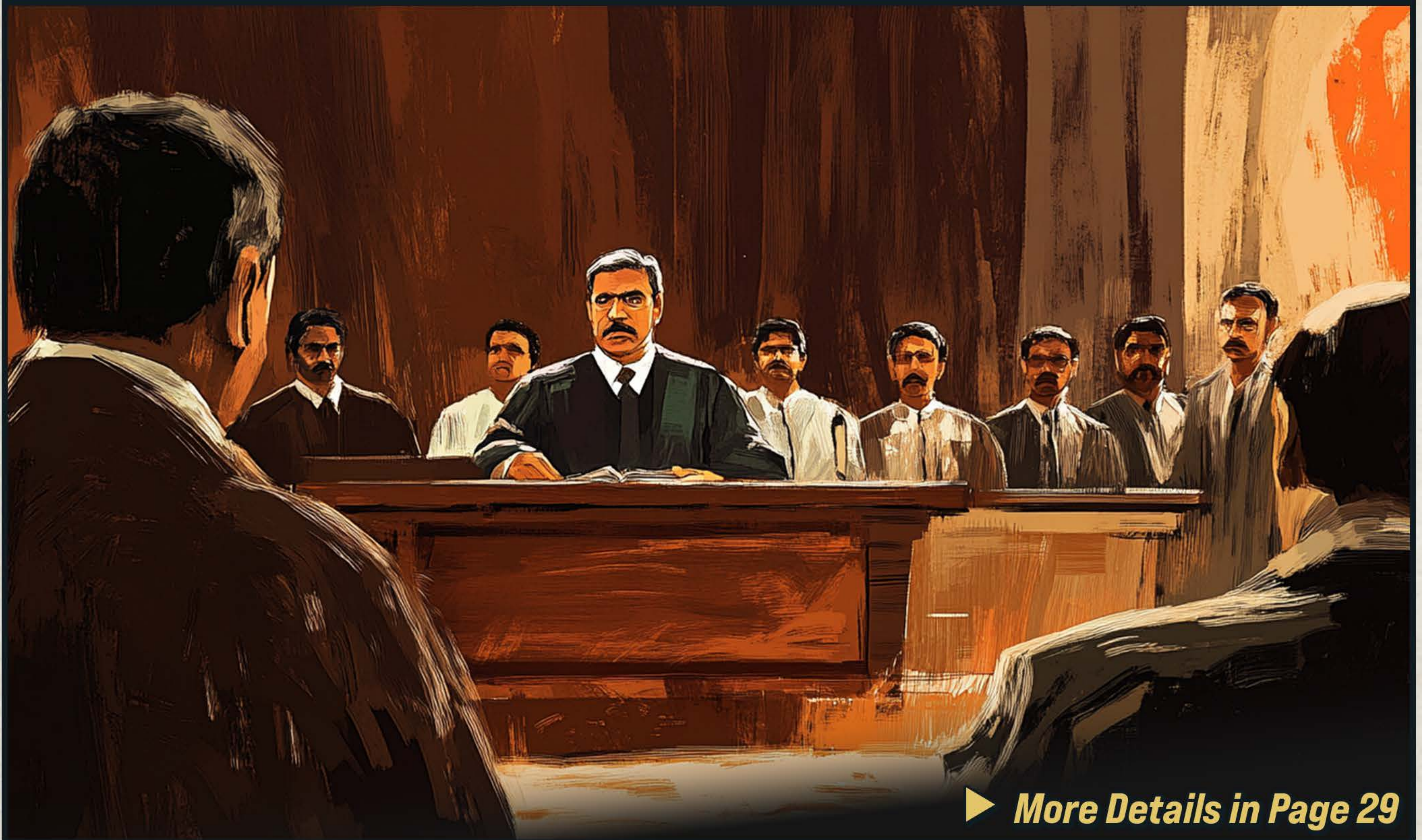


WEEKLY NEWS

December 08-14, 2024

Impeachment of HC Judge



► *More Details in Page 29*

Universe's Expansion Confirmed by JWST




► *More Details in Page 23*

HIGHLIGHTS

- 'Right to Disconnect'
- Mercy Petitions

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Forest Rights Approved in Anamalai Tiger Reserve (ATR)

● Why in News?

- ➡ **Approval of Rights:** The District Level Committee approved community and individual forest rights under the Forest Rights Act (FRA), 2006, for Nagaroothu I, Nagaroothu II, and Chinnarpathi tribal settlements in ATR, Tamil Nadu.

● About Forest Rights Act (FRA), 2006

- ➡ **Objective:** Address historical injustices faced by forest-dwelling communities. Secure their livelihood and food security.

- ➡ **Key Features:**

 - Types of Forest Rights:**

 - Individual Rights:** Rights for self-cultivation, habitation, and in-situ rehabilitation.

 - Community Rights:** Grazing, fishing, access to water bodies, protection of traditional knowledge, and customary rights.

- ➡ **Eligibility Criteria:** Applicable to individuals or communities residing in forests for at least three generations (75 years) before December 13, 2005.

- ➡ **Critical Wildlife Habitats:** Ensures inviolate conservation of critical wildlife habitats in National Parks and Sanctuaries.

