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# THE RISE



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## TABLE OF CONTENTS

## Table of Contents

GENERAL KNOWLEDGE .....	3
Corruption Perception Index 2023 .....	3
Safeguarding the Environment: India's Nuclear Power Plants and Radioactive Waste Management .....	4
India's First Comprehensive Snow Leopard Census: A Leap Towards Conservation .....	5
IEA Report Electricity 2024: Navigating the Energy Transition .....	7
India's Acquisition of MQ-9B SkyGuardian Drones: A Strategic Overview .....	8
NIA's Advanced Counter-Terrorism Database: A Comprehensive Overview .....	9
India Energy Week 2024: A Catalyst for India's Energy Transition .....	11
Unlocking Africa's Green Gold: Cameroon Embraces the Nagoya Protocol .....	12
Safeguarding Personally Identifiable Information (PII): A Comprehensive Guide .....	13
Fostering Innovation: The Budget's Emphasis on Deep Tech and Research .....	15
Navigating the Red Sea Crisis: India's Strategic Shift in Oil Imports .....	16
India's Maritime Leap: Amrit Kaal Vision 2047 .....	17
Celebrating Literary Excellence: The 2023 Jnanpith Award .....	19
GSLV-F14/INSAT-3DS Mission: A Milestone in India's Space Endeavor .....	20
Navigating the SDG Landscape: Progress and Challenges in the Asia-Pacific .....	22
INDUS-X Summit: Elevating India-US Defense Collaboration .....	23
Adani Group's Defence Manufacturing Milestone .....	26
Gupteswar Forest: Odisha's Fourth Biodiversity Heritage Site .....	27
AIIMS Innovates in Cancer Care with AI Technology .....	28
Northern Ireland: The Troubles and Recent Developments .....	30
LEGAL CURRENT AFFAIRS .....	33
Enhancing Women's Participation in the Workforce: Insights from EPFO's Latest Survey .....	33
Uttarakhand Moves Towards a Uniform Civil Code .....	35
Delimitation in India: An Overview and Recent Developments .....	36
The Public Examinations (Prevention of Unfair Means) Bill, 2024: A Comprehensive Overview .....	38
Constitution (J&K) ST Order (Amendment) Bill, 2024 .....	40
Ladakh's Demand for Statehood and Constitutional Safeguards .....	41
Historical Amendments to Scheduled Tribes and Castes Lists .....	42
Comprehensive Summary of RBI's Action on Paytm Payments Bank .....	44
Supreme Court Invalidates Electoral Bonds Scheme .....	46
Understanding Article 142: The Supreme Court's Intervention in Chandigarh's Mayoral Election .....	48
The Power of Article 142 .....	48
Special Watch .....	49

Interim Budget 2024 Highlights..... 49  
PRACTICE EXERCISE ..... 52  
Answers and Explanations..... 69

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## GENERAL KNOWLEDGE

### Corruption Perception Index 2023

#### Global Overview

*Stagnation and Decline:* Globally, regions are either stagnant or showing signs of decline in anti-corruption efforts.

*Western Europe and EU:* Despite being the top-scoring region, it saw a drop in its average score to 65, indicating weakening checks and balances and eroding political integrity.

*Sub-Saharan Africa:* Maintains the lowest average score at 33, with democracy and the rule of law under pressure.

*Eastern Europe and Central Asia:* Struggle with dysfunctional rule of law, rising authoritarianism, and systemic corruption.

*Middle East and North Africa:* Little improvement, reflecting ongoing political corruption and conflict.

*Asia Pacific:* Shows long-term stagnation, with some historically top-scoring countries backsliding.

*Americas:* Widespread impunity enabled by lack of judicial independence and weak rule of law.

#### India's Position

*Rank and Score:* India ranked 93 out of 180 countries in 2023, with a score of 39, indicating a slight decline from the previous year's score of 40.

*Regional Comparison:* In the Asian region, Singapore topped with a score of 83, while India's score fell below the Asia-Pacific average of 45.

*Global Movements:* India's slight drop in rank and score is attributed to global movements rather than significant national changes.

*Civic Space Concerns:* The report highlights concerns over the narrowing of civic space in India, especially with the passage of the Telecommunications Bill.

#### Top and Bottom Countries

*Top Performers:* Denmark, Finland, and New Zealand lead with scores of 90, 87, and 85, respectively.

*Bottom of the Index:* Somalia, with a score of 11, along with countries like Venezuela, Syria, and North Korea, remain at the bottom, affected by crises and armed conflicts.

#### Key Insights

*Global Stagnation:* The average global score remains unchanged at 43 for the twelfth consecutive year, with over two-thirds of countries scoring below 50.

*Asia-Pacific Stagnation:* The average score in the Asia-Pacific region has remained stagnant at 45 for five consecutive years.



*Judicial Oversight in South Asia:* Countries like Pakistan and Sri Lanka, despite political instability, have strong judicial oversight helping to keep governments in check.

*China's Anti-Corruption Efforts:* China's aggressive anti-corruption crackdown has raised doubts over the long-term effectiveness of such measures without institutional checks on power.

### Conclusion

The 2023 CPI underscores the global challenge of combating corruption, with most regions showing little to no progress. While some countries demonstrate improvement, the overall picture highlights the need for stronger institutions, better governance, and more robust anti-corruption measures worldwide.

## Safeguarding the Environment: India's Nuclear Power Plants and Radioactive Waste Management

### Overview of Radioactive Discharges and Environmental Impact

- *Minimal Impact:* A 20-year analysis (2000-2020) of India's six nuclear power plants by BARC researchers shows minimal radioactive discharges and negligible environmental impact.
- *Safe Operation:* The study underscores the safe operation of Indian nuclear power plants, aiming to dispel misconceptions and bolster public and policy support for nuclear energy advancement.
- *Radiological Data Analysis:* The comprehensive study covered seven nuclear power plants, including Kudankulam (2013-2020), highlighting negligible radiological impact on the environment and public.



### Radioactive Discharge Management

- *Gaseous and Liquid Wastes:* Indian nuclear plants manage radioactive discharges through dilution, dispersion, and strict regulatory adherence, including gaseous waste (noble gases, radioiodine, etc.) and liquid discharge (radioiodine, tritium, etc.).
- *Monitoring and Control:* Concentrations of fission products beyond 5 km from the plants were found to be insignificant, with strict focus on areas within 5 km for monitoring.

### Environmental Monitoring Results

- *Air Particulate Activity:* Average gross alpha activity in air particulates was less than 0.1 mBq/m<sup>3</sup> across all plants, with Narora showing slightly higher values due to atmospheric dust.
- *Water and Sediment Analysis:* Concentrations of caesium-137 and strontium-90 in water bodies and sediments near the plants were within natural variation levels, indicating no significant environmental deposition or accumulation.

### Radioactive Waste Management in India

- *Comprehensive Approach:* India prioritizes the safe management of radioactive waste, adhering to international guidelines and ensuring no undue radiation risk to workers, the public, or the environment.
- *Innovative Technologies:* Recent technological developments in India include the recovery of valuable radionuclides from radioactive waste for societal applications, enhancing safety and utility.
- *Waste Classification:* Radioactive wastes are classified based on their radioactivity level and managed accordingly, with a focus on minimizing, segregating, and safely disposing of waste.

### Advancements in Waste Management

- *Low and Intermediate Level Waste (LILW):* Management techniques for LILW include segregation based on physical nature and radioactivity, aiming for volume reduction and safe disposal.
- *High Level Waste (HLW):* HLW management involves immobilization, interim storage, and eventual disposal in deep geological repositories, with vitrification technology being a key component.

### Societal Benefits and Applications

- *Recovery and Utilization:* India's efforts in separating useful isotopes from waste for medical and industrial applications demonstrate the potential to convert waste into valuable resources.
- *Innovative Applications:* Technologies like vitrification and the development of cesium glass pencils for irradiation purposes highlight India's commitment to leveraging nuclear waste for societal benefits.

### Conclusion

India's approach to managing radioactive discharges from nuclear power plants and its comprehensive radioactive waste management strategies underscore a commitment to environmental safety and the advancement of nuclear power as a clean energy source. The ongoing efforts to minimize environmental impact, coupled with technological innovations in waste management, position India as a leader in safe and sustainable nuclear energy utilization.

## India's First Comprehensive Snow Leopard Census: A Leap Towards Conservation

### Introduction to Snow Leopards in India

- *Population Estimate:* India's first Snow Leopard Population Assessment (SPAI) estimates 718 snow leopards across Ladakh, Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh.
- *Extensive Range:* Snow leopards inhabit approximately 100,000 sq km of the higher Himalayan terrains in India, a significant portion of their global range.



