, ensuring a sustainable future for generations to come.

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India-New Zealand Trade Talks Resume After a Decade

Context: India and New Zealand have **revived negotiations** for a **Free Trade Agreement (FTA)** after a **decade-long pause**. This move aims to **deepen economic ties**, **boost bilateral trade**, and **strengthen market access** between the two nations.



Did You Know?

- India plans to **conclude trade negotiations** with the **US and the European Union** by **2025**.
- Talks are ongoing with **Australia** for a **comprehensive trade deal**, alongside **renegotiations of the ASEAN trade pact**.

India-New Zealand Relations: A Historical Perspective:

- Diplomatic Ties Since 1952:** Both nations share **strong Commonwealth ties**, **democratic governance**, and **common law practices**.
- Tourism & Sports Bonds:** Cricket, hockey, and mountaineering have long fostered goodwill.
- Policy Initiatives:**
 - "**Opening Doors to India**" (2011): Recognized India as a **priority partner**.
 - "**India-NZ 2025 – Investing in the Relationship**" (2020): Aims for a **long-term strategic partnership**.

Bilateral Trade (2023-24):

- Total Trade Volume:** **US\$ 1.75 billion**
- New Zealand's Exports to India:** Wool, Iron & Steel, Fruit & Nuts, Aluminium.
- India's Exports to New Zealand:** Pharmaceuticals, Machinery, Made-up Textile Articles, Pearls, Precious Stones & Metals.

Defence Cooperation:

- Naval Engagements:**
 - INSV Tarini** visited New Zealand (Dec 2024 – Jan 2025).
 - INS Sahyadri & INS Kolkata** made port calls (Aug-Sept 2023).
- Strategic Collaboration:**
 - India contributes personnel to **Combined Task Force 150**, led by the **Royal New Zealand Navy** from Jan 2025.

Strengthening Customs Cooperation:

- In **August 2024**, both countries signed a **Customs Cooperative Arrangement** to **facilitate trade** and **combat organized crime**.

Commitment to Renewable Energy:

- New Zealand** ratified the **International Solar Alliance** during the **Indian President's visit** to **Wellington** (Aug 2024), reinforcing cooperation in clean energy.

Education Ties:

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- **India is the 2nd largest source of international students in New Zealand**, with around 8,000 students enrolled in fields like **IT, hospitality, science, engineering, and architecture**.

People-to-People & Cultural Ties:

- A **vibrant Indian diaspora** fosters strong cultural connections.
- Indian **festivals like Diwali, Holi, Baisakhi, and Onam** are celebrated across New Zealand.
- **Indian classical arts (Kathak, Bharatnatyam), Bollywood dance, and Hindi language** are taught in New Zealand schools.

Sports Diplomacy:

- **Cricket, hockey, and mountaineering** strengthen bilateral ties.
- **Sir Edmund Hillary**, a national hero in New Zealand, remains iconic in India for his mountaineering achievements.

Trade Agreement: The Latest Developments

- **Comprehensive Economic Cooperation Agreement (CECA)** negotiations began in **April 2010** to facilitate **trade, services, and investments**.
- Talks were **stalled in 2015** after **nine rounds of discussions**.
- The revived **FTA negotiations** aim to achieve **balanced outcomes, improve supply chain integration, and enhance market access**.

Challenges in Trade Talks:

- **India's Demands:** Greater **market access for skilled professionals and the IT/services sector**.
- **New Zealand's Resistance:** Hesitant to grant **work opportunities similar to Australia and China**.
- **Tariff Differences:**
 - New Zealand's low import tariff: **2.3%**
 - **India's import tariff: 17.8%**, requiring significant reductions.
- **India's Dairy Market Protection:**
 - New Zealand seeks **greater access to India's dairy market**, a sensitive sector for India.
- **India's Past Trade Strategy:**
 - India **withdrew from RCEP in 2019** due to **market access concerns**.

Conclusion & Way Forward:

India and New Zealand share a **strong, evolving partnership** built on **mutual respect and shared goals**. With efforts to enhance **trade, defense, education, and cultural exchanges**, this **revived trade dialogue** is expected to **boost economic resilience and prosperity** for both nations.



Alarming Surge in Global Sea Levels in 2024: A Growing Climate Crisis

Context: NASA has reported that **global sea levels are rising at an unprecedented rate**, with an increase of **0.59 cm per year in 2024**, surpassing the **previous projection of 0.43 cm**. This alarming trend underscores the **intensifying impacts of climate change** on the planet's oceans.

Understanding Global Mean Sea Level (GMSL):

The **Global Mean Sea Level (GMSL)** is a **key climate indicator**, reflecting changes in both the **oceans and the cryosphere (Earth's ice-covered regions)**. It represents the **average height of the entire ocean surface** and is influenced by multiple climate-driven factors.

Major Causes of Rising Global Sea Levels:

1. Ice Melt:

- **Warming temperatures** accelerate the melting of **glaciers and ice sheets**, adding freshwater to the ocean.

2. Thermal Expansion:

- As **oceans absorb heat**, seawater **expands**, raising sea levels.
- In **2024**, **thermal expansion** contributed to **two-thirds of the rise**, overtaking **ice melt** as the dominant factor.

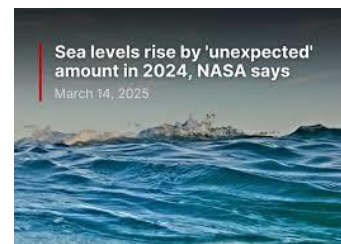
3. Land Water Storage Changes:

- **Human activities** like **groundwater extraction and dam construction** affect water distribution between land and oceans.
- Since **1993**, global sea levels have risen by **10 cm**, with the rate of rise more than doubling.
- **2024 was the warmest year on record**, with ocean temperatures at their highest levels in three decades.

Consequences of Rising Sea Levels:

1. **Threat to Infrastructure:** Roads, bridges, and buildings face **greater damage**, leading to **escalating repair costs**.
2. **Increased Coastal Flooding & Erosion:** More frequent and severe **coastal flooding** threatens **freshwater supplies** through **saltwater intrusion**.
3. **Damage to Coastal Ecosystems:**
 - **Mangroves, coral reefs, and wetlands**—natural coastal barriers—are at risk.
 - Habitat loss disrupts **marine biodiversity and fisheries**.
4. **Economic & Social Challenges:**
 - **Higher costs for coastal protection**, such as **sea walls and flood barriers**.
 - **Displacement of communities**, with loss of livelihoods in **tourism, fishing, and agriculture**.
 - **Strain on social services** as migration from **vulnerable coastal areas** increases.

Countries Most at Risk from Rising Seas:



**High-Risk Nations:**

- Bangladesh, China, India, and the Netherlands face severe threats due to **dense coastal populations**.

Pacific Island Nations on the Brink:

- Kiribati, Tuvalu, and the Marshall Islands are at **extreme risk**, as rising seas **threaten their very existence**.

Strategies to Counter Sea Level Rise:**1. Reduce Greenhouse Gas Emissions:**

- **Cutting emissions** is the most critical step to **slow global warming** and limit sea level rise.

2. Mitigation & Adaptation Measures:

- **Build protective infrastructure** like sea walls, storm surge barriers, and improved drainage systems.
- **Flood-resistant urban planning**, incorporating elevated buildings and **sustainable coastal defenses**.

3. Restoring Natural Barriers:

- **Mangrove forests, wetlands, and coral reefs** absorb **wave energy**, reducing **storm surge impacts**.

4. Strengthening Disaster Preparedness:

- **Enhancing early warning systems** and **disaster risk reduction plans**, supported by the **UN and global agencies**.
- **Planned relocation** of highly vulnerable communities to safer regions.

Conclusion:

The **rapid rise in sea levels** is a **clear warning** of the escalating **climate crisis**. Urgent **global action** is needed to **reduce emissions, enhance coastal resilience, and protect vulnerable communities**. Without immediate intervention, the **economic, social, and environmental costs** will continue to mount, threatening millions worldwide.

**Supreme Court's Stance on Linguistic Secularism: A Safeguard for Language Diversity**

Context: In the **U.P. Hindi Sahitya Sammelan vs. State of U.P. (September 2014)** case, the **Supreme Court** reaffirmed the **organic evolution of law and language** in India. The ruling highlighted that:

- **India's language laws are flexible** and aim to ensure **linguistic secularism**.
- **Language evolution is natural and accommodative**, not rigid or imposed.

**National Education Policy (NEP) and the Language Debate:**

- **Tamil Nadu CM M.K. Stalin** accused the **Centre** of imposing **Hindi** through the **National Education Policy (NEP)**, claiming it would **hinder Tamil Nadu's educational progress**.
- The **Union government** remains **firm** on implementing NEP, despite concerns about linguistic imposition.

Law Commission's Stand on Hindi as a Compulsory Language:

- The **216th Law Commission Report** on the **Non-feasibility of Hindi as a Compulsory Language** in the **Supreme Court** underscored the **sensitivity of language issues**.
- **Justice A.R. Lakshmanan** warned that forcing a language upon people could be **counterproductive**, leading to division rather than unity.

Historical Insights: Constituent Assembly Debates on Language:

- The **Supreme Court** cited **Constitutional expert H.M. Seervai** and the **1949 Constituent Assembly debate** on whether **Hindi should be the national language**.
- The **Munshi-Ayyangar formula** resulted in **Article 343**, which made **Hindi the official language but not the national language**.
- The **court acknowledged** that **regional languages** such as **Bengali, Tamil, Marathi, and Gujarati** were **more developed** than Hindi at the time.