● Authorities for Vesting Forest Rights

- ➡ **Gram Sabha:** Initiates the process to determine the nature and extent of forest rights.

- ➡ **Sub-Divisional Level Committee:** Examines Gram Sabha's resolutions.

- ➡ **District Level Committee:** Grants final approval of rights.

● Challenges (Xaxa Committee Findings)

- ➡ Arbitrary rejection of claims.

- ➡ Absence of deadlines for claim processing.

- ➡ Exclusion of displaced individuals due to development projects.



● **Way Forward**

- ⇒ Ensure transparency and accountability in the claims process.
- ⇒ Set specific timelines for resolving claims.
- ⇒ Address the rights of those displaced by development projects.
- ⇒ Strengthen community participation in the conservation and management of forest resources.



Railways (Amendment) Bill, 2024

● Why in News?

- ➔ **Introduction in Lok Sabha:** The Union Minister of Railways introduced the Railways (Amendment) Bill, 2024, to repeal the Indian Railway Board Act, 1905, and integrate its provisions into the Railways Act, 1989.

● Key Provisions of the Bill

➔ Statutory Railway Board:

Establishes the Railway Board as a statutory body under the 1989 Act.

Central government to define:

Number of members.

Qualifications and experience.

Terms of service and appointment procedures for the Chairman and members.

Acts as the apex decision-making body for Indian Railways to ensure efficient management and policy implementation.

- ➔ **Decentralization:** Grants greater autonomy to railway zones to enhance operational efficiency and decentralize decision-making.

- ➔ **Independent Regulator:** Proposes an independent regulatory body to oversee Tariffs, Safety, & Private sector participation.

- ➔ **Retained Structure:** The existing organizational structure of Indian Railways remains unchanged.

● Potential Impacts

- ➔ **Strengthened Railway Board:** Enhanced functioning and independence.

- ➔ **Improved Efficiency:** Faster decision-making through decentralization and zone empowerment.

- ➔ **Transparency:** Independent regulator to promote transparency and accountability in railway operations.

- ➔ **Private Sector Participation:** Encourages greater private investment, potentially leading to higher fares & reduced government subsidies.



● **Way Forward**

- ⇒ Implement the independent regulatory framework promptly to ensure accountability.
- ⇒ Balance private sector participation with affordability for the public.
- ⇒ Monitor the decentralized system to avoid coordination challenges.
- ⇒ Promote technological upgrades and innovation in railway operations through private and public collaboration.



India to Establish Comprehensive Anti-Drone Unit

● Why in News?

- ➔ **Union Home Minister's Announcement:** India plans to create a comprehensive Anti-Drone Unit to enhance border security and counter rising drone threats.
- ➔ **Focus:** A "whole of government" approach involving defense and research organizations to combat the growing menace of drones.

● Anti-Drone Systems: Overview

- ➔ **Definition:** Systems designed to detect, track, and mitigate unauthorized drones or UAVs posing security threats such as:
 - Transporting explosives.
 - Conducting surveillance.
 - Breaching restricted airspace.
- ➔ **Key Technologies:**
 - Radio Frequency Jammers:** Disrupt drone communication.
 - GPS Spoofers:** Mislead drone navigation.
 - Net Guns:** Capture drones physically.

● Need for an Anti-Drone Unit in India

- ➔ **Increasing Border Threats:** Over 260 drones intercepted in 2024 along the India-Pakistan border.
- ➔ **Critical Areas:** Safeguarding airports, military installations, critical infrastructure, and public events.
- ➔ **Countering Non-State Actors:** Drones used by terrorists for smuggling weapons and targeting civilians/security personnel.
- ➔ **Dual-Use Threats:**
 - Smuggling of arms.
 - Military reconnaissance and combat missions (e.g., Bangladesh's Bayraktar TB2 drone).
- ➔ **Internal Security:** Militant use of drones in Manipur to drop explosives raises significant concerns.

● **Recent Anti-Drone Measures in India**

⇒ DRDO's Soft and Hard Kill Systems:

Soft Kill: Jamming drone communication links.

Hard Kill: Laser-based systems to destroy drones.

⇒ **Laser-Equipped Mechanisms:** Mounted anti-drone guns along the India-Pakistan border; significant success in neutralizing drones.

⇒ **Counter Drone System (D4):**

Developed by Bharat Electronics Limited (BEL).

Capable of real-time detection, tracking, and neutralization of drones.

● **Way Forward**

⇒ **Enhanced Surveillance:** Deploy advanced anti-drone systems across critical zones.

⇒ **Indigenous Technology:** Accelerate development of homegrown counter-drone technologies.

⇒ **Cross-Border Coordination:** Collaborate with neighboring countries to address drone-related threats.

⇒ **Policy Framework:** Implement strict regulations to control unauthorized drone usage.

⇒ **Training & Awareness:** Equip security forces with the expertise to handle drone-related challenges effectively.

SC Guidelines on Mercy Petitions Processing

● Why in News?

- ⇒ **Supreme Court Decision:** Pronounced in State of Maharashtra vs. Pradeep Yashwant Kokade, the SC issued guidelines to streamline the processing of mercy petitions and death penalty executions.
- ⇒ **Objective:** Avoid undue delays and safeguard convicts' legal rights.