### Methodology and Findings

- *Collaborative Effort:* The SPAI, conducted between 2019 and 2023, involved the Wildlife Institute of India (WII), Nature Conservation Foundation, Mysuru, and WWF-India.

- *Comprehensive Coverage:* Over 70% of the potential snow leopard habitat was systematically surveyed, covering crucial trans-Himalayan regions.
- *Innovative Techniques:* The census utilized camera traps at 1,971 locations, genetic tools, and prey base analysis to estimate the population.

## Regional Insights

- *Ladakh:* The largest population, with 477 snow leopards, was identified in Ladakh, showcasing the region's critical importance for conservation.
- *Uttarakhand and Himachal Pradesh:* These states reported significant populations, with 124 and 51 snow leopards, respectively, highlighting the widespread distribution of these cats across the Indian Himalayas.

## Challenges and Solutions

- *Difficult Terrain:* The rugged and inaccessible terrain posed significant challenges, necessitating the deployment of camera traps and extensive fieldwork.
- *Identification Difficulties:* Snow leopards' elusive nature and the complexity of their spot patterns required manual evaluation and innovative camera trapping techniques for accurate identification.

## Conservation Implications

- *Increased Understanding:* This census marks a significant advancement in understanding snow leopard populations and distribution, providing a foundation for targeted conservation efforts.
- *Threats:* Snow leopards face threats from habitat fragmentation, human-wildlife conflict, and climate change, necessitating urgent conservation actions.

## Future Directions

- *Dedicated Monitoring:* The establishment of a Snow Leopard Cell at WII is proposed for long-term population monitoring and conservation strategy formulation.
- *Periodic Assessments:* Regular population estimations are recommended to track conservation progress and adapt strategies as needed.

## Global Context

- *Endangered Species:* Snow leopards are endangered, with an estimated global population of 3,920 to 6,390 individuals, underscoring the importance of India's conservation efforts.
- *Unique Adaptations:* Adapted to cold, barren landscapes, snow leopards are solitary, crepuscular animals with large home ranges, primarily preying on ibex, argali, and blue sheep.

## Conclusion

India's inaugural snow leopard census represents a monumental step towards safeguarding this elusive and iconic species. By providing a clearer picture of the snow leopard's status and distribution, India can lead the way in global conservation efforts, ensuring the survival of the "ghost of the mountains" for future generations.

## IEA Report Electricity 2024: Navigating the Energy Transition

### Introduction

The International Energy Agency (IEA) plays a pivotal role in the global dialogue on energy, offering comprehensive data, analysis, and policy recommendations to shape a secure and sustainable energy future. Established in 1974, the IEA has evolved from focusing solely on oil security to addressing a broad spectrum of energy issues, including climate change, energy efficiency, and the transition to clean energy.

### Global Electricity Trends

- *Demand Growth:* Global electricity demand is set to grow by an average of 3.4% annually through 2026, driven by economic recovery and the electrification of various sectors.
- *Renewables Surge:* Renewables are expected to overtake coal as the largest source of global electricity supply by 2025, with solar PV leading the expansion.
- *Data Centers' Impact:* Electricity consumption from data centers could double by 2026, highlighting the need for efficiency improvements and updated regulations.



### Regional Insights

- *Asia's Dominance:* Asia, led by China and India, remains the engine of global electricity demand growth. China's electricity demand is expected to grow significantly, while India's demand will rise at the world's fastest rate through 2026.
- *Europe's Challenge:* The European Union faces challenges in recovering energy-intensive industries, with electricity demand not expected to return to 2021 levels until 2026 at the earliest.
- *America's Recovery:* In the United States, electricity demand is expected to recover in the 2024-26 outlook period, with the data center sector playing a significant role.

### India's Energy Landscape

- *Coal Dependency:* Despite global trends towards clean energy, India will continue to rely heavily on coal to meet its rising electricity demand through 2026.
- *Renewable Growth:* Renewable energy capacity in India is growing, with significant additions in solar and wind power. However, coal-fired generation is expected to rise alongside renewables.

### Nuclear Power Resurgence

- *Global Growth:* Nuclear power generation is forecasted to reach new highs by 2025, with significant contributions from China and India.
- *Innovative Technologies:* Interest in small modular reactor (SMR) technology is growing, offering potential for more flexible and cost-effective nuclear power solutions.

### Emissions and Climate Goals

- *Structural Decline:* Emissions from electricity generation are entering a structural decline, with CO<sub>2</sub> intensity set to fall at an unprecedented rate, driven by the expansion of clean energy sources.

### IEA's Evolution and Impact

- *Broadened Mandate:* The IEA's mandate has expanded to include a focus on net-zero emissions, clean energy technologies, and the critical minerals needed for clean energy development.
- *Influential Reports:* The IEA's reports, such as the World Energy Outlook and Net Zero by 2050, provide authoritative insights into global energy trends and pathways to achieve climate goals.

### Conclusion

As the world navigates the complexities of the energy transition, the IEA's insights and forecasts provide valuable guidance for policymakers, industry stakeholders, and the global community. The shift towards clean energy, the role of emerging technologies, and the challenges of ensuring energy security and sustainability are central themes in shaping the future energy landscape.

## India's Acquisition of MQ-9B SkyGuardian Drones: A Strategic Overview

### Introduction to MQ-9B SkyGuardian

The MQ-9B SkyGuardian is a next-generation Remotely Piloted Aircraft System (RPAS), designed for persistent intelligence, surveillance, and reconnaissance (ISR) missions globally.

It features a 79 ft wingspan, Lynx Multi-mode Radar, advanced EO/IR sensors, and automatic takeoff and landing capabilities, ensuring unmatched situational awareness.



### US-India Defense Deal

- The US State Department approved the sale of 31 armed MQ-9B SkyGuardian drones to India for an estimated \$3.99 billion, marking a significant advancement in US-India defense relations.
- The deal includes 31 MQ-9B drones, missiles, and supporting equipment, enhancing India's capability to meet current and future threats.

### Distribution and Purpose

- The Indian Navy will receive 15 SeaGuardian drones, while the Indian Air Force and Army will each acquire eight SkyGuardian drones.
- These drones will enable unmanned surveillance and reconnaissance patrols, improving India's security in the Indo-Pacific and South Asia region.

### Capabilities and Features

- The MQ-9B can operate in all weather conditions, fly over the horizon via satellite for up to 40+ hours, and safely integrate into civil airspace.
- It boasts a payload capacity that includes missiles and bombs, making it capable of conducting a variety of missions, from humanitarian assistance to electronic warfare.

## Strategic Impact

- India's acquisition of MQ-9B drones is expected to significantly enhance its surveillance capabilities, particularly in monitoring activities in the Indian Ocean Region and along its borders with Pakistan and China.
- The drones' stealth features and ability to operate silently at low altitudes make them particularly effective for intelligence gathering and precision strikes.

## Operational Advantages

- MQ-9B drones can carry out extended missions without refueling, travel 2,000 miles, and hover over targets for up to 35 hours, providing continuous surveillance.
- Their advanced sensors, multi-mode communication systems, and precision weaponry enable effective surveillance, intelligence gathering, and airstrikes.

## Economic Efficiency

- The MQ-9B offers a cost-effective solution for maritime and anti-submarine warfare missions, matching 80% of the capability of manned patrol aircraft at about 20% of the cost per hour.

## Global Use and Impact

- The MQ-9B, also known as the 'Predator' or Reaper drone, has been extensively used by the United States in counter-terrorism operations, earning the nickname "terrorist hunter" in the Middle East.
- Other countries, including Australia, France, Italy, the Netherlands, Spain, and the United Kingdom, also operate Predator drones.

## Conclusion

India's strategic acquisition of MQ-9B SkyGuardian drones from the United States represents a significant enhancement of its defense capabilities, enabling more effective surveillance, reconnaissance, and precision strike operations. This deal not only strengthens the US-India strategic relationship but also contributes to the stability and security of the Indo-Pacific region.

## NIA's Advanced Counter-Terrorism Database: A Comprehensive Overview

### Introduction to NTDFAC

- The National Investigation Agency (NIA) has established the National Terrorism Data Fusion & Analysis Centre (NTDFAC), a centralized database to consolidate information on terrorists and their networks.
- Modeled after the US's Global Terrorism Database, NTDFAC aims to enhance India's counter-terrorism capabilities by providing a unified platform for data on terror groups and individuals.