Justice Krishna Iyer's Perspective on Language Policy:

- **Justice Krishna Iyer** personally preferred Hindi but **opposed compulsion**.
- He warned that **linguistic militancy** could **divide the nation**, whereas **federal pluralism** fosters **democratic sensitivity**.

Constitutional Provisions on Language:**1. Article 351:**

- Directs the **Union government** to **promote Hindi**, while **respecting linguistic diversity**.

2. Article 29(1):

- Protects the **fundamental right of every linguistic group**, including both **majority and minority communities**, to **preserve their language, script, and culture**.

Right to Choose Medium of Instruction:

- In **State of Karnataka vs. Associated Management of Primary & Secondary Schools**, the **Supreme Court** ruled that:



- Article 19 (freedom of speech and expression) includes the right to choose the medium of instruction.
- The state cannot impose a particular language on students.
- Referencing the U.S. Supreme Court's *Pierce v. Society of Sisters* (1924) case, the Indian Supreme Court held that a child is not a mere creature of the State, and parents have the right to guide their child's education.

Conclusion:

The Supreme Court's judgments strongly uphold **linguistic secularism**, ensuring that **language policies remain flexible, democratic, and accommodative**. In a **linguistically diverse country like India**, the **right to language choice is a constitutional guarantee**, preventing the **forcible imposition of any language**.



**Mudumal Menhirs: India's Ancient Megalithic Marvel Set for UNESCO Recognition**

Context: The Mudumal megalithic menhirs in Telangana's Narayanpet district are on track to become the **second UNESCO World Heritage Site in the state**. They are among **six Indian sites** expected to be included in UNESCO's tentative list in 2025.

**What are Menhirs?**

A **Menhir** is a **large, upright stone**, often **tapered at the top**, sculpted and erected by **prehistoric humans**.

- The term "**Menhir**" originates from **Brittonic languages**, meaning "**long stone**."
- The **largest known menhir**, the **Grand Menhir Brisé in Brittany, France**, originally stood **20.6 meters tall**.
- Menhirs gained **popularity in modern culture** due to **Obelix, the character from the Asterix comics**, who carries menhirs.

Purpose and History:

- **Menhirs date back to the Late Neolithic and Early Bronze Age** (around **4800–3800 BP**), with the **oldest European menhirs** dating to **7000 BP**.
- The **Mudumal menhirs**, dated between **3500 and 4000 BP**, are the **oldest known in India**.
- Menhirs were erected **either as standalone structures or as part of larger megalithic sites**.
- Their **exact purpose remains debated**, but they were likely used for:
 - **Ceremonial rituals**
 - **Grave markers**
 - **Astronomical observations**

Significance of the Mudumal Menhirs:

- UNESCO describes the **Mudumal menhirs** as a "**megalithic astronomical observatory**".
- Some menhirs are **aligned with the sunrise and sunset during solstices**, indicating their role in **tracking celestial events**.
- Over time, the **Mudumal menhirs became part of local folklore**, with **one particular menhir being worshipped as Goddess Yellamma**.

Why Do They Deserve UNESCO Recognition?

- **Menhirs showcase the ingenuity of early humans**, reflecting **advanced knowledge of physics and astronomy**.
- Their construction required **organized labor and a surplus economy**, suggesting the presence of a **ruling elite**.
- They offer **crucial insights into civilizations that left no written records**, helping researchers **decode ancient religious and cultural beliefs**.

Megaliths in India:



- Megaliths in India date back to before 3000 BC, with some findings in southern India dating to 5000 BC.
- The majority of megaliths are found in **peninsular India**, particularly in:
 - Maharashtra (Vidarbha region)
 - Karnataka
 - Tamil Nadu
 - Kerala
 - Andhra Pradesh
 - Telangana
- The **oldest megaliths** are found in **central India** and the **upper Indus Valley**, while **eastern megaliths** are of later origin.
- **Brahmagiri** (excavated in 1975) helped establish the prehistoric cultural sequence in South India.
- A living megalithic tradition still exists among some tribes, such as the **Gonds of Central India** and the **Khasis of Meghalaya**.

Megalithic Culture in India:

- **Megalithic societies were preliterate**, making their **ethnic origins difficult to trace**.
- A **stone axe inscribed with Harappan script** found in a **Tamil Nadu burial chamber** suggests possible cultural contact between Harappans and megalithic people.
- Some historians believe **megaliths were built by the elite**, signifying **social stratification**.
- **Megalithic people practiced agriculture**, cultivating **rice, wheat, millets, lentils, and pulses**.
- The practice of **burying the dead with goods** suggests a **strong belief in life after death and possibly reincarnation**.
- **Banded agate beads with eye patterns**, used to ward off evil spirits, have been recovered from megalithic sites—this **belief still persists today** in the form of **nazar battus (amulets, lime-chili strings)**.

Types of Megalithic Structures:

Megalith Type	Description
Menhir	A single, upright standing stone
Monolith	A large, single standing stone, often synonymous with menhir
Capstone Style	A single horizontal megalith placed over burial chambers
Stone Circles	Circular arrangements of standing stones (also called "cromlechs")
Dolmen	Large capstone supported by multiple stones, often used as tombs
Cist	Small, stone-built burial chambers, sometimes underground

Conclusion:

The **Mudumal menhirs** stand as **monuments to India's rich megalithic past**, revealing **ancient scientific, cultural, and religious traditions**. Their **potential UNESCO recognition** will help preserve this **invaluable heritage**, offering deeper insights into **early human civilization in the Indian subcontinent**.

Yemen: A Nation at the Crossroads of Conflict and Strategy

Context: The **United States** has launched **new airstrikes** targeting **Houthi rebels** in **Yemen**, further intensifying the ongoing conflict in the region. Yemen remains a **key geopolitical hotspot**, with its **strategic location** making it central to global trade and security concerns.



Political Landscape of Yemen:

Geographical Positioning:

Yemen is located at the **southwestern tip of the Arabian Peninsula**, making it a critical player in **Middle Eastern geopolitics**.

Land and Maritime Boundaries:

- **Land Borders:** Shares boundaries with **Saudi Arabia (North)** and **Oman (East)**.
- **Maritime Borders:**
 - **West: Red Sea**, a crucial route for international shipping.
 - **South: Gulf of Aden**, an important link to the **Indian Ocean**.
 - **Southeast: Arabian Sea**, vital for regional trade and maritime security.
- **Strategic Importance:** Yemen controls **Bab el Mandeb**, a narrow strait linking the **Red Sea** and the **Gulf of Aden**—one of the world's most important **shipping routes**.
- **Socotra Archipelago:** A group of islands located in the **Indian Ocean**, known for its **unique biodiversity** and strategic maritime significance.

Geographical and Environmental Features:

Diverse Climate Zones:





- **Coastal Areas:** Hot and humid, particularly along the **western coast**.
- **Western Highlands:** Temperate climate, influenced by **seasonal monsoons**.
- **Eastern Regions:** Harsh desert conditions, including part of the **Rub'al-Khali (Empty Quarter)**, the **largest continuous sand desert** in the world.

Natural Wealth and Resources:

Yemen is rich in natural resources, including:

- **Petroleum** – A significant but underdeveloped resource.
- **Marine Wealth** – Fishing industry thrives along the **Red Sea** and **Gulf of Aden**.
- **Minerals** – Abundant **rock salt, marble, and gypsum deposits**.

Key Strategic and Economic Insights:

- **Bab el Mandeb Strait:** Handles about **10% of global oil trade**, making it a **vital chokepoint** for global energy security.
- **Socotra Island:** A **UNESCO World Heritage Site**, home to rare and endemic species found nowhere else on Earth.
- **Economic Struggles:** Despite its **rich resources**, Yemen remains **one of the poorest countries** in the Middle East due to **ongoing conflict, political instability, and economic mismanagement**.

Conclusion: A Nation in Crisis but Strategically Vital

Yemen's **location, natural wealth, and political instability** make it a **focal point** for global powers and regional conflicts. As tensions rise with **U.S. airstrikes on the Houthis**, the world watches closely—understanding Yemen's **strategic importance** is key to **grasping the broader Middle Eastern dynamics**.

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NASA Astronauts Return After Unexpected 9-Month Delay

Context: NASA astronauts **Butch Wilmore** and **Suni Williams** have finally returned to Earth after an unexpected **nine-month delay** caused by issues with **Boeing's Starliner spacecraft**. Initially scheduled for a **brief one-week stay**, the astronauts ended up spending **286 days** aboard the **International Space Station (ISS)** due to technical malfunctions that made their return unsafe.



286 Days in Space – A Prolonged Mission:

- Although their **nine-month stay** is one of the longest space missions, it does not break the record for the longest continuous stay in space. That honor belongs to **Soviet cosmonaut Valeri Polyakov**, who spent **438 days** aboard the **Mir Space Station**. Other astronauts, including **Russia's Oleg Kononenko** and **NASA's Peggy Whitson**, have also completed multiple long-duration missions, contributing to space research.

Boeing's Starliner: A Test Mission Turned Crisis:

- Wilmore and Williams were part of a crucial **test mission** for **Boeing's Starliner CST-100**, a spacecraft designed to transport astronauts to the ISS under **NASA's Commercial Crew Program**. However, the spacecraft faced **multiple technical issues**, including a **helium leak** even before launch. Despite these concerns, the mission proceeded. More problems arose **during the journey**, ultimately preventing the spacecraft from safely returning the crew as planned.