● Major Guidelines Issued by SC

⇒ For States/UTs

Dedicated Cells for Mercy Petitions: States and UTs to establish cells specifically to handle and process mercy petitions promptly.

Judicial Officer Attachment: An officer from the Law and Judiciary Department to be attached to the dedicated cell for supervision.

Information Sharing and Documentation: Prison authorities to forward petitions to the dedicated cell. Relevant information to be sought from police stations and investigation agencies.

Coordination with Governor and President Secretariats: Mercy petitions to be sent to these offices for further processing.

Electronic Communication: Use email for efficient communication, except in cases requiring confidentiality.

Guidelines and Reporting: State Governments to issue detailed executive orders for handling mercy petitions. Compliance with SC directions to be reported within three months.

⇒ For Sessions Courts

Records Maintenance: Maintain detailed records of mercy petition-related cases.

Coordination: Notify public prosecutors or investigative agencies for pending appeals.

Execution Warrants: State to issue warrants immediately after the death penalty becomes enforceable.

● **About Mercy Petitions**

⇒ **Constitutional Framework**

Article 72: President of India has the power to grant pardons, reprieves, respites, or remissions of punishment.

Article 161: Similar power granted to Governors at the state level.

SC Observation (Maru Ram vs. Union of India, 1981): The President must act on the advice of the Council of Ministers while deciding mercy petitions.

⇒ **Legal Framework**

Governed under Section 472(1) of the Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023.

● **Way Forward**

⇒ **Timely Implementation:** Ensure dedicated cells and frameworks are established across all States/UTs.

⇒ **Capacity Building:** Train judicial officers and prison authorities to handle mercy petitions efficiently.

⇒ **Monitoring Mechanisms:** Regular review of compliance reports to assess adherence to SC guidelines.

⇒ **Use of Technology:** Leverage digital platforms to streamline communication and documentation processes.

UNESCO eDNA Expeditions: Safeguarding Marine Biodiversity

● Why in News?

- ➔ **UNESCO Report:** The report "Engaging Communities to Safeguard Ocean Life" highlights findings from environmental DNA (eDNA) expeditions across World Heritage Marine Sites (WHMS), focusing on marine species' vulnerability to climate change.
- ➔ **Expedition Timeline:** eDNA sampling campaigns conducted at 21 of 51 WHMS between September 2022 and July 2023.

● About UNESCO's eDNA Expeditions

- ➔ **Objective:** Measure marine biodiversity and assess the impact of climate change on species distribution in UNESCO WHMS.
- ➔ **Global Citizen Science Initiative:** Engages communities worldwide to monitor and protect ocean life.

● About Environmental DNA (eDNA)

- ➔ **Definition:** Genetic material left by organisms in the environment, including DNA from cells, tissues, fluids, and excrement, detected through environmental sampling.

➔ Significance of eDNA

Large-Scale Monitoring: Enables sampling across vast and geographically distant regions.

Advanced Technology: Provides a sensitive and rapid bio-monitoring method compared to traditional techniques.

Sustainable Approach: Non-invasive method with minimal environmental impact.

Cost-Effective: Economical for sample collection and effective in detecting rare, transient, or invasive species. Example: Detection of invasive lionfish in Belize.

➔ Limitations of eDNA

Data Gaps: Confirms only the presence of organisms but lacks information on number, size, sex, or life stage.

Identification Challenges: Incomplete DNA reference databases hinder accurate species identification.

Other Challenges: Susceptibility to contamination. High laboratory analysis costs.



● **UNESCO World Heritage Marine Sites (WHMS)**

- ➡ **Global Significance:** Cover over 20% of the world's blue carbon ecosystems. Store carbon assets equivalent to 10% of global greenhouse gas emissions.
- ➡ **Marine Biodiversity:** Host 35% of threatened marine species. Over 70% of these sites face threats from climate change (IUCN).
- ➡ **Proxy for Marine Protection:** Act as benchmarks for the global network of 18,000 Marine Protected Areas (MPAs). India has **26 MPAs** in the Peninsular region and **106 MPAs** in Islands.
- ➡ **India's Contribution:** Sundarbans National Park is a designated WHMS.

● **Way Forward**

- ➡ **Strengthen DNA Databases:** Develop comprehensive DNA reference libraries for accurate species identification.
- ➡ **Enhance Sampling Infrastructure:** Improve lab capacities for cost-effective and contamination-resistant analysis.
- ➡ **Leverage eDNA in Policy:** Utilize eDNA findings to drive marine conservation policies, especially in threatened regions.
- ➡ **Community Engagement:** Expand citizen science initiatives to increase public awareness and participation in marine protection efforts.

Permanent Commission to Woman Army Officer

● Why in News?

- ➔ **Landmark Decision:** Supreme Court, under Article 142 of the Constitution, granted permanent commission to a woman Army officer, Lt. Col. Suprita Chandel (Suprita Chandel vs. UOI & Ors).
- ➔ **Significant Ruling:** SC upheld that reliefs granted to similarly placed individuals must also be extended to others not party to the original case.