### Key Features and Capabilities

- *Comprehensive Data Collection:* NTDFAC houses detailed profiles of terrorists, including case history, fingerprints, videos, pictures, social media profiles, and affiliations with terror groups.

- *Technological Arsenal:* The database is equipped with state-of-the-art tools like the National Automated Fingerprint Identification System, housing over 92 lakh fingerprint records, and an Integrated Monitoring of Terrorism database with data on over 22,000 terrorist cases.
- *Advanced Identification Systems:* A face recognition system is in place to match suspects from CCTV footage with known individuals in the database, enhancing real-time tracking and identification efforts.

## Strategic Impact

- *Unified Information Repository:* By consolidating scattered data across various agencies, NTDFAC eliminates information silos, enabling investigators to swiftly connect dots and identify patterns in terror activities.
- *Enhanced Surveillance and Tracking:* The integration of advanced identification technologies facilitates the rapid identification of suspects and potential threats, significantly improving surveillance and tracking capabilities.
- *Support for Counter-Narcotics Efforts:* The National Integrated Database on Arrested Narco-Offenders links terror financing with narcotics trafficking, offering insights into the financial networks supporting terrorism.

## Operational Advantages

- *Real-Time Situational Awareness:* NTDFAC's capabilities ensure that law enforcement and counter-terrorism agencies have access to real-time data, crucial for preemptive actions and strategic planning.
- *Inter-Agency Collaboration:* The centralized database fosters collaboration among state police forces, anti-terror agencies, and national security operatives, streamlining efforts to dismantle terror networks.

## Global and National Security Implications

- *Adoption of Global Best Practices:* Inspired by international counter-terrorism databases, NTDFAC represents India's commitment to adopting global best practices in the fight against terrorism.
- *Contribution to Global Security:* With its comprehensive data and cutting-edge technology, NTDFAC not only bolsters India's counter-terrorism efforts but also contributes to global security initiatives.

## Challenges and Considerations

- *Privacy and Misuse Concerns:* The vastness of the database raises concerns about potential misuse and the importance of safeguarding individual privacy rights.
- *Responsible Implementation:* The effectiveness of NTDFAC hinges on its responsible implementation and oversight, ensuring that it serves as a powerful tool in India's relentless pursuit of eradicating terrorism.

## Conclusion

The National Terrorism Data Fusion & Analysis Centre marks a significant advancement in India's counter-terrorism efforts. By leveraging comprehensive data and advanced technology, NTDFAC is poised to become a critical asset in identifying, tracking, and dismantling terror networks, thereby enhancing national and global security.

## India Energy Week 2024: A Catalyst for India's Energy Transition

### Overview

India Energy Week 2024 was inaugurated by Prime Minister Narendra Modi in Goa, marking a significant event in the global energy sector.

The event is set to witness an investment of USD 67 billion in India's energy sector over the next 5 to 6 years.

### Key Highlights

*Economic Growth:* India's robust economic growth is projected to surpass 7.5%, positioning it as the world's third-largest economy soon.

*Investment Opportunities:* PM Modi invited global investors to partake in India's energy sector expansion, with plans to enhance India's refining capacity from 254 MMTPA to 450 MMTPA by 2030.

*Renewable Energy and Ethanol Blending:* India's solar installed capacity has increased by more than 20 times over the past decade. Ethanol blending has surged from 1.5% to over 12%.

*Affordable Energy:* Despite global factors, India has managed to reduce petrol and diesel prices over the last two years, achieving 100% electricity coverage.

*Infrastructure Development:* Approximately ₹10 lakh crore is being invested in infrastructure during this financial year, with a significant portion allocated to the energy sector.

### Day 2 Focus: Renewable Energy and Technology

- Discussions on whether renewable energy can power the world, alongside sessions on refining technology, innovations in utilities, and decarbonization strategies.
- Launch of the IEA Indian Oil Market 2030 report and discussions on alternative fuels, AI, machine learning, and sustainable aviation fuel.

### Government Initiatives

- *Natural Gas Share Increase:* The share of natural gas in India's energy mix is being raised from 6% to 15%.
- *Compressed Biogas Plants:* As part of the waste-to-wealth management program, 5,000 compressed biogas plants are in development.
- *Solar Rooftop Installation:* Plans for solar rooftop installation for 1 crore houses, with the electricity produced reaching the grid directly.

### Global Participation and Innovation

- The event features over 900 national/international exhibitors, 400 global speakers, and more than 2,000 technical papers across all energy streams.
- Dedicated country pavilions from Canada, Germany, Netherlands, Russia, the UK, and the USA, along with a special Make in India Pavilion showcasing innovative solutions by Indian MSMEs in the energy sector.



### Prime Minister's Vision

- PM Modi emphasized India's role as a global energy growth center, highlighting the country's position as the third-largest energy consumer and oil consumer, and fourth-largest LNG importer and refiner.
- *Net Zero Emission by 2070*: India aims to achieve Net Zero Emission by 2070, focusing on environmentally conscious energy sources to enhance the energy mix.

### Conclusion

India Energy Week 2024 serves as a pivotal platform for discussing and advancing India's energy transition goals. With a focus on investment, renewable energy, technology advancements, and global collaboration, the event underscores India's commitment to becoming a leading player in the global energy landscape, fostering innovation, and ensuring sustainable and affordable energy for all.

## Unlocking Africa's Green Gold: Cameroon Embraces the Nagoya Protocol

### Cameroon's Biodiversity and the Nagoya Protocol

- *Rich Biodiversity*: Cameroon, a central African country, is a biodiversity hotspot with an estimated 11,000 species of plants, animals, and microorganisms.
- *Adoption of the Nagoya Protocol*: Cameroon has adopted the Nagoya Protocol on Access and Benefit Sharing, aiming for fair and equitable sharing of benefits arising from genetic resources and traditional knowledge.



### The Nagoya Protocol: A Global Commitment

- *Core Obligations*: The Protocol mandates contracting parties to ensure access to genetic resources, fair benefit-sharing, and compliance with domestic and international regulations.
- *Access Obligations*: Parties are required to create legal certainty, clarity, and transparency, ensuring prior informed consent and mutually agreed terms for access to genetic resources.
- *Benefit-Sharing Obligations*: It emphasizes the fair and equitable sharing of benefits, both monetary and non-monetary, from the utilization of genetic resources.
- *Compliance Obligations*: The Protocol innovatively supports compliance with domestic legislation on genetic resource utilization and encourages cooperation in cases of alleged violations.

### Cameroon's Implementation and Challenges

- *Bioprospecting and Traditional Knowledge*: Cameroon's vast biological resources and traditional knowledge offer valuable genetic information for medicines, crops, and other products.
- *Economic Potential*: The country aims to leverage its biological resources, like the *Prunus Africana* plant used for prostate cancer drugs, to unlock economic potential and ensure community benefits.
- *Implementation Challenges*: Despite enacting laws and decrees, Cameroon faces challenges such as lack of implementing instruments, institutional capacity, and research on biodiversity value chains.

## Global Environment Facility Support

- The Global Environment Facility has financed a project to support Nagoya Protocol implementation and biodiversity value chain research for smallholders in Cameroon.

## Impact on Local Communities

- *Fair Trade and Community Benefits:* The adoption of the Nagoya Protocol is a step towards ensuring that local communities benefit from their biological resources.
- *International Agreements:* Cameroon has signed agreements with French and Swiss cosmetic businesses for research and commercial activities based on indigenous species.

## Looking Forward

- *Mastering Biological Resource Value:* Experts emphasize the importance of understanding the real value of biological resources to negotiate better with companies that utilize them.
- *Unlocking Economic Potential:* The Nagoya Protocol's implementation in Cameroon represents a significant opportunity to harness the country's rich biodiversity for sustainable economic development.

## Conclusion

Cameroon's adoption of the Nagoya Protocol marks a pivotal moment in recognizing and valuing the country's rich biodiversity. By ensuring fair access, benefit-sharing, and compliance, Cameroon sets a precedent for biodiversity conservation and sustainable use, promising a brighter economic future for its communities and a model for other nations.