No Immediate Backup for Safe Return:

- With no immediate alternatives, NASA had to carefully **assess return options**. Missions to and from the ISS are meticulously planned months in advance, and the next **scheduled return mission** wasn't set until **February 2025**. Since the astronauts faced **no urgent medical concerns**, NASA made the decision to let them remain aboard the ISS, which can support up to **12 astronauts** at a time.

Thriving Despite Uncertainty:

- Their prolonged stay became a **global talking point**, capturing attention worldwide. While **long space missions** are not new, few astronauts have experienced such an **unexpected extension** with uncertainty surrounding their return.

Despite the situation, Wilmore and Williams remained **fully engaged in ISS operations**. They assisted in **critical experiments, conducted maintenance and repairs**, and even participated in **spacewalks**.

Record-Breaking Spacewalks by Suni Williams:

- A historic moment emerged during their extended mission as **Suni Williams set a new record for the most time spent spacewalking by a female astronaut**, clocking in an impressive **62 hours over nine spacewalks**.

Leading in Space – Williams' Command Role:

Three months into her extended stay, Williams was **appointed as the ISS station commander**, demonstrating her leadership and expertise. She held this position until just before their return to Earth.

Scientific Insights from Extended Space Travel:

NASA scientists see their extended mission as a **valuable research opportunity**. Long-duration space travel impacts the **human body in multiple ways**, including:

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- **Muscle and Bone Loss** – Astronauts in microgravity experience muscle atrophy and bone density reduction.
- **Brain Fluid Changes** – Studies suggest fluid shifts in space may affect cognitive functions.
- **Heart Disease Risks** – Prolonged exposure to space radiation can increase cardiovascular risks.
- **Psychological Effects** – Mental health challenges arise from isolation, confinement, and mission uncertainty.

The findings from this mission will contribute to **future deep-space exploration**, including planned **Moon and Mars missions** under NASA's **Artemis Program**.

Looking Ahead – The Future of Space Missions:

The return of Wilmore and Williams marks another chapter in human space exploration. Despite the **technical setbacks**, this mission has provided **invaluable data** that will shape the future of **commercial space travel** and **long-duration space missions**.

As NASA and Boeing work to resolve **Starliner's challenges**, the mission raises important discussions on the **safety, reliability, and preparedness** needed for future astronaut missions beyond Earth's orbit.





National Wildlife Health Policy Enhances Zoonotic Disease Surveillance

Context: In the wake of the **COVID-19 pandemic**, the Indian government is reviewing a **draft National Wildlife Health Policy (NWHP)** aimed at **strengthening disease surveillance** in wildlife. This policy seeks to establish **advanced monitoring systems**, introduce **new diagnostic laboratories**, and expand **research initiatives** to prevent the spread of **zoonotic diseases**—infections that transfer from animals to humans.



National Referral Centre for Wildlife (NRC-W): A Game-Changer

Understanding the Zoonotic Threat:

Zoonotic diseases contribute to nearly **60% of emerging infectious diseases worldwide**, with **72% of these infections originating from wildlife**. India has already faced several severe outbreaks, including **Kyasanur Forest Disease** and the **Nipah virus**, highlighting the urgent need for **continuous health surveillance** of both **wild and captive animals**.

Establishing NRC-W: A Critical Step for Wildlife Health

To address these concerns, the government has established the **National Referral Centre for Wildlife (NRC-W)** in **Junagadh, Gujarat**. Under the guidance of the **Central Zoo Authority (CZA)** and the **Union Environment Ministry**, this center will focus on:

- **Early disease detection** and research
- **Outbreak prevention** and management
- **Advanced diagnostics** for wildlife health
- **Training programs** for veterinarians and researchers

Why NRC-W is Crucial:

- Out of the **1,407 pathogens** affecting humans, **816 originate from animals**, posing a severe public health risk. The **NRC-W** will play a vital role in **identifying and containing these threats** before they spread, ultimately preventing **potential pandemics**.

Cutting-Edge Facilities and a One Health Approach:

- The NRC-W will be equipped with **state-of-the-art research labs** to analyze diseases in **both wildlife and humans**. This initiative is part of India's **One Health Approach**, which integrates **human, animal, and environmental health programs** to ensure a comprehensive strategy for disease control.

Global and National Collaborations:

- The NRC-W will collaborate with **leading national and international institutions** to enhance wildlife disease surveillance. The **CZA will act as the nodal agency**, coordinating efforts across India's **zoos, research institutions, and conservation programs**.

National Wildlife Health Policy (NWHP) Under Review:

An Updated Policy for Stronger Wildlife Disease Control:

- The government is in the process of refining the **National Wildlife Health Policy (NWHP)** to bolster **wildlife disease surveillance, research, and outbreak response mechanisms**. The new policy emphasizes:
- **Integrated surveillance networks** for real-time monitoring
- **Cutting-edge diagnostic laboratories** across the country



- Collaboration between wildlife, veterinary, and public health sectors
- Strategies to prevent disease spillover from animals to humans

Alignment with the One Health Framework:

- With over 60% of emerging human diseases originating from animals, the NWHP is aligned with the **National One Health Mission**. This integrated strategy is critical for **early pandemic preparedness**, ensuring that wildlife health monitoring becomes a **priority in India's public health agenda**.

Key Contributors and Policy Development:

The **Central Zoo Authority (CZA)** is spearheading this policy initiative, with support from:

- The Principal Scientific Adviser's Office
- Experts from IIT Bombay
- Various governmental and research institutions

Role of NRC-W in National Wildlife Health Policy:

The NRC-W, inaugurated by **Prime Minister Narendra Modi** in **Junagadh, Gujarat**, will serve as the **central authority for wildlife disease investigations**. This institution will be responsible for:

- Analyzing wildlife deaths and disease outbreaks
- Developing rapid response protocols
- Enhancing research in wildlife pathology and epidemiology

Bridging the Gap: Data Integration and Cross-Sector Coordination:

Creating a Unified Wildlife Health Database:

Currently, **wildlife disease surveillance** in India is fragmented across multiple agencies. The NWHP proposes the creation of:

- A **National Wildlife Health Database** for real-time data tracking
- A **Wildlife Health Information System** to predict and prevent outbreaks
- **Integration with the National Animal Disease Referral Expert System** for comprehensive monitoring

Expanding Wildlife Health Infrastructure:

The policy also recommends:

- **Satellite Diagnostic Laboratories** near key forest regions to improve disease detection
- **Vaccination Programs for livestock near national parks** to reduce disease transmission to wildlife
- **Community participation initiatives** for better awareness and prevention

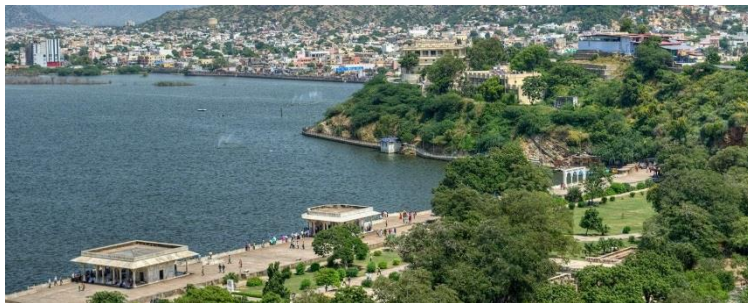
A Step Towards Stronger Wildlife Protection:

The **National Wildlife Health Policy** and the establishment of **NRC-W** represent a **major leap forward in India's approach to wildlife disease management**. By integrating **advanced research, disease surveillance, and global collaborations**, these initiatives will play a crucial role in **safeguarding both wildlife and human health** from emerging zoonotic threats.

As the world grapples with **increasing risks of pandemics**, India's proactive measures will not only protect biodiversity but also **strengthen national and global health security**.

Ana Sagar Lake: A Timeless Marvel of Ajmer

Context: The **Supreme Court** has recently ordered the **Rajasthan state government** to remove **replica structures** from the 'Seven Wonders' park, which is situated within the **wetland zone** of **Ana Sagar Lake**. The court has set a **six-month deadline** for the removal, emphasizing the need to **preserve the lake's ecological balance** and **heritage value**.



Ana Sagar Lake: A Historic Jewel of Rajasthan:

A Lake with a Rich Heritage:

Ana Sagar Lake is a **magnificent artificial lake** located in **Ajmer, Rajasthan**. It was constructed between **1135 and 1150 AD** by **Arnoraja Chauhan**, the grandfather of the legendary **Prithviraj Chauhan**. The lake is named after its creator, reflecting the rich **Chauhan dynasty's** legacy in Rajasthan.

Engineering Feat of the 12th Century:

The lake was created by building a **dam across the Luni (Lavanavari) River**, showcasing early **hydraulic engineering techniques**. Spanning over **13 km**, the lake is one of the **largest man-made water bodies** in Rajasthan.

Mughal Influence on Ana Sagar:

The lake later attracted the attention of the **Mughal emperors**, who contributed significantly to its beautification:

- **Shah Jahan** built the elegant **Baradari (pavilions)** in **1637 AD**, adding to its architectural grandeur.
- **Jehangir** developed the **Daulat Bagh Gardens** along the banks of the lake, transforming it into a serene retreat.

A Stunning Island in the Middle of the Lake:

- At the center of **Ana Sagar Lake** lies a **picturesque island**, accessible only by **boat rides**, making it a popular attraction for tourists.