● Case Background

- ➔ **Policy Amendment (2013):** An amendment to the original policy allowed age relaxation for male officers, upheld by the Armed Forces Tribunal (AFT).
- ➔ **Denied Benefit:** Appellant was excluded from this benefit as she wasn't part of the original litigation.
- ➔ **Supreme Court Ruling:** Extended the benefit to the appellant, referencing earlier judgments: **Amrit Lal Berry Case (1975) & K.I. Shephard Case (1987)**

● Permanent Commission for Women in the Army

➔ Historical Progression:

1992: Women were allowed in specific cadres (e.g., Short Service Commission and Army Service Corps).

Until 2020: Women could not receive permanent commissions or hold command positions, serving instead as Short Service Commission officers for 10+4 years.

➔ SC Intervention (Babita Puniya Case, 2020):

Ordered granting of permanent commission to women officers.

Held that denying women permanent commissions violated Article 14 (Right to Equality).

● Article 142: Complete Justice

- ➔ **Empowering SC:** Authorizes the Supreme Court to pass orders or decrees to ensure complete justice in any matter.
- ➔ **Enforceability:** Orders are binding across India, subject to laws made by Parliament or presidential orders.



● **Way Forward**

- ➔ **Institutional Reforms:** Ensure gender parity in the Armed Forces by institutionalizing equal opportunities. Streamline policies to prevent gender-based exclusions in military roles.
- ➔ **Judicial Precedents:** Adopt a uniform approach to extending judicial reliefs to similarly situated individuals without requiring litigation.
- ➔ **Awareness and Implementation:** Increase awareness among women officers about their rights under the law. Strengthen mechanisms for prompt enforcement of SC judgments in military policy.



Indigenous Communities

● Why in News?

- ➡ COP16 of UNCCD recognized the vital role of indigenous communities in combating desertification.
- ➡ The first-ever '**Indigenous Peoples Forum at UNCCD**' highlighted their contributions to land conservation and sustainable resource management.

● Who are Indigenous Peoples?

- ➡ Tribal communities with distinct social, cultural, economic, and political characteristics.
- ➡ **Examples: Aborigines (Australia), Maori (New Zealand), Santhals (India).**
- ➡ Represent 5% of the global population but manage **22% of the world's green areas**, earning the title "**gatekeepers of green areas**".

● Contributions of Indigenous Communities in Combating Desertification

- ➡ **Regenerative Agriculture:** Mayan people's **Milpa polyculture technique**.
- ➡ **Protected Area Management:** Soligas Tribe's role in managing the **Biligiri Rangaswamy Temple Wildlife Sanctuary (BRTWS)**.
- ➡ **Forest Restoration:** Khasi and Garo tribes' preservation of **sacred groves in Meghalaya**.
- ➡ **Water Management:** '**Karez**' or '**Surang Bavi**' systems for rainwater harvesting in Bidar region.

● Challenges Faced by Indigenous Peoples

- ➡ **Social:** Extreme poverty, gender discrimination, and poor political representation.
- ➡ **Environmental:** Displacement due to climate change.
- ➡ **Economic:** Lack of access to social services and financial resources.

● Recommendations

- ➡ Include indigenous peoples in global green area protection decision-making.
- ➡ Ensure **land rights** and direct access to finance for indigenous communities.
- ➡ Integrate traditional knowledge into national and international policies.



● **Steps Taken for Green Area Protection Using Indigenous Knowledge**

- ⇒ **Joint Forest Management (JFM):** Involves local communities in managing degraded forest lands.
- ⇒ **Green India Mission (GIM):** Focuses on protecting and enhancing forest cover.
- ⇒ **Traditional Knowledge Digital Library (TKDL):** Prevents bio-piracy and wrongful patents.
- ⇒ **Forest Rights Act (FRA) 2006:** Grants community rights over forest resources and practices.

● **Way Forward**

- ⇒ Recognize indigenous peoples as equal stakeholders in environmental policymaking.
- ⇒ Promote partnerships that leverage traditional knowledge for sustainable practices.
- ⇒ Provide legal and financial support to preserve their cultural and ecological contributions.



Smuggling in India: DRI Report 2023-24

● Why in News?

➡ **Release of Report:** Directorate of Revenue Intelligence (DRI) published the 'Smuggling in India' Report 2023-24.

➡ About DRI:

Established: 1957.

Role: Apex anti-smuggling agency under Central Board of Indirect Taxes & Customs, Ministry of Finance.

● Key Highlights

➡ **Gold Seizures:** 1319 kg gold seized. Sources being Land (55%) and Air routes (36%).

➡ **Cocaine Smuggling:** 9% rise in quantities smuggled, mainly through airports.

➡ **Illegal Wildlife Trade:** Focus on Elephant tusks (~53 kg) among other products.

● Reasons for Smuggling in India

➡ Geographical Factors:

Proximity to major drug-trafficking zones:

Death Crescent: Afghanistan, Iran, Pakistan.

Death Triangle: Myanmar, Laos, Thailand.

Extensive borders: ~7500 km coastline and porous land boundaries.

➡ **High Domestic Demand:** Cultural demand for gold and rising youth population and demand for narcotics.

➡ **Economic Disparities:** Tax structure differences encourage smuggling (e.g., cheaper gold in Dubai, Bangkok).

● Initiatives to Combat Smuggling

➡ Global Efforts:

United Nations Office on Drugs and Crime (UNODC).

Paris Pact Initiative: Links counter-narcotics actors.

Convention on International Trade in Endangered Species (CITES).