## Safeguarding Personally Identifiable Information (PII): A Comprehensive Guide

### Understanding PII

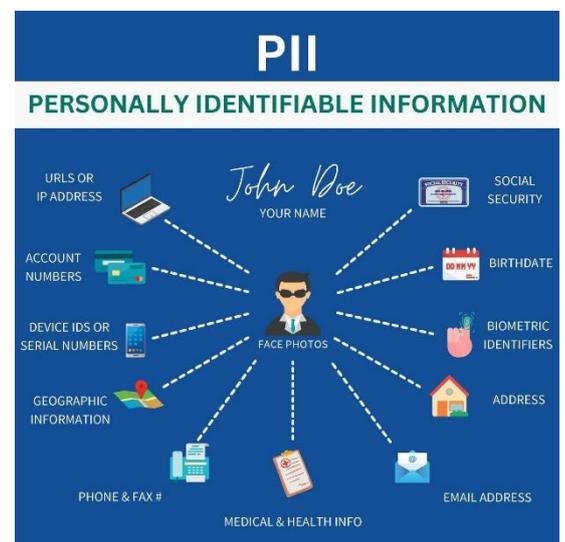
- *Definition:* PII is any data that can identify an individual either directly or when combined with other data. This includes names, Social Security Numbers, driver's licenses, financial information, and medical records.
- *Types of PII:* There are two main types - sensitive and non-sensitive. Sensitive PII includes legal statistics and financial information, while non-sensitive PII, accessible from public sources, includes zip code, race, and date of birth.

### The Importance of Protecting PII

- *Risks of Exposure:* Exposed PII can lead to phishing, identity theft, and fraudulent activities. Recent breaches highlight the severity of PII exposure risks.
- *Digital Age Vulnerabilities:* The proliferation of digital platforms increases the risk of data breaches and cyberattacks, emphasizing the need for robust PII protection measures.

### Protective Measures for Individuals

- *Secure Browsing:* Ensure websites use HTTPS and consider using a VPN on public networks.



- *Social Media Caution:* Be mindful of the personal information shared on social platforms.
- *Financial Vigilance:* Regularly monitor bank transactions and credit scores for unauthorized activities.

## Global Perspectives on PII

- *DigiCert Digital Trust Report:* Reveals a gap in trust management practices, with only 1 in 100 trust managers rating their practices as extremely mature.
- *Regulatory Landscape:* Various countries have adopted data protection laws to safeguard PII, highlighting the global importance of PII protection.

## Safeguarding Strategies

- *Data Protection Laws:* Countries have enacted laws outlining basic principles for PII protection, including collection limitations and secure data sharing requirements.
- *Anonymization Techniques:* Companies often use anonymization to protect sensitive PII when sharing data with third parties.

## Challenges and Solutions

- *Big Data and Privacy:* The rise of big data has led to increased data breaches, prompting regulatory bodies to seek new laws for consumer data protection.
- *PII Theft Methods:* Thieves use methods like phishing and social engineering to steal PII. Reducing opportunities for theft is crucial for protection.

## Actionable Steps for Organizations

- *Implement Strong Password Policies:* Use complex passwords and different passwords for each account to reduce the risk of data leaks.
- *Encrypt Sensitive Data:* Always encrypt important data and use passwords for devices to prevent unauthorized access.

## International Definitions and Regulations

- *Varied Definitions:* The definition of PII varies by jurisdiction, with the U.S. focusing on data that can trace an individual's identity and the EU expanding this to include quasi-identifiers.
- *GDPR in Europe:* Sets comprehensive rules for collecting and processing personal information, emphasizing the broader context of personal data protection.

## Incidents and Fines

- *Notable Breaches:* Instances of PII theft have led to significant fines for companies failing to protect consumer data adequately, with Didi Global receiving one of the largest fines to date.

## Conclusion

Protecting PII is a shared responsibility between individuals, corporations, and governments. By understanding the types of PII, the risks associated with its exposure, and implementing robust protection measures, we can safeguard our identities in the increasingly digital world. Stay informed, vigilant, and proactive in protecting your personal information.

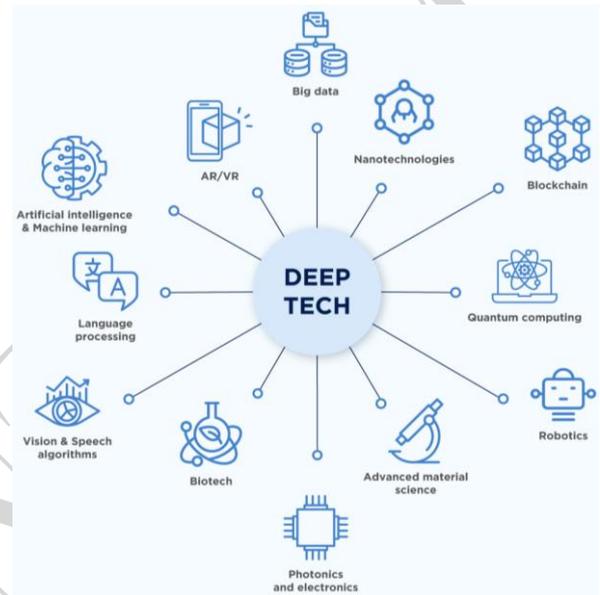
## Fostering Innovation: The Budget's Emphasis on Deep Tech and Research

### Introduction to Deep Tech and Research Funding

- The Indian government announced a significant Rs 1 lakh crore fund to support research and development, offering long-term, low-cost, or zero-interest loans.
- A new scheme aims to bolster deep-tech capabilities in the defense sector, with broader policies to support deep tech startups across various sectors anticipated.

### The Significance of Deep Tech

- Deep tech encompasses disruptive technologies like nanotechnology, biotechnology, quantum technologies, and artificial intelligence, poised to address global challenges such as climate change and energy access.
- India, with its vast pool of science and engineering talent, is well-positioned to be a leader in deep tech innovation, contributing to global technological advancements.



### Government Initiatives for Deep Tech Ecosystem

- Recent efforts include the National Mission on Transformative Mobility and Battery Storage and the National Quantum Mission.
- The National Deep Tech Startup Policy (NDTSP) aims to create an enabling environment for technology startups, addressing challenges unique to deep tech ventures.

### Challenges and Opportunities in Funding

- Deep tech projects, being time- and money-intensive, require substantial long-term funding, a gap the government aims to fill with the newly announced corpus.
- Despite increased absolute spending on research, India's expenditure as a share of GDP remains low compared to global standards, highlighting the need for enhanced private sector involvement.

### AI Infrastructure and Innovation in the 2024-25 Budget

- The budget's focus on innovation as the foundation of development reflects a commitment to supporting R&D and innovation in India.
- Tax exemptions for startups and sovereign wealth funds have been extended, encouraging investment in deep-tech and sunrise sectors.

### Infrastructure, Innovation, and Technology for Growth

- The budget aims to strengthen infrastructure and technological development, supporting Make in India and fostering economic growth.
- Entrepreneurs and business leaders have lauded the budget's emphasis on deep-tech investments, particularly in the defense sector, as a move towards sustainable growth and global competitiveness.

### Deep Tech Startups in Central and Eastern Europe (CEE)

- The CEE region has seen a surge in deep tech startups, with investments growing more than 20% annually, reaching almost \$18 billion by the end of 2018.
- Deep tech startups in CEE are innovating in fields like agri-tech, biotech, advanced medtech, and more, showcasing the region's potential in driving technological advancements.

### Conclusion

The budget's focus on deep tech and research funding underscores the government's commitment to fostering innovation and technological advancement. By supporting deep tech startups and investing in research, India aims to enhance its global competitiveness and address pressing challenges. The initiatives reflect a comprehensive strategy to stimulate economic development and position India as a leader in the technological revolution.

## Navigating the Red Sea Crisis: India's Strategic Shift in Oil Imports

### Impact of the Red Sea Crisis on India's Oil Imports

- The Red Sea crisis, fueled by Houthi rebels in Yemen, has disrupted global trade routes, compelling India to adjust its oil import strategies.
- Indian refiners have increased imports from West Asia, particularly Iraq and the UAE, to mitigate the impact of the crisis and avoid the troubled Red Sea route.



### Record-High Imports from Iraq

- In January, India's oil imports from Iraq surged to 1.19 million barrels per day (bpd), marking the highest level since April 2022.
- This shift underscores India's reliance on Iraq as a crucial source of crude oil amidst global supply chain disruptions.

### Boost in UAE Oil Imports

- Oil imports from the UAE in January witnessed a significant jump of nearly 81% over December levels, reaching around 326,500 bpd.
- The UAE has emerged as India's fourth-largest supplier of crude oil, highlighting the strategic importance of Gulf countries in India's energy security.

### Diversification of Oil Supply Sources

- The crisis has prompted India to diversify its oil supply sources, with a notable increase in imports from Venezuela following the easing of U.S. sanctions on the South American producer.
- India's total oil imports hit a record high of 5.24 million bpd in January, up 17% from December and 3.5% higher than the same month a year earlier.