Colonial Legacy: The British Residency

- On a hill near the lake stands a **circuit house**, which was once the **British Residency** during colonial rule. Today, it offers breathtaking views of the lake and the surrounding landscapes.

The Lake's Seasonal Transformation:

Despite its grandeur, **Ana Sagar Lake** **dries up every summer** due to **high temperatures and evaporation**, highlighting the challenges of **water conservation** in Rajasthan's arid climate.

Ana Sagar Lake: A Must-Visit Destination

- Surrounded by lush gardens, historic monuments, and scenic beauty, **Ana Sagar Lake** remains one of **Ajmer's most iconic landmarks**. Whether you enjoy **boating**, **exploring Mughal-era pavilions**, or simply **soaking in the sunset views**, this lake offers a perfect blend of **history, culture, and natural beauty**.

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- **Ajmer Sharif Dargah**, one of India's most revered Sufi shrines, is just a few kilometers from the lake, making it a spiritual and historical hub.
- The lake was originally much smaller, but successive rulers, including the **Mughals and British**, expanded its surroundings for aesthetic and functional purposes.
- **Birdwatching enthusiasts** can spot migratory birds visiting the lake during the winter season.

Ana Sagar Lake is not just a water body—it's a **testament to centuries of Rajput, Mughal, and colonial influences**. With the Supreme Court's recent decision to protect its **ecological and historical essence**, the lake continues to be a **symbol of Ajmer's heritage and natural beauty**.



**Peru: Land of Ancient Civilizations and Natural Wonders**

Context: Peru has declared a **state of emergency** and deployed the **army in Lima**, the nation's **capital**, in response to a **surge in violence**. The move comes as part of government efforts to **restore law and order** in one of **South America's most dynamic cities**.

Peru: A Nation of Diverse Landscapes and Rich History

Strategic Location in South America:

Peru is situated on the **western coast of South America**, acting as a **geographical bridge** between the **Pacific Ocean, the Andes Mountains, and the Amazon Rainforest**.

Borders:

- **North:** Ecuador and Colombia
- **East:** Brazil
- **South:** Bolivia and Chile
- **West:** Pacific Ocean

This **strategic positioning** makes Peru a **biodiversity hotspot** and an important player in **regional trade and environmental conservation**.

Geographical Marvels of Peru:

The Mighty Amazon and the World's Highest Navigable Lake

- **Amazon River** – One of the world's longest and most powerful rivers originates in Peru.
- **Lake Titicaca** – The **highest navigable lake in the world** (shared with Bolivia), revered by the **Inca civilization**.

A Country of Vast and Contrasting Landscapes:

- **Amazon Rainforest** – Covering nearly **60% of Peru**, this dense jungle is home to **rare wildlife, indigenous tribes, and immense biodiversity**.
- **Atacama Desert** – One of the **driest places on Earth**, extending from **Chile into southern Peru**.
- **Humboldt Current** – A **cold ocean current** that regulates Peru's **marine ecosystem**, making it one of the world's **richest fishing zones**.
- **Nazca Lines** – **Mysterious ancient geoglyphs** carved into the desert, believed to be created by the **Nazca civilization** between 500 BCE and 500 CE.

Peru's Natural Wealth and Economic Importance:

A Global Leader in Silver Production:

Peru boasts **one of the world's largest silver reserves**, making it a **key player in the global mining industry**. In addition to **silver**, the country is rich in:

- **Gold** – One of **South America's top gold producers**.
- **Copper and Zinc** – Crucial for **industrial and technological applications**.
- **Agricultural Exports** – Leading producer of **quinoa, coffee, and avocados**, which are exported worldwide.





A Land of Cultural and Historical Significance:

Home to the Legendary Inca Empire:

- **Machu Picchu** – The breathtaking **Lost City of the Incas**, a UNESCO World Heritage site and one of the **New Seven Wonders of the World**.
- **Cusco** – The **former capital of the Inca Empire**, blending **Andean and Spanish colonial heritage**.

Did You Know?

- The **Peruvian Andes** are home to the **Rainbow Mountain (Vinicunca)**, famous for its **multicolored slopes**.
- **Peru has over 3,000 potato varieties**, making it the **birthplace of the potato!**
- The **Andean condor**, one of the world's **largest flying birds**, soars over Peru's rugged landscapes.

With its **rich history, stunning geography, and abundant resources**, Peru remains one of **South America's most fascinating nations**.



**India's First PPP-Based Green Waste Processing Plant Set to Launch in Indore**

Context: India's first-ever Public-Private Partnership (PPP) model Green Waste Processing Plant is all set to begin operations in **Indore**, marking a revolutionary step in **sustainable waste management**. This initiative, launched under the **Swachh Bharat Mission-Urban**, aims to transform **green waste** into **valuable eco-friendly resources**, setting a benchmark for cities across India.

**Key Highlights of Indore's Green Waste Processing Plant:**

- The facility will process **wood, branches, leaves, and flowers** to generate revenue for the **Indore Municipal Corporation (IMC)**.
- IMC will provide **land and transportation** of green waste, ensuring an efficient supply chain.
- A **private entity, Astronomical Industries Private Limited**, will be responsible for the **installation, operation, and maintenance** of the plant.
- The project will contribute to **waste-to-energy** and **waste-to-wealth** initiatives, promoting circular economy principles.

India's Green Waste Management Initiatives:

India has been actively working towards sustainable **waste processing and bioenergy production** through various initiatives:

1. Solid Waste Management Rules, 2016:

- Mandates that **biodegradable waste** must be **composted, treated, or disposed of** within the premises as much as possible.
- Encourages **decentralized waste processing**, reducing the burden on landfills.

2. National Bioenergy Programme:

- Supports the **establishment of bioenergy projects**, promoting **biogas and biomass-based power generation**.
- Aims to enhance **energy security** and **reduce dependency on fossil fuels**.

3. Waste to Wealth Mission:

- An initiative under the **Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC)**.
- Focuses on **scientific and technological innovations** to strengthen **waste management systems**.
- Promotes the conversion of **waste into valuable resources**, contributing to a **circular economy**.

Why This Matters?

With **rapid urbanization** and **increasing waste generation**, India faces significant **waste management challenges**. The **Indore Green Waste Processing Plant** serves as a **model project** for other cities, showcasing the **potential of public-private partnerships** in addressing environmental concerns.



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Additionally, Indore has been a **pioneer in cleanliness**, consistently ranking as **India's cleanest city** under the Swachh Survekshan rankings. This new initiative **reinforces its leadership** in **sustainable urban development** and **green innovation**.

A Step Towards a Greener Future:

This **PPP-based Green Waste Processing Plant** is not just a facility—it's a **vision for a cleaner, greener, and more sustainable India**. As the country continues to innovate in **waste management**, such projects will play a **crucial role** in achieving **environmental sustainability** and **urban resilience**.



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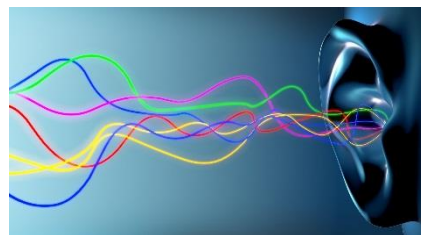
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Audible Enclaves: The Future of Private Sound Technology

Context: Imagine standing in a **crowded room** yet hearing a message only meant for you—without the use of **headphones** or **earpieces**. This futuristic concept is now a reality with **Audible Enclaves**, a breakthrough in **sound wave technology** that allows audio to be transmitted **privately to specific individuals**, even in noisy environments.



What Are Audible Enclaves?

Audible Enclaves are **small, localized pockets of sound** that remain **undisturbed by surrounding noise**. They ensure that only the **intended listener** hears the transmitted audio, making them ideal for **crowded spaces** like **airports, museums, offices, and retail stores**.

Key Features:

- **Private Sound Zones** – Only individuals in the designated area can hear the audio.
- **No Headphones Needed** – Experience **personalized audio** without wearing any device.
- **Noise-Free Communication** – External noise does not interfere with the transmitted message.

Understanding Sound Waves: How Does Sound Work?

Sound travels in the form of **waves**, causing particles in the surrounding medium (such as **air, water, or solid materials**) to **vibrate back and forth**. The **speed of these vibrations** determines the frequency of sound:

- **Higher frequency = Higher-pitched sound**
- **Lower frequency = Deeper sound**

When sound waves are emitted, they undergo **diffraction**, meaning they spread out as they travel. Interestingly, **higher-frequency waves** tend to diverge **more** than lower-frequency waves. This principle plays a crucial role in **targeted audio transmission**.

How Are Audible Enclaves Created?

Audible Enclaves take sound control a **step beyond traditional directional speakers**.

- **Traditional Parametric Speakers:** These use **high-frequency waves** modulated with an **audio signal** to create **focused sound beams**.
- **Audible Enclave Technology:** This advanced method uses **two high-frequency waves of different frequencies** that are:
 - **Individually inaudible** to the human ear.
 - When they **intersect** at a specific location, they interact **non-linearly**, generating a sound wave **audible only within that precise zone**.

Scientific Validation: This method, documented in the **Proceedings of the National Academy of Sciences (PNAS)**, ensures highly **precise sound targeting**—an innovation that could redefine **communication, entertainment, and security applications**.