● **Initiatives to Combat Smuggling**

⇒ **Indian Measures:**

Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985: Tackles drug trafficking.

Hazardous Wastes Management Rules, 2023: Regulates transboundary movement of waste.

Wildlife Crime Control Bureau: Monitors illegal wildlife trade.

● **Way Forward**

⇒ **International Collaboration:** Example: Operation Tentacle (smuggling via airline passengers).

⇒ **Enhanced Border Security:** Integrated border management and advanced surveillance tools like thermal imaging and motion sensors.

⇒ **Coastal Security:** Strengthen coastal monitoring through radars and patrolling.



Merchant Shipping Bill, 2024

● Why in News?

- ➔ **Introduction in Lok Sabha:** The Ministry of Ports, Shipping, and Waterways introduced the Merchant Shipping Bill, 2024, aimed at reforming India's shipping laws.
- ➔ **Repeal of Old Act:** Seeks to repeal the Merchant Shipping Act, 1958, and consolidate laws related to merchant shipping in compliance with international maritime treaties.

● Key Provisions of the Bill

- ➔ **National Shipping Board:** Establishment to advise the central government on Indian shipping matters. Empowered to regulate its procedures for conducting business.
- ➔ **Maritime Administration:** Central Government to appoint a Director-General of Maritime Administration for overseeing maritime affairs.
- ➔ **Registration of Vessels:** Ownership permitted to:
 - Citizens of India, including Non-Resident Indians (NRIs) and Overseas Citizens of India (OCIs).
 - Companies established under central or state acts with a registered office in India.
- ➔ **Transfer of Indian Vessels:** Prohibition on the transfer or acquisition of Indian vessels during times of national security threats, such as war or external aggression.
- ➔ **Pollution Prevention and Containment:** Mandates compliance with provisions of international conventions to prevent and manage marine pollution.

● Need for the Bill

- ➔ **Simplified Ownership Criteria:** Streamline the ownership process for merchant vessels, making operations easier for Indian-flagged vessels.
- ➔ **Strengthened Pollution Control:** Introduce stricter norms against polluting vessels to safeguard marine ecosystems.
- ➔ **Regulation of Marine Casualties:** Standardize regulations related to maritime incidents for better management.
- ➔ **National Interest:** Promote the development and efficient maintenance of India's mercantile marine to align with national priorities.

● **Way Forward**

- ➔ **Strengthening Maritime Policies:** Implement robust mechanisms for effective compliance with international conventions. Enhance coordination between maritime authorities and shipping stakeholders.
- ➔ **Promoting Indian Shipping Industry:** Incentivize investments in Indian-flagged vessels. Expand the global presence of Indian maritime companies.
- ➔ **Environmental Safeguards:** Develop advanced technologies for pollution detection and containment. Foster international cooperation for sustainable maritime operations.



Quantum Leap with Google's Willow Chip

● Why in News?

- ➡ Google launched **Willow**, its advanced quantum computing chip.
- ➡ The chip can solve complex computations in under **5 minutes**, which would otherwise take the world's fastest supercomputers **10 septillion years** to complete.

● About Willow Chip

- ➡ **Technology Used:** Operates with **superconducting transmon qubits**, tiny circuits exhibiting quantum behavior at extremely low temperatures.
- ➡ **Performance:** Represents a significant leap in solving computationally intensive problems.

● What is Quantum Computing?

- ➡ **Principle:** Based on **quantum mechanics**, enabling faster problem-solving compared to classical computers.
- ➡ **Qubits:** Unlike traditional bits (0s and 1s), **qubits** can exist as both 0 and 1 simultaneously.
- ➡ **Key Principles of Quantum Mechanics Involved**
 - Superposition:** A quantum particle can exist in multiple states at once.
 - Entanglement:** Quantum particles exhibit correlations stronger than allowed by classical probability.
 - Others:** Decoherence and Interference.

● Applications of Quantum Computing

- ➡ **Artificial Intelligence & Machine Learning:** Enhanced data processing.
- ➡ **Cybersecurity:** Improved encryption and threat detection.
- ➡ **Drug Development:** Accelerated research for new medicines.
- ➡ **Weather Forecasting:** More accurate climate predictions.
- ➡ **Traffic Management:** Optimizing flow and reducing congestion.



● **Challenges in Quantum Computing**

- ⇒ **Quantum Errors:** Noise and decoherence reduce reliability.
- ⇒ **Scalability:** Requires specialized materials and techniques.
- ⇒ **Short Qubit Lifespan:** Limits operational time.
- ⇒ **Security:** Protocols are still evolving.
- ⇒ **Skilled Workforce Shortage:** Demand for expertise exceeds availability.

● **India's Initiatives for Quantum Computing**

- ⇒ **National Quantum Mission:** Boosting R&D for creating a robust quantum technology ecosystem.
- ⇒ **Quantum Enabled Science & Technology (QuEST):** Building foundational quantum capabilities through research.
- ⇒ **Quantum Frontier Mission:** Led by **PM-STIAC**, focusing on advancing quantum technology innovation.

● **Way Forward**

- ⇒ **Global Collaboration:** Partnering with global leaders in quantum research.
- ⇒ **Building Infrastructure:** Investment in labs and facilities for quantum research.
- ⇒ **Skill Development:** Training programs to build a skilled workforce.
- ⇒ **Policy Support:** Establishing guidelines for ethical and secure use of quantum technology.