### Challenges and Adjustments

- The Red Sea conflict has led to higher freight and insurance costs for oil imports, particularly affecting long-haul crude cargoes from the Americas.
- Indian refiners have turned to nearby suppliers in the Middle East to avoid disruption and compensate for the diversion of Russian light sweet Sokol oil.

### Sectoral Impact of the Red Sea Crisis

- The capital goods and fertiliser sectors in India have been highly impacted, facing challenges such as delays in trade routes and increased logistics costs.
- The pharmaceutical industry, reliant on export markets like the US and Europe, faces potential turbulence due to increased shipping surcharges and freight costs.

### Strategic Implications for India

- India's strategic shift in oil imports reflects a broader effort to ensure energy security amidst geopolitical tensions and supply chain disruptions.
- The crisis underscores the importance of diversifying energy sources and strengthening partnerships with key oil-producing nations in the Middle East.

### Conclusion

The Red Sea crisis has necessitated a strategic recalibration of India's oil import strategy, emphasizing the importance of Gulf countries as reliable energy partners. By diversifying its oil supply sources and increasing imports from Iraq and the UAE, India aims to mitigate the impact of global trade disruptions and maintain its energy security.

## India's Maritime Leap: Amrit Kaal Vision 2047

### Strategic Expansion of Maritime Infrastructure

- *Six Mega Ports by 2047:* India plans to develop six mega ports by 2047, enhancing cargo handling capacity and boosting maritime trade.
- *Two Port Clusters:* The initiative includes two categories based on capacity: exceeding 500 MTPA (Deendayal and Tuna Tekra Port Cluster, Jawaharlal Nehru - Vadhavan Port Cluster) and exceeding 300 MTPA (Cochin - Vizhinjam Port Cluster, Galathea South Bay Port, Chennai - Kamarajar - Cuddalore Port Cluster, Paradip and Other Non-Major Ports Cluster).



### Investment and Development

- *Rs 80,000 Lakh Crore Investment:* A comprehensive roadmap involves an investment of Rs 80,000 lakh crore, focusing on maritime sector transformation.

- *PPP and Internal Funding:* Infrastructure and capacity improvements to be achieved through Public-Private Partnerships (PPP) and internal funding.

## Economic and Environmental Goals

- *Boosting Maritime Trade:* The mega ports are expected to significantly enhance India's maritime trade and cargo movement.
- *Sustainable Growth:* Emphasis on environmentally friendly practices and blue economy initiatives.
- *Job Creation:* The initiative aims to create new employment opportunities, contributing to economic growth.

## Technological and Connectivity Enhancements

- *Advanced Maritime Technologies:* Investment in R&D for maritime technologies to ensure efficient and sustainable port operations.
- *Enhanced Global Connectivity:* Developing efficient port infrastructure and trade corridors to strengthen global connections.

## Skill Development and Workforce Training

- *Skilled Maritime Workforce:* Training and skill development programs to cater to the evolving needs of the maritime sector.

## Vision for a Developed India

- *Amrit Kaal Vision 2047:* A long-term development roadmap aiming to transform India into a developed nation by 2047, marking the 100th year of independence.
- *Maritime Sector Focus:* Specific emphasis on developing the Indian maritime sector as a key component of the broader development vision.

## Regional Development and Economic Upliftment

- *Port-led Regional Development:* The development of six major ports presents a promising prospect for regional and local economic upliftment.
- *Sagarmala Program Alignment:* Aligning port-led development with the Sagarmala program's objectives for holistic coastal and port development.

## Global Maritime Leadership

- *Strengthening India's Global Maritime Presence:* Enhancing maritime cooperation and leadership on the global stage.
- *BIMSTEC Agreement on Maritime Transport Cooperation:* Aiming for seamless movement of water-borne cargo amongst BIMSTEC countries.

## Innovation and Sustainability

- *Promoting Green Energy in Inland Waterways:* Introduction of electric catamarans and hybrid vessels to enhance communication facilities.
- *Dredging Operations in North East:* Dredging Corporation of India to commence operations, ensuring seamless movement of cargo and passengers.

### Comprehensive Maritime Roadmap

- *From 2014 to 2023:* Significant growth in India's maritime fleet and seafarer numbers, demonstrating the country's commitment to maritime advancement.
- *Future Aspirations:* Increasing port handling capacity to over 10,000 MMTPA by 2047 and ensuring sustainable and green maritime sector development.

### Conclusion

India's ambitious maritime expansion under the Amrit Kaal Vision 2047 represents a strategic leap towards transforming the nation's coastal regions into engines of economic growth and prosperity. With the construction of six mega ports, India is set to significantly enhance its cargo handling capacity, streamline trade, and propel itself towards becoming one of the leading maritime nations in the world.

## Celebrating Literary Excellence: The 2023 Jnanpith Award

### 2023 Jnanpith Awardees

- *Gulzar and Rambhadracharya:* Urdu poet Gulzar and Sanskrit scholar Rambhadracharya are the distinguished recipients of the 2023 Jnanpith Award.
- *Award Details:* Each awardee will receive a cash prize of Rs 11 lakh, a trophy, and a citation.



### Gulzar: A Luminous Literary Journey

- *Versatile Genius:* Celebrated for his contributions to Hindi cinema and regarded as one of the finest Urdu poets of his era.
- *Innovative Contributions:* Gulzar is credited with inventing the 'Triveni,' a non-mukaffa poem of three lines, and has significantly contributed to children's poetry.
- *Accolades:* His accolades include the Sahitya Akademi Award for Urdu (2002), the Dadasaheb Phalke Award (2013), the Padma Bhushan (2004), and international recognition for the song "Jai Ho" from "Slumdog Millionaire" (Oscar in 2009 and Grammy in 2010).

### Jagadguru Rambhadracharya: A Scholar of Eminence

- *Spiritual and Literary Stature:* Founder and head of Tulsi Peeth in Chitrakoot, Rambhadracharya is a revered Hindu spiritual leader and a prolific writer in several Indian languages.
- *Polyglot and Poet:* Fluent in 22 languages, he has authored over 240 books and texts, including four epics.
- *National Honors:* Awarded the Padma Vibhushan in 2015.

### Jnanpith Award: India's Literary Crown

- *Prestigious Recognition:* The Jnanpith Award, established in 1961, is India's highest literary honor, awarded annually for outstanding contributions to Indian literature.
- *Diverse Laureates:* Recognizes literary work in any of the 22 languages listed in Schedule VIII of the Indian Constitution.

- *Award Composition:* Includes a cash prize, a citation, and a bronze replica of Saraswati, the Hindu goddess of knowledge and arts.

### Selection Committee

- *Eminent Panel:* The winners were selected by a committee led by Pratibha Rai, featuring notable literary figures and scholars.
- *Inclusive Process:* The selection reflects the committee's commitment to recognizing literary excellence across diverse Indian languages.

### Historical Context

- *Second and Fifth Recognition:* Marks the second time the award has been given for Sanskrit and the fifth time for Urdu, highlighting the award's inclusivity across Indian languages.

### Literary Legacy and Impact

- *Gulzar's Cinematic and Literary Influence:* Known for his profound impact on Hindi cinema and Urdu poetry, Gulzar's works span films, music, and literature, touching on themes of love, social issues, and human values.
- *Rambhadracharya's Spiritual and Scholarly Contributions:* His extensive scholarly work and spiritual teachings have significantly influenced Hindu philosophy and Sanskrit literature.

### Looking Ahead

- *Continued Excellence:* The Jnanpith Award continues to honor the luminaries of Indian literature, fostering a rich literary culture and inspiring future generations.
- *Celebrating Diversity:* By recognizing contributions in languages like Urdu and Sanskrit, the award underscores the rich tapestry of Indian literary heritage.

### Conclusion

The 2023 Jnanpith Award celebrates the literary brilliance of Gulzar and Rambhadracharya, whose works have enriched Indian literature and culture. Their achievements underscore the vibrancy of India's literary landscape and its enduring legacy.

## GSLV-F14/INSAT-3DS Mission: A Milestone in India's Space Endeavor

### Mission Overview

- *Launch Date:* The GSLV-F14/INSAT-3DS mission was successfully launched on February 17, 2024, at 17:30 Hrs. IST from SDSC-SHAR, Sriharikota.
- *Vehicle Specifications:* GSLV-F14 is a three-stage launch vehicle, 51.7 m long with a liftoff mass of 420 tonnes, featuring a solid propellant first stage, an earth-storable propellant second stage, and a cryogenic third stage.