Potential Applications of Audible Enclaves:

Audible Enclaves can revolutionize various industries, including:



- **Retail & Marketing** – Stores can deliver **personalized promotions** to individual shoppers without disturbing others.
- **Museums & Exhibits** – Visitors can hear detailed descriptions of exhibits without needing headphones.
- **Airports & Public Spaces** – Announcements can be directed to specific groups without overwhelming ambient noise.
- **Healthcare** – Patients can receive **private audio guidance** without disrupting a shared environment.
- **Military & Security** – Confidential audio transmissions can be sent to individuals without risk of eavesdropping.

The Future of Sound: What's Next?

Audible Enclaves represent a **giant leap** toward **hyper-personalized audio experiences**. As **AI and smart sound systems** evolve, this technology could merge with **augmented reality (AR) and virtual reality (VR)**, transforming **how we interact with sound in digital spaces**.

A World Where Sound is Personal:

With **Audible Enclaves**, sound is no longer a **shared experience**—it becomes a **tailored, immersive interaction**. This technology is set to **reshape communication, privacy, and entertainment** in ways we've only imagined.

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TOGETHER WE SCALE HEIGHTS



Women's Political Participation in India: Progress, Challenges, and Future Pathways

Context: Women's **political participation** in India has undergone a significant transformation over the past decade. While many nations saw a narrowing **gender gap** in political engagement during the 1990s, India witnessed this shift only in the 2010s. The increasing involvement of women in the electoral process is an encouraging sign, yet challenges remain in ensuring **equal representation** in governance and decision-making roles.



Key Insights from Research:

Voting Behavior & Agency:

- Women's voting patterns are often **overlooked** by political parties, which tend to treat them as a **homogeneous group**, ignoring differences in caste, class, and religion.
- Female voters are frequently seen as **passive beneficiaries** of welfare schemes like **Ujjwala Yojana** and **Pradhan Mantri Awas Yojana**, rather than as active political agents.
- Despite rising voter turnout, women's engagement in **rallies, campaigns, and advocacy** remains significantly lower due to **social and structural barriers**.

Rising Voter Turnout & Political Power:

- In the **2019 General Elections**, women's voter turnout (67.2%) slightly exceeded that of men (67%).
- In the **2024 Lok Sabha Elections**, women again had a **higher voting percentage** (65.8%) compared to men (65.6%).
- In states with **high male migration**, particularly **economically backward regions**, women's voter turnout has increased significantly, filling the political vacuum left by migrating men.
- In states with strong **regional political movements** like **Tamil Nadu and Kerala**, women's preferences are often shaped by **local political dynamics** rather than national gender-based trends.

Women's Political Participation Beyond Voting:

Although more women are voting, their presence in **leadership roles** remains limited. Women constitute only **14.4%** of the Indian Parliament as of 2024, significantly lower than the global average of **26.5%**.

At the **grassroots level**, the introduction of **33% reservation for women in Panchayati Raj Institutions (PRIs)** has led to **better governance and development outcomes**. However, challenges like **proxy leadership** (where male relatives influence elected women) continue to persist.

Factors Influencing Women's Political Participation:

1. **Socio-Cultural Norms** – Traditional **gender roles** and social conditioning restrict women's active political engagement.
2. **Education & Literacy** – Higher **education levels** enhance political awareness and decision-making abilities.
3. **Economic Independence** – Financial security enables women to engage in **political discourse** and leadership roles.
4. **Caste, Class & Religion** – Women's **voting behavior** is deeply influenced by **social identities**, often aligning with community-based political affiliations.



5. **Political Party Strategies** – Parties that actively engage with women through **gender-sensitive policies and welfare schemes** witness higher female support.
6. **Social Movements** – Women's participation in **activism and advocacy** often translates into greater involvement in formal politics.
7. **Regional & State-Specific Factors** – Local governance structures and **regional political dynamics** shape women's participation in politics.

Global Perspective & Policy Goals:

- The **Sustainable Development Goals (SDGs)**, particularly **SDG 5 (Gender Equality & Women Empowerment)**, emphasize equal political participation.
- The **Beijing Declaration and Platform for Action** advocates for **balanced representation** of women in decision-making positions.
- Many countries, including **Rwanda (61% women in Parliament)** and **Sweden (46%)**, have successfully closed the **gender gap in politics**, offering models for India to follow.

Way Forward: Towards Gender-Equal Politics:

The **decentralization of governance** over the past two decades has made it essential to **measure women's participation** in decision-making roles. Gender-sensitive policies such as **Gender Budgeting**, which ensures financial allocation for women's welfare, have been implemented for **inclusive growth**.

To achieve true **gender parity in politics**, India must:

- **Strengthen political reservations** for women beyond local governance.
- **Enhance political literacy programs** to empower women as informed voters and leaders.
- **Address socio-cultural barriers** that restrict women's active participation in governance.
- **Ensure better data collection and analysis** to assess and improve women's involvement in politics.

A future where women participate **not just as voters but as decision-makers** is key to achieving a truly **inclusive and democratic India**.

Cabinet Approves Revised Rashtriya Gokul Mission: Boosting India's Livestock Sector

Context: The Union Cabinet has approved the **Revised Rashtriya Gokul Mission (RGM)** to accelerate growth in the **livestock sector**, focusing on the **development, conservation, and genetic upgradation** of indigenous cattle breeds. This mission aims to enhance **milk production and productivity**, thereby benefiting **farmers and the dairy industry**.



Overview of Rashtriya Gokul Mission (RGM):

Objective:

Launched in **2014**, the **Rashtriya Gokul Mission** aims at:

- **Preserving and improving indigenous cattle breeds**
- **Enhancing genetic quality** of bovine populations
- **Boosting milk production and productivity**

Implementation:

The mission is implemented by the **Department of Animal Husbandry and Dairying** under the Government of India.

Key Initiatives Under RGM:

- **Strengthening Semen Stations** to improve artificial insemination coverage.
- **Developing Artificial Insemination Networks** to enhance breeding efficiency.
- **Upgrading Central Cattle Breeding Farms** for quality livestock production.
- **Promoting Farmer Training & Awareness Programs** to ensure widespread adoption of scientific cattle rearing methods.
- **Establishing Gokul Grams**, 16 Integrated Indigenous Cattle Development Centers, for the **scientific conservation and development** of native cattle breeds.

Key Features of the Revised RGM:

Financial Outlay:

3,400 crore allocated for the **15th Finance Commission cycle (2021-22 to 2025-26)**.

New Additions to the Mission:

1. **Heifer Rearing Centres (HRCs):** One-time assistance covering **35% of the capital cost** will be provided to implementing agencies for establishing **30 housing facilities** with a total capacity of **15,000 heifers**.
2. **Interest Subvention for Farmers:** To encourage farmers to purchase **high-genetic merit (HGM) in vitro fertilization (IVF) heifers**, a **3% interest subvention** will be provided on loans availed from **milk unions, financial institutions, or banks**.

Impact of Revised RGM:

- **Enhanced Milk Production:** Strengthening cattle genetics will boost milk yield, benefiting the dairy sector.
- **Economic Growth for Farmers:** Increased financial support and subsidies will improve farmers' earnings.



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- **Sustainable Livestock Development:** Scientific breeding techniques will aid in **preserving indigenous breeds** while enhancing their productivity.

Conclusion:

The **Revised Rashtriya Gokul Mission** represents a significant step towards **modernizing India's dairy and livestock sector**. By promoting **scientific breeding, financial support for farmers, and indigenous cattle conservation**, the initiative will play a crucial role in ensuring a **sustainable and prosperous dairy industry in India**.



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**Cabinet Approves 1,500 Crore Incentive for BHIM-UPI Low-Value Transactions**

Context: The Union Cabinet, chaired by Prime Minister Narendra Modi, has approved the "Incentive Scheme for Promotion of Low-Value BHIM-UPI Transactions (Person to Merchant - P2M)" for the financial year 2024-25. This initiative aims to accelerate the adoption of **digital payments**, particularly for transactions below **2,000**, benefiting small merchants and consumers alike.

**What is BHIM?**

The **Bharat Interface for Money (BHIM)** is a digital payment application based on the **Unified Payments Interface (UPI)** that facilitates **fast, secure, and seamless** transactions via **mobile apps** and the **USSD (99#)** service.

Key Highlights of BHIM:

- **Launch:** Introduced by the **Government of India** on **December 30, 2016**.
- **Mass Adoption:** Achieved **1 crore downloads** within **10 days** of launch and recorded over **2 million** transactions.
- **Developed by NPCI:** Created under the guidance of the **Reserve Bank of India (RBI)** and **National Payments Corporation of India (NPCI)**.
- **Interoperability:** Works across all **UPI-enabled banks and apps**.
- **Merchant Benefits:**

Direct bank-to-bank transactions.

- **Virtual Payment Address (VPA)** and **QR code** for easy transactions.

1,500 Crore UPI Incentive Scheme: Key Details**Objective of the Scheme:****The government seeks to:**

- Promote the **indigenous BHIM-UPI platform**.
- Increase **UPI transaction volume** to **200 billion** in **FY25**.
- Encourage digital transactions among **small merchants**.
- Expand UPI reach to **rural areas** using **UPI 123PAY** (feature phone payments) and **UPI Lite/UPI LiteX** (offline payments).
- Strengthen the **digital payments infrastructure** and reduce **technical failures**.

Incentive Structure:**For transactions up to 2,000:**

- **Small merchants:** **0.15% incentive**.



- **Large merchants: No incentive.**

For transactions above 2,000:

- **No incentives** for any merchant.

Why Was This Scheme Introduced?