World Malaria Report 2024

● Why in News?

- ➔ **WHO Report Release:** The World Health Organization (WHO) published the World Malaria Report 2024, highlighting global and regional trends in malaria.

● Key Findings

- ➔ **Global Trends:** Malaria cases increased to 263 million in 2023, with an incidence of 60.4 per 1,000 population at risk, compared to 58.6 in 2022. The African Region accounted for 94% of global malaria cases.

➔ India-Specific Findings:

Decline in Malaria Cases: Cases reduced by 69%, from 6.4 million in 2017 to 2 million in 2023.

Decline in Malaria Deaths: Deaths dropped by 68%, from 11,100 in 2017 to 3,500 in 2023.

HBHI Group Exit: India exited the High Burden to High Impact (HBHI) group in 2024.

● About Malaria

➔ Disease Overview:

Caused by Plasmodium parasites and transmitted through infected female Anopheles mosquito bites.

Prevalent mainly in tropical regions.

Symptoms: Fever, chills, headache, fatigue, etc.

➔ Causative Parasites:

Five Plasmodium species affect humans: *P. falciparum*, *P. vivax*, *P. malariae*, *P. ovale*, *P. knowlesi*.

P. falciparum and *P. vivax* pose the highest risk.

➔ Vaccines:

RTS,S/AS01: First WHO-approved vaccine (2021).

R21/Matrix-M: Second WHO-approved vaccine (2023).

● Initiatives and Strategies

- ➔ **Global Initiatives:** WHO's Global Technical Strategy for Malaria 2016–2030 (updated in 2021) provides a framework for combating malaria.

- ➔ **India's National Strategy:** National Strategic Plan for Malaria Elimination (2023–2027) outlines India's roadmap to eradicate malaria.



● **Factors Increasing Malaria Vulnerability**

- ➔ **Biological Factors:** Includes physiological characteristics like age, sex, immune response, and genetic predisposition.
- ➔ **Environmental Factors:** Climate variability and land-use changes exacerbate malaria exposure.
- ➔ **Social and Economic Factors:** Socioeconomic status, gender inequalities, disability, ethnicity, and migration status increase vulnerability.
- ➔ **Structural Challenges:** Issues like conflict, migration, and limited healthcare access heighten malaria risks.

● **Way Forward**

- ➔ **Strengthening Global Efforts:** Enhance the implementation of WHO's global strategy. Promote equitable access to malaria vaccines in high-burden regions.
- ➔ **Focus on India:** Continue progress under the National Strategic Plan. Leverage technology and innovation for mosquito control and early detection.
- ➔ **Target Vulnerable Groups:** Address socioeconomic and structural barriers to healthcare access. Prioritize vaccine distribution among high-risk populations.
- ➔ **Climate Adaptation:** Develop localized solutions to mitigate the impact of climate variability on malaria transmission.



Universe's Expansion Confirmed by JWST

● Why in News?

- ➡ NASA's James Webb Space Telescope (JWST) validated earlier findings by the Hubble Space Telescope, confirming the universe's expansion at a rate faster than expected, approximately 8% higher than previous estimates.

● Universe's Expansion Rates

- ➡ **Hubble's Law:** The Hubble Constant suggests the universe expands at a rate of 67–68 km/s per megaparsec (1 megaparsec = 3.26 million light-years).

- ➡ **Observed Discrepancy:**

Observations from telescopes, including JWST, indicate a higher expansion rate of 70–76 km/s per megaparsec.

This variation between observed rates and the Hubble Constant is termed the 'Hubble Tension'.

● Probable Causes of Accelerated Expansion

- ➡ **Dark Matter:** Accounts for ~27% of the universe. A hypothesized form of invisible matter detected through its gravitational influence on ordinary matter like stars and planets.
- ➡ **Ordinary Matter:** Constitutes about 5% of the universe, including visible celestial bodies.
- ➡ **Dark Energy:** Makes up ~69% of the universe. A hypothetical force causing not just expansion but acceleration of the universe's expansion by stretching spacetime.

● Key Evidence Supporting Universe's Expansion

- ➡ **Redshift of Galaxies:** Light from distant galaxies is stretched (redshifted), indicating they are moving away from us.
- ➡ **Cosmic Microwave Background (CMB):** Residual radiation from the Big Bang, detectable in all directions, provides a snapshot of the early universe.
- ➡ **Other Observations:** Data from supernovae, gravitational waves, and galaxy clusters further confirm expansion trends.



● **Way Forward**

- ➡ **Resolving the Hubble Tension:** Advance observational capabilities and theoretical models to address discrepancies in expansion rates.
- ➡ **Understanding Dark Matter and Energy:** Prioritize research into these elusive components to better explain their role in cosmic expansion.
- ➡ **Global Collaboration:** Strengthen international scientific partnerships for deeper exploration of the universe's mysteries.
- ➡ **Enhance Data Analysis:** Employ AI and machine learning to interpret vast datasets from telescopes like JWST and Hubble.

● **Significance of Findings**

Provides deeper insights into the universe's origin, evolution, and structure.