### INSAT-3DS Satellite

- *Mission Purpose:* INSAT-3DS is designed for enhanced meteorological observations, monitoring of land and ocean surfaces for weather forecasting, and disaster warning.
- *Operational Augmentation:* It aims to augment meteorological services alongside the operational INSAT-3D and INSAT-3DR satellites.
- *Primary Objectives:* The satellite's goals include monitoring Earth's surface, providing vertical profiles of meteorological parameters, and offering data collection and dissemination capabilities.

### Mission Highlights

- *Funding:* The GSLV-F14/INSAT-3DS mission is fully funded by the Ministry of Earth Sciences (MoES).
- *Payloads:* INSAT-3DS is equipped with an imager payload, a sounder payload, a data relay transponder, and a satellite-aided search and rescue transponder.
- *User Agencies:* Data from INSAT-3DS will be utilized by various departments of MoES, including IMD, NCMRWF, IITM, NIOT, and INCOIS.

### ISRO's GSLV Program

- *Indigenous Cryogenic Stage:* The GSLV-F14 marks the 16th flight of GSLV and the 10th flight with an indigenous cryo stage, showcasing India's self-reliance in space technology.
- *Operational Milestone:* This mission represents the seventh operational flight of GSLV with an indigenous cryogenic stage.

### Technological and Scientific Contributions

- *Enhanced Meteorological Services:* INSAT-3DS will significantly contribute to India's weather forecasting, climate monitoring, and disaster management capabilities.
- *Global Collaboration:* The mission underscores India's commitment to utilizing space technology for global welfare and environmental monitoring.

### ISRO: India's Space Pioneer

- *Foundation and Evolution:* ISRO, established on August 15, 1969, has evolved from INCOSPAR, set up in 1962, to harness space technology for national development.
- *Space Systems:* ISRO has developed major space systems for communication, broadcasting, meteorological services, and navigation, alongside satellite launch vehicles PSLV and GSLV.

### Mission Significance

- *Weather Forecasting and Climate Monitoring:* INSAT-3DS will play a crucial role in enhancing India's capabilities in weather forecasting and climate monitoring.
- *Disaster Management:* The satellite's data will be instrumental in improving disaster mitigation and preparedness.

### ISRO's Global Footprint

- *Scientific Contributions:* ISRO's missions, including lunar and interplanetary explorations, contribute to global scientific knowledge and encourage science education.

- *International Collaboration:* ISRO's advancements in space technology foster international cooperation and contribute to global space exploration efforts.

### Conclusion

The successful launch of GSLV-F14 carrying INSAT-3DS marks a significant milestone in India's space journey, demonstrating ISRO's capabilities in advanced satellite technology and meteorological research. This mission not only enhances India's meteorological services but also contributes to global efforts in environmental monitoring and disaster management.

## Navigating the SDG Landscape: Progress and Challenges in the Asia-Pacific

### Overview of SDG Progress in Asia-Pacific

- *Projected Delay:* The Asia-Pacific region is projected to achieve the Sustainable Development Goals (SDGs) 32 years behind the 2030 target, potentially reaching them by 2062.
- *Key Factors:* Gender and location are significant determinants of poverty and inequality, with rural populations and the urban poor facing substantial challenges.



## Asia-Pacific SDG Partnership

### India's Performance on SDGs

- *Progress on Indicators:* India has shown improvement on 85 SDG indicators, with stagnation on 27 and regression on 36.
- *Data Availability:* India has better data availability for SDG indicators compared to regional peers, with two or more data points available for 68% of the indicators.

### Regional Challenges and Successes

- *Climate Action (SDG 13):* All targets under climate action are off-track, with some even regressing, highlighting the urgent need for integrated climate policies.
- *Poverty and Hunger:* While there has been progress towards eliminating poverty (SDG 1) and promoting sustainable industry (SDG 9), efforts to mitigate hunger (SDG 2) and enhance health (SDG 3) require more attention.

### Gender and Urban-Rural Divide

- *Educational and Employment Barriers:* Women and girls face significant barriers to education and employment, with lower enrollment rates and higher youth unemployment.
- *Rural Disadvantages:* Rural areas experience pronounced disadvantages, including limited access to clean water, sanitation, and clean cooking fuels.

### Climate Action as a Priority

- *Immediate Attention Required:* Climate action (SDG 13) is identified as an immediate priority, with small island developing States (SIDS) needing the most support due to their vulnerability to climate change.

- *Investment in Sustainable Infrastructure:* A significant ramp-up in investment towards sustainable infrastructure and renewable energy sources is called for.

### Data Gaps and Monitoring Challenges

- *Insufficient Data:* Half of the SDG indicators lack sufficient data, underscoring the need for enhanced coordination and effective SDG data sharing.
- *Monitoring Progress:* Measuring and monitoring SDG targets become increasingly important as 2023 marks the halfway point to achieving the SDGs.

### Innovative Solutions and Policy Responses

- *Digital Training Programs:* Public-private partnerships in digital training programs, such as those in Vietnam, are highlighted as strategies to bridge skills and employment gaps.
- *Upgraded Statistical Systems:* National statistical systems in countries like Kazakhstan and Uzbekistan have been upgraded to better support vulnerable populations.

### UNESCAP's Role and Recommendations

- *Annual SDG Progress Report:* UNESCAP's report serves as a foundation for activities and policy responses, offering an overview of progress on global goals in the region.
- *Addressing Inequalities:* The urgency of addressing inequalities that impact marginalized groups is emphasized, with a focus on improving access to education and employment opportunities.

### Conclusion

The Asia-Pacific region's journey towards achieving the SDGs by 2030 faces significant challenges, with a projected delay extending the timeline to 2062. Addressing climate action, gender and location-based inequalities, and enhancing data availability and monitoring are critical to accelerating progress. India's performance on SDG indicators highlights both achievements and areas needing improvement, reflecting the broader regional trends and challenges.

## INDUS-X Summit: Elevating India-US Defense Collaboration

### Historical Context and Evolution

- *INDUS-X Launch:* Initiated in June 2023 during Prime Minister Narendra Modi's state visit to the US, aiming to expand strategic technology partnerships and defense industrial cooperation.
- *Historical Milestones:* The India-US defense relationship has been strengthened over the years with key agreements like LEMOA (2016), COMCASA (2018), and BECA (2020), enhancing military interoperability and technology sharing.
- *Technopolitical Goals:* Since India's independence, it has emphasized science and technology for economic development and military power, notably through its nuclear program.



### Strategic Objectives and Statements

- *U.S. Ambassador Eric Garcetti's Vision:* Advocated for co-development of military hardware to make India a significant market and producer, aiming to deter reliance on mutual adversaries for weaponry.
- *Defense Innovation Bridge:* INDUS-X is envisioned as a defense innovation bridge, including joint challenges, innovation funds, academia engagement, and private investment in defense projects.
- *Enhancing Bilateral Ties:* The INDUS-X summit marks a significant milestone in collaborative efforts, focusing on advancing defense innovation and collaboration.

### Operational and Strategic Impacts

- *Deterrence and Peace:* Emphasized the goal of protecting peace rather than waging war, with references to Indian epics and philosophies on war and peace.
- *Strategic Technology Partnerships:* Aims to drive strategic technology partnerships and defense industrial cooperation, with the second summit highlighting the potential for consequential U.S.-India cooperation.
- *Reducing Regulatory Friction:* INDUS-X has made progress in breaking information silos, building networks, and reducing regulatory friction between the U.S. Department of Defense and the Indian Ministry of Defense.

### Innovation and Development

- *Defense Innovation Challenges:* Launched challenges related to maritime domain, including underwater communications and oil spill detection.
- *Joint Challenges and Innovation Fund:* Focus on academia engagement, industry-startup connections, and mentoring by experts in niche technology projects.
- *Private Sector Engagement:* Stressed the importance of private sector to private sector partnerships for shared deterrence and innovation.

### Cultural and Philosophical References

- *War and Peace in Indian Epics:* Garcetti referenced the Rig Veda and Mahabharata to emphasize the ancient Indian perspective on war and peace.

### Future Trajectory and Opportunities

- *Expanding Cooperation:* INDUS-X represents a pivotal moment for advancing defense innovation, setting the stage for future technological advancements and strategic partnerships.
- *Bolstering Strategic Cooperation:* The summit focused on exploring ways to enhance bilateral strategic cooperation, particularly in defense innovation.
- *Global Security and Deterrence:* INDUS-X initiatives aim to strengthen global security and deterrence, particularly in the Indo-Pacific region.

### Technology and Innovation

- *Access to Advanced Technologies:* India's access to advanced sensor-to-shooter technology aims to challenge Chinese military planning and defend its borders.