- The **Government of India** promotes **digital payments** as part of its **financial inclusion** strategy.
- **Merchant Discount Rate (MDR)**, which is usually charged by banks for processing payments, was **waived off** for **RuPay Debit Cards** and **BHIM-UPI transactions** in **January 2020**.
- The incentive scheme ensures that **banks and payment providers** can sustain **UPI transaction processing costs** despite the **zero MDR policy**.

Expected Benefits of the Scheme:

- Ensures **zero additional charges** for consumers and small merchants.
- Encourages **wider adoption of UPI**, especially among **small merchants**.
- Supports the government's "**Less-Cash Economy**" initiative.
- Improves **24/7 UPI service availability** by motivating banks to **maintain uptime** and **minimize technical failures**.
- Reduces dependency on **cash transactions**, promoting **financial inclusion**.

Industry Concerns Over Funding Allocation:

- Despite the **1,500 crore** outlay, experts believe the amount is **insufficient** to sustain UPI transaction costs.
- **Industry estimates** suggest a requirement of **4,000 - 5,000 crore** to support the digital payments ecosystem.

Proposed Solutions:

- Introducing a **controlled MDR of 0.25%** for merchants with **annual turnover exceeding ₹40 lakh**, while maintaining **zero MDR for small merchants**.

Conclusion:

The **BHIM-UPI Incentive Scheme** is a **significant step** in advancing India's **digital payments ecosystem**. While it provides much-needed support to **small merchants**, addressing **industry concerns** about **sustainable funding** will be key to ensuring **long-term digital payment growth**.

Sonic Weapons: The Power of Sound in Warfare and Control

Context: Serbia's government has come under scrutiny for allegedly deploying a **banned sonic weapon** to disperse protesters in **Belgrade**. The use of such technology has raised concerns over its ethical and legal implications.

What Are Sonic Weapons?

Also known as **Acoustic Weapons**, these devices utilize **high-intensity sound waves** to disrupt, disorient, or incapacitate individuals. They can emit both **audible and inaudible frequencies**, impacting people over **long distances**.



Originally designed for **military** and **crowd control** applications, these weapons were notably used by the **U.S. military in Iraq (2004)**. Some versions also serve as **long-range voice amplifiers**, enabling authorities to issue commands effectively.

How Do Sonic Weapons Work?

- Equipped with **hundreds of transducers**, converting energy into powerful **sound waves**.
- Emit **highly concentrated, amplified sound** aimed at specific targets.
- **Authorities** can adjust the **frequency, volume, and duration** to control the impact.
- The **narrow sound beam** can trigger **extreme discomfort, pain, and disorientation**.

Types of Sonic Weapons:

1. Long-Range Acoustic Device (LRAD):

- Used by **law enforcement** and **military** for **crowd control**.
- Projects **sound over 8,900 meters** at intensities reaching **160 decibels (dB)**.
- Can cause **ear pain, hearing damage, nausea, and dizziness**.

2. Mosquito Device:

- Emits **high-pitched sounds** that are only perceptible to **young individuals (under 30 years old)**.
- Commonly used to **deter loitering** in public spaces.
- Causes **irritation and discomfort**, making areas unappealing to youth.

3. Infrasonic Weapon:

- Emits **low-frequency sound waves** that are **inaudible** but affect the body.
- Can cause **headaches, nausea, vertigo, and even internal organ damage**.
- Still in the **research phase**, but holds **potential for military applications**.

The Ethical Debate:

The increasing use of **sonic weapons** in **crowd control** and **warfare** raises **serious concerns** about their **long-term effects** and potential **misuse**. While some advocate for their **non-lethal** nature, others argue they can inflict **severe, lasting harm**.

As technology evolves, the debate over **sonic warfare** and its **legal limitations** is far from over.

**Right to Development: A Fundamental Priority**

Context: The **Supreme Court of India** has reinforced the importance of balancing the **right to development** with the **right to a clean environment**. In a recent verdict, the Court set aside judicial orders that had halted development activities in **Auroville**, emphasizing the principles of **sustainable development** enshrined in **Articles 14, 19, and 21** of the Constitution.

**Key Observations by the Supreme Court:**

- While the **precautionary principle** and **polluter pays principle** are crucial in environmental law, the **right to industrialization and development** is equally fundamental.
- The **right to a clean environment** is protected under **Articles 14 and 21**, but the **right to development** holds equal priority under **Articles 14, 19, and 21**.

NGT's Order on Auroville Township (April 2022):

- The **National Green Tribunal (NGT), Chennai**, had ordered the **Auroville Foundation** to halt construction until environmental clearance was obtained.
- The **Supreme Court** ruled that the NGT **committed a gross error** by overstepping its jurisdiction.
- The case was based on concerns about road construction affecting the **Darkali forest**, but the Court clarified that this was a **man-made plantation**, not an officially recognized **forest** under the **Forest (Conservation) Act, 1980**.

Supreme Court's Rationale for Overturning NGT's Decision:

The **Master Plan** for Auroville was:

- Approved by the **Auroville Foundation's governing board** (1999).
- Sanctioned by the **Ministry of Urban Development** (2001).
- Published in the **Gazette of India** (2010).
- The NGT **misapplied the precautionary principle** and **exceeded its jurisdiction** by interfering in a legally approved project.

Madras High Court's Order on Auroville Town Development Council (March 2024):

- The High Court had **nullified a June 2022 notification** regarding the reconstitution of the **Auroville Town Development Council**.
- The **Supreme Court overturned** this decision, criticizing certain residents for **misusing litigation** to stall progress.
- Respondent **Natasha Storey** was ordered to **deposit Rs. 50,000** to the **Supreme Court Legal Service Committee** within two weeks.

Conclusion: Upholding Sustainable Development:

This judgment **reaffirms** that **industrialization and development** hold **constitutional validity** alongside **environmental protection**. The **Supreme Court cautioned** against unnecessary **judicial interference** in **legally approved projects**, ensuring that **sustainable development** remains a priority while respecting statutory approvals.

Discovery of a New Killifish Species in Kenya

Context: Scientists have identified a **new species of killifish**, *Nothobranchius sylvaticus*, in **Kenya's Gongoni Forest**, a habitat estimated to be **7.09 million years old**. This groundbreaking discovery makes it the **first-ever endemic forest-dwelling killifish**.

The species is **exclusive to Kenya** and has been categorized as **Critically Endangered (IUCN)** due to habitat destruction and climate change.



What Are Killifish?

General Overview:

- **Killifish** are **small, egg-laying (oviparous)** fish belonging to the **Cyprinodontiformes** order, commonly known as **toothcarps**.
- These fish exhibit **vibrant colors**, making them popular among **aquarium enthusiasts**.

Natural Habitat:

- Killifish are found in **freshwater and brackish** water environments across **the Americas, Europe, Africa, the Middle East, and Asia**.
- Some species thrive in **ephemeral (seasonal) water bodies** like swamps, floodplains, and temporary pools, laying eggs that **can survive in dry conditions for months until rains revive them**.

Survival & Adaptability:

- Can withstand **extreme environments**, including **high salinity, low oxygen levels, and fluctuating temperatures**.
- Used as **model organisms** in scientific research on **aging, genetics, and evolutionary adaptation** due to their **short lifespan and rapid reproductive cycle**.

Kenya: A Biodiversity Hotspot

Geographical Significance:

- Located in **East Africa**, Kenya shares borders with **South Sudan, Ethiopia, Somalia, Uganda, Tanzania, and the Indian Ocean**.
- Home to **diverse ecosystems**, from **savannas and mountains to lakes and coastal regions**.

Important Ecological & Conservation Highlights:

Major Lakes:

- **Lake Turkana** – The world's largest **desert lake**.
- **Lake Victoria** – Africa's largest freshwater lake, shared with **Tanzania and Uganda**.

Dadaab Refugee Complex:

- One of the **largest refugee camps** globally, housing people displaced by **Somalia's civil war**.

India-Kenya Wildlife Partnership:

- **India is acquiring 20 cheetahs from Kenya** to help revive the species in the **Gandhi Sagar Wildlife Sanctuary** (Madhya Pradesh-Rajasthan).



- Cheetahs once roamed **India's grasslands** but were declared **extinct in 1952**—this initiative is part of efforts to **reintroduce them into their natural habitat**.

Conservation Challenges & The Future:

The discovery of *Nothobranchius sylvaticus* underlines the **rich biodiversity of Kenya** but also highlights the **urgent need for conservation**. Factors such as **deforestation, habitat fragmentation, and climate change** pose **severe threats** to fragile species like this **forest-dwelling killifish**.

Protecting natural habitats, promoting sustainable development, and enhancing conservation efforts will be key to ensuring the survival of **rare and endangered species**.



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India's Habitual Offender Laws: A Legacy of Discrimination

Context: In a recent statement in **Parliament**, the **Government of India** confirmed that laws declaring individuals as “**habitual offenders**” are still active in **14 states and Union Territories**. Despite **Supreme Court** interventions questioning the constitutionality of these laws, they continue to disproportionately affect marginalized communities.



Understanding Habitual Offender Laws:

Habitual offender laws in **India** target individuals repeatedly convicted of certain crimes, aiming to monitor and control them. While initially introduced to curb **recidivism**, these laws have come under severe **criticism** for perpetuating **discrimination**—particularly against **denotified, nomadic, and semi-nomadic tribes** (DNTs, NTs, SNTs) that were historically labeled as “criminal tribes” during **British colonial rule**.