Opens new avenues in cosmology and physics to explore unknown forces shaping the cosmos.



Growing Demand for the 'Right to Disconnect' in India

● Why in News?

- ➔ Increased calls for a legal framework on the Right to Disconnect in India following the death of a young female employee due to work-related stress.

● What is the 'Right to Disconnect'?

- ➔ Grants employees the right to not respond to work-related calls or messages outside working hours.
- ➔ Protects employees from disciplinary actions for not engaging in work communications after hours.

● Need for the 'Right to Disconnect' in India

- ➔ **Psycho-Social Impact:** Weakens social relationships and increases isolation. Contributes to mental health issues and physical ailments like cardiovascular diseases.
- ➔ **Impact on Women:** Reports indicate Indian women in professional fields (e.g., IT, auditing) work over 55 hours per week.
- ➔ **Other Concerns:** Reduced productivity due to burnout. Health issues like insomnia and disrupted sleep cycles caused by excessive screen time.

● Current Status in India

- ➔ **Legal Framework:** India does not currently have specific laws granting the Right to Disconnect.
- ➔ **Constitutional Provisions:**
 - Article 38:** Directs the state to promote the welfare of people.
 - Article 39(e):** Mandates the state to protect the health and strength of workers.
- ➔ **Judicial Support:**
 - Vishakha v. State of Rajasthan (1997):** Advocated for a safe working environment for women.
 - Ravindra Kumar Dhariwal v. Union of India (2021):** Urged accommodations for persons with disabilities.
- ➔ **Legislative Initiative:** A Private Member's Bill (2018) was introduced in the Lok Sabha to formalize the right to disconnect after working hours.



● **Global Position on the 'Right to Disconnect'**

- ⇒ **France:** A 2001 ruling by the Labour Chamber of the French Supreme Court stated that employees are not obligated to work from home or take files home.
- ⇒ **Portugal:** Employers are prohibited from contacting employees outside working hours except in emergencies.
- ⇒ **Spain:** Public sector employees have the legal right to switch off devices after hours.
- ⇒ **Australia:** The Parliament granted employees the right to disconnect from work communications outside working hours.

● **Way Forward**

- ⇒ **Legislative Action:** Enact a national law recognizing the Right to Disconnect to protect workers' mental health and work-life balance.
- ⇒ **Awareness Campaigns:** Educate employers and employees about the importance of boundaries for productivity and well-being.
- ⇒ **Strengthen Workplace Policies:** Encourage organizations to adopt internal policies respecting personal time.
- ⇒ **Global Collaboration:** Learn from international best practices and adapt them to the Indian context.

● **Significance**

- ⇒ Promotes mental and physical well-being.
- ⇒ Ensures work-life balance, especially for vulnerable groups like women and persons with disabilities.
- ⇒ Encourages sustainable workplace practices for long-term productivity.

Simultaneous Elections

● Why in News?

- ➡ The Union Cabinet recently approved two Bills aimed at implementing simultaneous elections for the Lok Sabha, State Assemblies, and local bodies.
- ➡ These Bills focus on amending the Constitution and provisions related to Union Territories with Legislative Assemblies.

● What are Simultaneous Elections?

- ➡ Simultaneous elections refer to holding elections for:
 - Lok Sabha** (Parliament),
 - State Legislative Assemblies,**
 - Local Bodies** (Municipalities and Panchayats) all at the same time.

● Need for Simultaneous Elections

- ➡ **Governance:** Frequent elections delay development projects and impact policy decision-making due to the imposition of the Model Code of Conduct (MCC).
- ➡ **Financial Savings:** Holding simultaneous elections can reduce the financial burden of conducting separate elections every year.
- ➡ **Human Resource Efficiency:** It would prevent the diversion of security forces and electoral officers (like teachers) from their primary duties for prolonged periods.
- ➡ **Other Benefits:** Can increase voter participation and reduce the burden on courts.

● Concerns about Simultaneous Elections

- ➡ **Impact on Regional Parties:** May adversely affect the electoral prospects of regional parties.
- ➡ **Political Accountability:** Reduced public scrutiny as elections would occur only once every five years.
- ➡ **Logistical Issues:** Requires a large number of Electronic Voting Machines (EVMs) and other resources, posing logistical challenges.

● **Recommendations by High-Level Committee (Led by Ram Nath Kovind)**

- ➡ **Constitutional Amendments:** Amendments to three Articles, addition of 12 new sub-clauses, and changes in three laws concerning Union Territories with Legislative Assemblies.
- ➡ **Single Electoral Roll:** A single electoral roll will be prepared by the Election Commission of India in consultation with State Election Commissions (Article 325 to be amended).
- ➡ **Simultaneous Elections to Local Bodies:** Municipalities and Panchayats elections will be held within 100 days of the Lok Sabha and State Assembly elections.
- ➡ **Appointed Date:** The President will notify the date of the first sitting of the Lok Sabha after a general election as the appointed date for synchronizing the elections.
- ➡ **Fresh Elections:** In case of a hung Parliament or no-confidence motion, fresh elections will be conducted only for the remaining term of the current Lok Sabha.