- *Innovation Power:* Pooling U.S. and Indian science and technology ecosystems for strategic advantages.
- *Industrial Base Resilience:* India's industrial base can provide redundancy and resilience to stretched bases in the U.S. and Europe.

## Networking and Collaboration

- *Cross-National Networks:* INDUS-X focuses on stimulating science and technology networks and building connective tissue between domestic and international entrepreneurs and markets.
- *Information and Regulatory Mechanisms:* Efforts to address information asymmetries and reduce regulatory friction to foster commercial collaboration.
- *Collaborations in Academia:* Forged partnerships between academic institutions and between accelerators and incubators to drive innovation.

## Challenges and Progress

- *Regulatory Challenges:* Navigating international arms trafficking and export controls while fostering innovation partnerships.
- *Progress in Information Exchange:* Accelerated on-ramps into defense industrial supply chains and dialogue between innovation leads.
- *Networking and Industry Summits:* Industry summits and idea conclaves have been instrumental in clarifying roadblocks to technology cooperation.

## Looking Ahead

- *Increasing Contact Points:* INDUS-X could increase contact points between startups and primes, enabling greater visibility at defense exhibitions.
- *Joint Prototyping and Development:* Essential next steps include joint prototyping, product development, and talent flows.
- *Regulatory Navigation:* Novel approaches like anticipatory technology release policies could expedite innovation partnerships.

## Operational Coordination and Global Security

- *Operational Cooperation:* Opportunities for greater operational coordination in areas like maritime shipping protection in the Indian Ocean.
- *Mutual Reinforcement:* The pace and depth of U.S.-India operational cooperation and technology development are mutually reinforcing.

## Conclusion

These points encapsulate the essence and strategic importance of the INDUS-X summit and the broader India-US defense collaboration, highlighting historical context, strategic objectives, innovation efforts, and future opportunities for enhancing global security and deterrence.

## Adani Group's Defence Manufacturing Milestone

The Adani Group has recently inaugurated a significant development in India's defence manufacturing sector, marking a new era in the country's self-reliance in defence capabilities.

### Strategic Importance

- *First of Its Kind:* The Adani Group unveiled India's first ammunition and missile manufacturing complex in Uttar Pradesh (UP), a landmark in the country's defence sector.
- *Location and Scale:* Situated in the UP Defence Corridor, this facility is recognized as South Asia's largest defence manufacturing complex.
- *Job Creation:* The initiative is set to generate approximately 4,000 jobs, boosting local employment and skill development.



### Operational Highlights

- *Diverse Manufacturing:* The complex is designed for the manufacturing of a wide range of ammunition and missiles, catering to the needs of the Indian Armed Forces and export markets.
- *Investment and Capacity:* Significant investment has been made to ensure state-of-the-art manufacturing capabilities, aiming to enhance India's self-reliance in defence production.
- *Technology and Innovation:* Emphasis on incorporating cutting-edge technology and innovation to produce high-quality defence equipment.

### Strategic Impact

- *Enhanced Defence Capabilities:* This move significantly boosts India's defence manufacturing capabilities, reducing dependence on imports.
- *Contribution to Defence Corridor:* The complex is a key component of the UP Defence Corridor, envisaged to be a hub for defence production in India.
- *Global Positioning:* By entering the defence manufacturing sector, the Adani Group aims to position India as a significant player in the global defence market.

### Economic Implications

- *Economic Growth:* The project is expected to spur economic growth in the region through direct and indirect employment, and ancillary industries.
- *Investment Attraction:* This initiative is likely to attract further investments in the defence sector, both domestically and internationally.
- *Skill Development:* The complex will also focus on skill development in the defence manufacturing sector, enhancing the technical workforce in India.

### Future Prospects

- *Expansion Plans:* The Adani Group has outlined plans for further expansion in the defence sector, indicating long-term commitment.

- *Export Potential:* With a focus on quality and innovation, the complex is well-positioned to meet international standards, opening up significant export opportunities.
- *Strategic Partnerships:* Potential for strategic partnerships with global defence manufacturers, fostering technology transfer and collaboration.

### Conclusion

This summary encapsulates the strategic, operational, and economic facets of the Adani Group's entry into the defence manufacturing arena, highlighting its potential impact on India's defence capabilities, economic growth, and position in the global defence market.

## Gupteswar Forest: Odisha's Fourth Biodiversity Heritage Site

The declaration of Gupteswar Forest as Odisha's fourth Biodiversity Heritage Site marks a significant stride in the conservation of India's rich biodiversity and cultural heritage.



### Geographical Essence

- *Location:* Situated in the Koraput district of Odisha, the Gupteswar Forest is renowned for its scenic beauty and ecological significance.
- *Area Coverage:* The site encompasses a vast area, serving as a vital habitat for diverse flora and fauna.
- *Topographical Features:* Characterized by lush greenery, caves, and hills, offering a unique ecological niche.

### Biodiversity and Ecology

- *Flora:* The forest is home to a wide variety of plant species, including several medicinal plants that are of great value to local communities.
- *Fauna:* Hosts a diverse range of animal life, including many species that are endemic to the region.
- *Ecological Significance:* Plays a crucial role in maintaining ecological balance, supporting numerous species and ecosystems.

### Cultural and Historical Significance

- *Historical Shrine:* Gupteswar is famous for its ancient Shiva temple, a place of pilgrimage and spiritual significance.
- *Mythological Importance:* The site is associated with legends from the Ramayana, adding layers of cultural depth.
- *Community Ties:* The forest and its surroundings hold a special place in the lives of local communities, intertwined with their traditions and daily practices.

### Conservation Efforts

- *Heritage Site Designation:* Recognized as a Biodiversity Heritage Site, highlighting its importance for conservation and sustainable use.

- *Legal Protection:* The designation ensures legal protection, aimed at preserving the site's natural and cultural heritage.
- *Community Involvement:* Local communities play a significant role in the conservation efforts, embodying traditional knowledge and sustainable practices.

### Sustainable Development

- *Eco-Tourism Potential:* The area holds great potential for eco-tourism, promoting conservation awareness while benefiting local economies.
- *Research and Education:* Serves as an important site for research and educational activities, fostering a deeper understanding of biodiversity.
- *Policy and Management:* Managed under the guidance of both local and national conservation policies, ensuring a balanced approach to development and conservation.

### Global Context

- *World Heritage Significance:* While not a UNESCO World Heritage site, its designation as a Biodiversity Heritage Site aligns with global efforts to protect biodiversity.
- *Conservation Challenges:* Faces challenges such as habitat degradation and climate change, underscoring the need for continuous conservation efforts.
- *International Collaboration:* Opportunities for international collaboration in research, conservation, and sustainable development practices.

### Conclusion

This summary captures the essence, significance, and future prospects of the Gupteswar Forest as Odisha's fourth Biodiversity Heritage Site, embodying a rich tapestry of biodiversity, culture, and conservation efforts.

## AIIMS Innovates in Cancer Care with AI Technology

All India Institute of Medical Sciences (AIIMS), Delhi, has taken a groundbreaking step forward in the battle against cancer through the integration of Artificial Intelligence (AI) in their treatment and early detection processes.

### Introduction to AIIMS AI Initiative

- *Pioneering Project:* AIIMS Delhi has embarked on a pioneering project to harness AI in improving cancer therapy and early detection.
- *Focus on Oncology:* The initiative specifically targets oncology, aiming to transform cancer care with cutting-edge technology.



### AI in Cancer Detection and Therapy

- *Early Detection:* AI technology is being utilized to detect cancer at its nascent stages, significantly improving treatment outcomes.
- *Treatment Personalization:* AI aids in personalizing treatment plans based on the patient's unique genetic makeup and cancer profile.
- *Enhancing Accuracy:* The AI-based platforms enhance diagnostic accuracy, reducing the likelihood of human error.

### Technological Innovations

- *Indigenously Developed Technology:* AIIMS has unveiled indigenously developed AI technology tailored for the early detection of cancer.
- *Comprehensive Platforms:* These platforms integrate various AI tools for analyzing medical images, genetic information, and other diagnostic data.

### Impact and Outreach

- *Broad Spectrum of Cancers:* The initiative targets a broad spectrum of cancers, including but not limited to breast, lung, and oral cancers.
- *Community Healthcare Integration:* AIIMS aims to extend these AI solutions to community healthcare settings, improving accessibility to advanced cancer care.

### Collaborations and Support

- *Multi-disciplinary Approach:* The project brings together oncologists, radiologists, biotechnologists, and AI specialists, fostering a multi-disciplinary approach to cancer care.
- *Government and Private Sector Involvement:* Supported by both government and private sector funding, the initiative is a testament to the collaborative effort in healthcare innovation.