The Historical Background: From “Criminal Tribes” to “Habitual Offenders”

The origins of these laws can be traced back to **colonial-era legislation**:

- **Regulation XXII (1793)** gave magistrates the authority to imprison or force labor on certain communities based on mere suspicion.
- This evolved into the **Criminal Tribes Act (CTA) of 1871**, which declared entire communities as “**criminal by birth**”.
- In **1924**, the CTA was extended across **colonial India**.

After **independence**, the CTA was repealed in **1952**, and communities were officially **denotified**. However, the introduction of **Habitual Offender Acts** in various states continued the cycle of targeting these communities, despite the change in legal terminology.

Supreme Court's Intervention and Recent Legal Developments:

In **October 2024**, the **Supreme Court of India** raised concerns over the use of habitual offender classifications, particularly in the context of **caste-based discrimination** in jails. Led by **Chief Justice D.Y. Chandrachud**, the court emphasized that:

“A whole community ought not to have either been declared a criminal tribe in the past or a habitual offender in the present.”

The **Supreme Court** urged states to critically review the application of these laws, which have been **misused** to target entire communities.

Crimes Under the Habitual Offender Classification:

State laws define habitual offenders based on prior convictions for certain crimes, including:

- **Being a thug**
- **Belonging to a gang of dacoits**
- **Living on the earnings of prostitution**
- Various forms of “**lurking**” or **suspicious activity**

These laws often involve **registering** individuals under surveillance, echoing practices from the **Criminal Tribes Act**, where marginalized communities were routinely targeted.

Impact on Denotified and Nomadic Tribes (DNTs, NTs, SNTs):

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Despite being **officially denotified**, DNTs remain heavily **stigmatized** and continue to face:

- **Police surveillance**
- **Social ostracization**
- **Exclusion from education, employment, and social integration**

The **custodial death** of **Budhan Sabar**, a member of a denotified tribe in 1998, sparked widespread outrage and led to the formation of the **Denotified and Nomadic Tribes Rights Action Group** (DNT-RAG). The **National Human Rights Commission (NHRC)** and international bodies like the **United Nations Committee on the Elimination of Racial Discrimination** have urged India to repeal these laws, citing their continued **discriminatory impact**.

Current Status of the Laws Across States:

The **Supreme Court's** observations have prompted mixed reactions from states:

- **Punjab** and **Odisha** report no active use of the habitual offender law in recent years.
- **Andhra Pradesh** has no inmates currently under this classification.
- **Gujarat** and **Goa** support retaining the law, claiming it isn't used to target **DNTs**.
- **Uttar Pradesh** has integrated these provisions into its **Goondas Act**.
- **Delhi** leads in the application of this law, with **21.5%** of convicts categorized as habitual offenders (according to **NCRB 2022**).

The Need for Repeal:

Critics of habitual offender laws argue that:

- They **perpetuate colonial-era stigma** and discrimination.
- They facilitate **targeted policing** of marginalized communities.
- They violate fundamental rights, including **equality** (Article 14) and **freedom of movement** (Article 19).
- They contradict **India's commitments** to non-discrimination under **international human rights law**.

Repealing these laws across the country would be a crucial step toward **justice** and **inclusion** for **denotified**, **nomadic**, and **semi-nomadic tribes**.

Conclusion: A Call for Justice and Equality

While habitual offender laws may appear neutral on paper, their **colonial legacy** and discriminatory enforcement have made them tools of **oppression** against vulnerable communities. With ongoing judicial scrutiny and numerous reports recommending their repeal, it is high time for a nationwide **review** and **repeal** of these outdated laws.

To truly empower **denotified** and **nomadic tribes**, India must not only reform its policies but also **dismantle the inherited prejudices** embedded within its legal system.



India's Looming Power Crisis: Challenges & Solutions in Renewable Energy

Context: India is facing an **increasing risk of power shortages** due to the rapid expansion of renewable energy **without adequate storage systems**. With **peak electricity demand expected to hit 270 GW** this summer, the power grid is under immense strain. The **decline in thermal power investments** over the last decade has further worsened the situation, leading to supply gaps during peak hours.



Challenges of Rapid Renewable Energy Growth:

Intermittency Issues of Solar & Wind Power

Unlike **thermal power**, which can be **ramped up as needed**, renewable sources like **solar and wind** are dependent on weather conditions. **Solar power peaks during the afternoon**, but electricity demand **spikes in the evening**, creating a **supply-demand mismatch**.

Limited Growth in Thermal Power Capacity:

India's **coal-based power capacity** has grown only **7% since 2019-20**, while renewable capacity has **doubled from 72 GW to over 150 GW**. Thermal plants are operating at high capacity utilization rates, making it challenging to scale up further.

Rising Power Demand & Grid Stability Concerns:

India's Surging Electricity Demand:

- **2018-19:** 169 GW
- **2024-25:** 250 GW
- **Summer 2025 Projection:** 270 GW

With the **expansion of renewables**, grid stability has become a **major challenge**. **Unpredictable renewable energy supply** makes it harder to maintain a **steady power supply** during peak demand hours.

Power Shortage Projections for Summer 2025:

India's **grid operator** warns of **potential power shortages from April to October**, with **May and June identified as high-risk months**.

Risk of Load Shedding & Supply Deficits:

- **Loss of Load Probability (LOLP) in May:**
 - **Best-case scenario:** 19%
 - **Median scenario:** 31% (1 in 3 chance of power shortages)
- **LOLP in June:**
 - **Ranges between 4.7% and 20.1%**

LOLP measures the likelihood of power supply failing to meet demand, signaling the risk of blackouts.

The Urgent Need for Energy Storage Solutions:

Recognizing the challenge of **intermittent renewables**, the **Central Electricity Authority (CEA)** has emphasized the need for **energy storage systems**.

Current Storage Capacity vs. Renewable Growth:

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- **Total Renewable Energy Capacity:** 200 GW+
- **Installed Energy Storage Capacity:**
 - **Pumped Storage Plants (PSP):** 4.75 GW
 - **Battery Energy Storage Systems (BESS):** 0.11 GW

Without **rapid deployment of energy storage**, power shortages will continue to **worsen during peak hours**.

Reviving Thermal Power to Stabilize Supply:

To address the crisis, the **National Load Despatch Centre (NLDC)** has recommended invoking **Section 11 of the Electricity Act, 2003**, which mandates **higher operational levels for imported coal-based plants**.

The Hidden Costs of Renewable Energy

- **Aging thermal units** are being kept on standby to manage power intermittency, leading to **higher costs**.
- The assumption that **renewables have reached cost parity with thermal power** is misleading. **Factoring in standby thermal power nearly doubles the cost of renewable electricity**.

Corrective Measures & Future Roadmap:

Recognizing past **policy missteps**, the government is taking **corrective actions**, including:

- **Scaling up nuclear power capacity**
- **Expanding thermal power projects**
- **Importing coal to restart idle plants**
- **Mandating energy storage for new solar projects**

These steps aim to **strengthen India's power grid**, ensuring **stable electricity supply** and **reducing blackout risks** during peak demand periods.

Conclusion:

India's ambitious push for **renewable energy** is **admirable**, but without **sufficient storage solutions and thermal backup**, the country risks **severe power shortages**. A **balanced approach**—integrating renewables with **energy storage and thermal power**—is essential to **ensure long-term energy security**.

World Happiness Report 2025: India's Ranking Improves but Still Behind Pakistan

Context: The **World Happiness Report 2025**, released by the **Wellbeing Research Centre at the University of Oxford**, once again crowns **Finland** as the world's happiest country for the **eighth consecutive year**.

India's Performance in the Happiness Rankings:

India has shown **consistent improvement** over the past three years, moving up to **118th place** out of 147 countries, compared to **126th last year**. However, despite its **stronger economy and governance**, India continues to rank **below Pakistan** (**109th place**) in overall happiness.



How Are the Rankings Determined?

The rankings are based on **Gallup World Poll** surveys and the **UN Sustainable Development Solutions Network**, using responses from people rating their lives on a **0-10 scale** (Cantril Ladder method).

Key Factors Influencing Happiness Scores:

1. **GDP per Capita**
2. **Healthy Life Expectancy**
3. **Social Support**
4. **Freedom to Make Life Choices**
5. **Generosity**
6. **Perception of Corruption**

The report uses a **three-year average** (2022-2024) to ensure accuracy.

Global Highlights: Who's Happiest & Who's Not?

Top-Ranked Countries:

- **Nordic Nations Lead:** Finland, Denmark, Iceland, and Sweden hold the top four positions.
- **Surprise Entries:** Costa Rica (6th) and Mexico (10th) break into the top 10.
- **Israel (8th)** remains in the top tier despite ongoing conflicts.

Declining Happiness in the West:

- **United States (24th):** Fell from 11th (2012) due to increased social isolation.
- **United Kingdom (23rd):** Records its **lowest happiness level** since 2017.

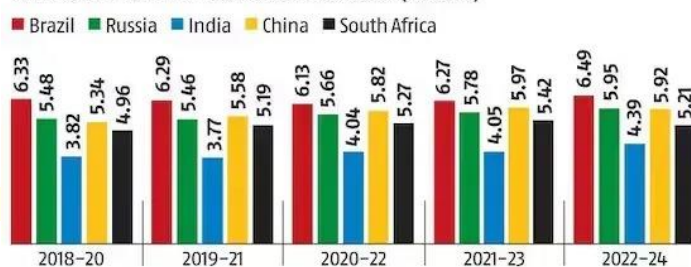
Least Happy Countries:

- **Afghanistan** remains at the bottom, with severe challenges for women.
- **Sierra Leone and Lebanon** follow as the second and third least happy nations.
- **Global Social Support Decline:** 19% of young adults report having no one to rely on.