● **Way Forward**

- ➡ **Constitutional Amendments:** Proceed with the amendments to the Constitution and relevant laws to enable simultaneous elections.
- ➡ **Preparatory Measures:** Strengthen infrastructure, prepare a unified electoral roll, and plan logistics for efficient execution of simultaneous elections.
- ➡ **Stakeholder Engagement:** Involve political parties, electoral bodies, and the public in discussions about the potential impacts and concerns surrounding simultaneous elections.
- ➡ **Addressing Logistical Challenges:** Plan for the required increase in EVMs, manpower, and coordination among various agencies to execute the simultaneous elections smoothly.

● **Significance**

- ➡ **Streamlined Governance:** Enhances governance efficiency by reducing the frequency of elections.
- ➡ **Cost Reduction:** Helps in saving significant government resources by consolidating election cycles.
- ➡ **Improved Voter Engagement:** Could lead to higher voter participation in elections.

Impeachment Motion Moved Against Allahabad HC Judge

● Why in News?

- ➡ A motion to impeach a judge of the Allahabad High Court was recently introduced in the Rajya Sabha.
- ➡ The impeachment process seeks to uphold judicial accountability and preserve the integrity of the judiciary.
- ➡ This is the first impeachment motion against a high court judge in recent history, although none of the previous six attempts to impeach a judge have been successful.

● Constitutional Provisions Related to Impeachment

- ➡ The Constitution doesn't explicitly use the term "impeachment" but refers to the process under:
 - Article 124:** For the removal of Supreme Court judges.
 - Article 218:** For the removal of High Court judges.
- ➡ **Grounds for Removal:** Proven misbehaviour and incapacity (though these terms are not defined in the Constitution).
- ➡ **Procedure:** Governed by the **Judges Enquiry Act, 1968**.

● Steps in the Impeachment Process

- ➡ **Initiation:** A motion must be signed by at least:
 - 100 Lok Sabha members or
 - 50 Rajya Sabha members.
 The motion is then submitted to the presiding officer of the respective House.
- ➡ **Investigation:** If the motion is admitted, it is referred to a **three-member committee**, which includes:
 - Chief Justice of India** or a Supreme Court judge,
 - High Court Chief Justice,**
 - A distinguished jurist.**
- ➡ The committee investigates the charges and submits its report with findings to the **Speaker (Lok Sabha)** or **Chairman (Rajya Sabha)**.



● **Steps in the Impeachment Process**

⇒ **Parliamentary Approval:**

Debate and voting take place in both Houses of Parliament.

Requires a **special majority:**

Two-thirds majority of members present and voting,

Majority of the **total membership**.

⇒ **Presidential Action:** If both Houses pass the motion, it is sent to the **President** for final approval.

● **Way Forward**

⇒ **Accountability Measures:** Strengthen the process of ensuring judicial accountability, making it transparent and robust.

⇒ **Clarity in Constitutional Provisions:** Provide clearer guidelines for "misbehaviour" and "incapacity" to avoid ambiguity in future impeachment proceedings.

⇒ **Judicial Reforms:** Consider reforms to streamline the impeachment process to ensure timely and effective resolution of such motions.

● **Significance**

⇒ **Judicial Independence:** The impeachment process is essential to maintaining judicial independence while ensuring accountability.

⇒ **Public Trust:** Upholding the integrity of the judiciary enhances public trust in the legal and justice systems.

⇒ **Strengthening the Constitution:** A well-functioning impeachment process strengthens the Constitution by safeguarding the impartiality of judges.

Disaster Management (Amendment) Bill, 2024

● Why in News?

- ➡ The Lok Sabha passed the Disaster Management (Amendment) Bill, 2024.
- ➡ It amends the Disaster Management Act, 2005, aligning disaster management with development plans as per the 15th Finance Commission recommendations.

● Key Changes in the Bill

➡ Enhanced Roles and Responsibilities

Planning Responsibility: Transfers disaster plan preparation from executive committees to:

National Disaster Management Authority (NDMA)

State Disaster Management Authorities (SDMA)

Expanded Functions:

Assess disaster risks.

Provide technical assistance.

Recommend relief guidelines.

➡ Strengthened Disaster Data Management

Disaster Database: Includes information on disaster risks, severity, and fund allocation.

➡ New Urban Disaster Authorities

Urban Disaster Management: State governments empowered to establish Urban Disaster Management Authorities in State capitals & Cities with municipal corporations.

➡ Formation of State Disaster Response Forces (SDRFs)

State governments authorized to constitute SDRFs, define their roles, and set terms of service.

➡ Institutional Reforms

National Crisis Management Committee (NCMC): Granted statutory status to act as the nodal body for major disasters.

High-Level Committee (HLC): Empowered to provide financial aid to state governments during disasters.

● **About the Disaster Management Act, 2005**

➡ **Three-tier Structure:**

NDMA: Headed by the Prime Minister. Responsible for policies, plans, and guidelines at the national level.

SDMAs: Led by Chief Ministers. Focus on disaster management at the state level.

DDMAs: Headed by District Magistrates. Implement plans at the district level.

● **Way Forward**

➡ **Improved Implementation:** Ensure efficient functioning of newly created Urban DM Authorities and SDRFs.

➡ **Robust Monitoring:** Develop mechanisms to monitor disaster risk databases and ensure data accuracy.

➡ **Capacity Building:** Enhance training and technical capabilities of disaster response teams.






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