India's Performance Breakdown:

- **Improved Happiness Score:** 4.389 (out of 10), up from 4.054 last year.

REPORT CARD Scores of Brics countries (out of 10)



HOW THE NEIGHBOURS FARED



Countries	Happiness score (2022-24)	Change in happiness score from 2006-10 to 2022-24
Nepal	5.31	0.71
Pakistan	4.77	-0.37
INDIA	4.39	-0.58
Sri Lanka	3.89	-0.38
Bangladesh	3.85	-0.92

Note: Scores have been calculated on a three-year average

Source: World Happiness Report 2025



- **Ranking in Social Indicators:**

- **57th** in donations
- **10th** in volunteering
- **74th** in helping strangers
- **Wallet Return Rates:** Ranked **115th** (by neighbor), **86th** (by stranger), **93rd** (by police)

Why is India Behind Pakistan Despite Economic Strength?

India outperforms Pakistan in key areas:

- **Higher Per Capita Income:** India - **\$2,480.8**, Pakistan - **\$1,365.3**
- **Better Life Expectancy:** India - **58.1 years**, Pakistan - **56.9 years**
- **Lower Corruption Perception:** India - **96th**, Pakistan - **135th**

Yet, **happiness isn't just about wealth**. The report emphasizes **social trust, connections, and emotional well-being** over material prosperity.

Final Thoughts:

India's steady rise in happiness rankings reflects progress, but the report highlights **the power of social bonds and trust** in shaping national well-being. As **Gallup CEO Jon Clifton** states, "**Happiness isn't just about money or growth—it's about knowing people have your back.**"

To create **happier societies**, we must invest in **trust, relationships, and emotional well-being**, alongside economic development.

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GPS Spoofing: A Rising Cyber Threat

Context: Between November 2023 and February 2025, as many as **465 cases** of **GPS interference and spoofing** have been reported near India's border regions, particularly in **Amritsar and Jammu**, according to recent government data.

This growing cyber threat highlights the vulnerability of **critical navigation systems**, which are essential for **military operations, aviation, maritime security, and civilian transportation**.



What is a Spoofing Attack?

A **spoofing attack** is a **cyberattack technique** where fraudulent data is sent to a system to deceive it into accepting false information as legitimate.

Common Types of Spoofing Attacks:

- **GPS Spoofing** – Manipulating GPS signals to alter location data.
- **IP Spoofing** – Hiding the attacker's real IP address, often used in **Distributed Denial of Service (DDoS)** attacks.
- **Caller ID & SMS Spoofing** – Faking caller ID information to mislead recipients.
- **Email Spoofing** – Sending emails that appear to come from a trusted source, commonly used in **phishing attacks**.

Understanding GPS Spoofing:

GPS spoofing involves the transmission of **fake GPS signals** to mislead **GPS-enabled devices** into believing they are in a different location. This can have **serious consequences**, especially for:

- **Military and Defense** – Disrupting enemy navigation and surveillance.
- **Aviation & Maritime Transport** – Misguiding flights or ships, leading to accidents.
- **Financial Transactions** – Some banking systems use GPS for **location-based authentication**.
- **Drones & Autonomous Vehicles** – Causing drones and self-driving cars to lose their way.

How Does GPS Spoofing Work?

GPS signals from satellites are inherently **weak**, making them susceptible to interference. Attackers exploit this weakness in the following way:

- **Signal Analysis** – The attacker studies the victim's GPS setup, including the type of signals used.
- **Signal Transmission** – Fake GPS signals, mimicking real ones, are broadcasted.
- **Overpowering Genuine Signals** – Since the counterfeit signals are stronger, the receiver **mistakenly prioritizes them**.
- **Location Manipulation** – The affected GPS receiver **displays an incorrect position**, leading to navigation errors.

Real-World Examples of GPS Spoofing:



- **2019 – Black Sea Incident:** Over **20 ships** reported **false GPS locations**, causing confusion.
- **2017 – Aviation Disruptions:** NATO detected Russian GPS spoofing near **Norway and Finland**, affecting aircraft.
- **2020 – Pokemon Go Hackers:** Gamers used GPS spoofing to **fake their locations** and gain advantages.

How to Defend Against GPS Spoofing?

With **cyber threats evolving**, it is crucial to adopt **preventive measures** against GPS spoofing:

- **Use Encrypted GPS Signals** – Advanced systems like **M-code (for military use)** offer better protection.
- **Multi-Frequency GPS Receivers** – Using multiple signals makes it harder for attackers to deceive the system.
- **AI-Based Anomaly Detection** – Machine learning algorithms can detect irregular GPS patterns.
- **Backup Navigation Systems** – Relying on **inertial navigation systems (INS)** and **ground-based alternatives** can help in case of spoofing.

Conclusion:

As technology advances, so do **cyber threats**. **GPS spoofing is no longer a theoretical concern—it's a real-world problem affecting national security, businesses, and everyday users.** Strengthening **defenses through encryption, AI, and alternative navigation methods** is critical to countering this growing menace.

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Iguanas: The Ancient Reptilian Wanderers

Context: Scientists have uncovered fascinating evidence of how **iguanas** managed to travel vast distances, making their way from the **Americas to Fiji**. These resilient reptiles likely rafted across oceans on floating vegetation, showcasing their adaptability and survival skills.



What Are Iguanas?

Iguanas are **large, robust lizards** predominantly found in **tropical regions** of the Americas. Their distinctive features include:

- **Scaly skin** adorned with rough **warts** and protective **spines** along their back.
- A unique **dewlap** (a flap of skin beneath their neck) used for communication and thermoregulation.
- Various **color morphs**, ranging from **vibrant green** to striking **blue** and muted **grey** shades.

Diet & Adaptability:

Despite their fierce appearance, **iguanas are herbivores**, primarily feeding on **leaves, fruits, and flowers**. They have successfully adapted to diverse ecosystems, thriving in **rainforests, arid deserts, and even urban environments**.

Geographic Range & Natural Habitat:

Where Are Iguanas Found?

- **Native Regions:** Spread across **Central and South America**, from **Mexico to Paraguay and Brazil**.
- **Introduced Regions:** Populations have been established in **Florida, Hawaii, and the Caribbean islands** due to human activity.

Did You Know?

- **Largest Lizard in the USA** – The **green iguana** holds the title of the **biggest lizard species in the United States**.
- **Arboreal Creatures** – Iguanas are **tree-dwelling reptiles**, rarely descending to the ground except for nesting.

Preferred Environments:

Iguanas can be found in various ecosystems, including:

- **Forests & Rainforests** – Thriving in the dense canopy.
- **Rivers, Lakes & Coastal Waters** – Excellent swimmers!
- **Wetlands (Swamps)** – Adapting to humid, marshy areas.
- **Urban & Agricultural Areas** – Displaying remarkable **suburban adaptability**.

Conservation Status: Are Iguanas at Risk?

According to the **IUCN Red List**, most **iguana species are not currently threatened**. However, some are protected under the **CITES Appendix II**, which regulates their international trade.

Threats to Iguana Populations:

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To the Point

Weekly Current Affairs

16 to 22 March 2025



- **Overexploitation** – Due to demand in the **pet trade** and **leather industry**.
- **Habitat Destruction** – **Deforestation** and **urban expansion** are major concerns.

Fun Fact!

- Some iguanas, like the **marine iguana** of the Galápagos Islands, **can dive up to 30 feet underwater** to graze on algae!

Iguanas continue to captivate scientists and nature lovers alike with their **resilience, adaptability, and ancient lineage**. These remarkable reptiles have thrived for **millions of years**, proving their place in the ever-changing natural world.



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Suriname: The Hidden Gem of South America

Context: In a significant move to strengthen agricultural ties, **India** has provided **\$1 million worth of machinery** to **Suriname** to enhance its **passion fruit industry**. This initiative aims to modernize the sector, increase production, and create new economic opportunities for local farmers.

Indian Diaspora: A Strong Cultural Bond

The **Indian diaspora** forms a substantial **27% of Suriname's population**, making it one of the most influential communities in the country. This connection dates back to the **19th century**, when indentured laborers from India were brought to Suriname under Dutch colonial rule. Today, their cultural influence is evident in **festivals, cuisine, and traditions** across the nation.

Political and Geographical Insights:

A Unique Position in South America:

- **Smallest Country** in **South America** in terms of land area.
- Bordered by **French Guiana (East)**, **Brazil (South)**, and **Guyana (West)**.
- **Atlantic Ocean** forms its **northern boundary**, providing a crucial maritime connection.

Suriname's Diverse Landscape:

- Home to the **Bakhuys Mountains** and **Van Asch Van Wijck Mountains**.
- The **Wilhelmina Mountains** house **Juliana Top**, the highest peak in the country.
- Major **rivers** like the **Suriname River**, **Maroni River**, and **Courantyne River** are vital for transportation, irrigation, and biodiversity.

Did You Know?

- **Over 90% of Suriname** is covered in **tropical rainforests**, making it one of the most **heavily forested nations** in the world.
- The country is part of the **Guiana Shield**, a region rich in **gold and bauxite** reserves.
- **Paramaribo**, the capital, is a **UNESCO World Heritage Site** due to its well-preserved **Dutch colonial architecture**.

With growing international partnerships and a rich cultural heritage, **Suriname** continues to strengthen its position as a **rising economic and environmental powerhouse in South America**.