### Future Prospects and Goals

- *Expansion Plans:* AIIMS plans to expand the scope of AI in healthcare, exploring other areas where AI can be impactful.
- *Training and Development:* Emphasis on training healthcare professionals in utilizing AI technology, ensuring widespread adoption and effectiveness.
- *Research and Innovation:* Ongoing research to refine AI algorithms and technologies for better accuracy and efficiency in cancer detection and treatment.

### Global Significance

- *Setting a Global Benchmark:* AIIMS's initiative sets a global benchmark in integrating AI with healthcare, particularly in oncology.
- *Inspiration for Innovation:* Inspires healthcare institutions worldwide to explore AI's potential in enhancing patient care and treatment outcomes.

### Conclusion

This comprehensive overview showcases AIIMS Delhi's groundbreaking efforts in revolutionizing cancer care through AI technology. It underscores the initiative's impact, innovations, and future prospects, marking a

significant leap towards advanced healthcare solutions in India and setting a precedent for global healthcare innovation.

## Northern Ireland: The Troubles and Recent Developments

The history and recent developments surrounding Northern Ireland's Troubles are complex, marked by decades of conflict, a peace agreement, and ongoing legal and political challenges.

### Historical Background

- *The Troubles*: A period of sectarian conflict in Northern Ireland between the late 1960s and 1998, involving nationalists/republicans (mainly Catholic) and unionists/loyalists (mainly Protestant).
- *Root Causes*: Stemmed from disputes over the constitutional status of Northern Ireland and discrimination against the Catholic/nationalist minority by the Protestant/unionist majority.
- *Major Events*: Included violent clashes, bombings, and shootings by paramilitary groups, as well as security force actions.
- *Civil Rights Movement*: Emerged in the late 1960s, demanding equal rights for the Catholic minority.
- *Bloody Sunday (1972)*: British soldiers shot 26 unarmed civil rights protesters in Derry/Londonderry, exacerbating the conflict.
- *Direct Rule*: Imposed by Britain in 1972, stripping the Northern Ireland Parliament of its powers.
- *Hunger Strikes (1981)*: Led by Bobby Sands, increased international attention and support for the republican cause.



### Peace Process

- *Anglo-Irish Agreement (1985)*: First agreement between the British and Irish governments, acknowledging both countries' roles in Northern Ireland.
- *Ceasefires (1994)*: Announced by the IRA and loyalist paramilitaries, leading to peace negotiations.
- *Good Friday Agreement (1998)*: Major peace agreement that included provisions for power-sharing and decommissioning of weapons.
- *Reduction in Violence*: The agreement significantly reduced the level of violence, though sporadic incidents continued.

### Recent Developments

- *Ongoing Challenges*: Despite the peace agreement, divisions and political instability persist.

- *Brexit and the Border:* Concerns have risen over the potential impact of Brexit on the peace process, particularly regarding the border with the Republic of Ireland.
- *Immunity Proposals:* Recent proposals to grant immunity for crimes committed during the Troubles have sparked controversy.
- *Judicial Rulings:* A Northern Ireland judge ruled that amnesty for Troubles-related violence breaches human rights.
- *Victims' Rights:* The debate continues over how to address the rights of victims and their families.
- *Government Responses:* The UK government's stance on immunity has been met with opposition from various quarters, including political parties in Northern Ireland and human rights organizations.
- *International Attention:* The situation has attracted attention from international human rights bodies and the European Court of Human Rights.
- *Documentary Evidence:* Key documents and testimonies from the period continue to emerge, shedding light on the actions of both paramilitaries and security forces.
- *Public Inquiry Calls:* There are ongoing calls for a public inquiry into specific incidents of violence and alleged collusion.

### Cultural and Social Impact

- *Community Relations:* The Troubles have had a lasting impact on community relations in Northern Ireland, with some areas still divided by "peace walls."
- *Mental Health:* The legacy of the conflict has had significant effects on the mental health of individuals directly and indirectly affected.
- *Economic Consequences:* The conflict and its aftermath have influenced economic development, with certain areas lagging behind in terms of investment and growth.
- *Cultural Expression:* The Troubles have been a significant theme in music, literature, and film, reflecting the complexities and human stories of the conflict.
- *Educational Initiatives:* Efforts continue to educate new generations about the history of the Troubles and the importance of peace and reconciliation.
- *Memorials and Commemorations:* Various memorials and annual events commemorate those who lost their lives during the Troubles.
- *Peace-Building Efforts:* Numerous organizations work towards building peace and reconciliation between communities in Northern Ireland.
- *Legal and Historical Research:* Ongoing research into the Troubles aims to provide a comprehensive understanding of the conflict and support for victims.
- *International Comparisons:* Northern Ireland's peace process is often cited as a model for conflict resolution worldwide, despite its imperfections.
- *Future Outlook:* The path towards a fully reconciled society remains challenging, with ongoing efforts required from all sectors of the community.

**Conclusion**

This summary provides a concise yet comprehensive overview of the historical context, key events, and recent developments related to the Troubles in Northern Ireland, aiming to inform and engage readers interested in this significant period of history and its lasting impact.

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## LEGAL CURRENT AFFAIRS

### Enhancing Women's Participation in the Workforce: Insights from EPFO's Latest Survey

The Employees' Provident Fund Organisation (EPFO) has initiated a comprehensive survey aimed at gathering detailed information on women workers to enhance their share in the workforce. This initiative reflects a broader effort to assess and improve workplace conditions for women across India.



#### EPFO's Initiative for Women Workers

- *Objective:* EPFO aims to increase the participation of women in the workforce through targeted data collection.
- *Survey Focus:* The survey seeks detailed information on the demographic and employment details of women workers.
- *Broader Goals:* It intends to identify challenges and opportunities for enhancing women's employment rates.

#### Key Areas of Investigation

- *Employment Conditions:* Questions about the nature of employment and work conditions faced by women.
- *Equal Pay for Equal Work:* The survey asks if employers adhere to the principle of equal pay for equal work.
- *Workplace Facilities:* Information on the availability of essential facilities for women at the workplace is sought.
- *Employer Compliance:* Examines whether employers are following government regulations aimed at protecting women's rights in the workplace.

#### Implications for Employers

- *Assessment of Workplace Policies:* Employers are encouraged to assess and improve their workplace policies to be more inclusive and supportive of women workers.
- *Regulatory Compliance:* Highlights the importance of compliance with government regulations promoting gender equality at work.
- *Promotion of Gender Equality:* Employers are urged to take proactive steps in promoting gender equality and ensuring safe working environments for women.

#### Historical Context and EPFO's Role

- *EPFO's Establishment:* The Employees' Provident Fund came into existence with the promulgation of the Employees' Provident Funds Ordinance on the 15th of November, 1951.

- *Legislative Framework:* It was replaced by the Employees' Provident Funds Act, 1952.
- *Purpose:* EPFO was established to provide social security and financial stability to employees in India.
- *Coverage:* It covers over 19 lakh employers and 12 crore account holders, making it one of the world's largest social security organizations.

## Survey's Potential Impact

- *Data-Driven Decisions:* The survey's findings will enable data-driven decisions to improve women's employment conditions.
- *Policy Formulation:* Can aid in the formulation of more effective policies aimed at increasing women's participation in the workforce.
- *Awareness and Advocacy:* Raises awareness among employers and the general public about the importance of gender equality in employment.
- *Benchmarking Progress:* Helps in setting benchmarks for progress in gender equality initiatives.

## Challenges and Opportunities

- *Identifying Barriers:* The survey aims to identify barriers that prevent women from participating fully in the workforce.
- *Enhancing Accessibility:* Seeks to understand how workplace accessibility can be improved for women.
- *Promoting Work-Life Balance:* Investigates how employers can support a better work-life balance for women.
- *Encouraging Inclusivity:* Encourages employers to create more inclusive and diverse work environments.

## Conclusion and Next Steps

- *Call to Action:* Employers and policymakers are urged to use the survey findings to implement practical changes.
- *Monitoring and Evaluation:* Continuous monitoring and evaluation of workplace policies to ensure they are effective in promoting gender equality.
- *Engagement and Dialogue:* Promotes ongoing dialogue between employers, employees, and policymakers to address challenges facing women in the workforce.
- *Future Surveys:* EPFO may conduct follow-up surveys to track progress and update strategies accordingly.
- *Stakeholder Collaboration:* Highlights the importance of collaboration between the government, private sector, and civil society to enhance women's workforce participation.
- *Educational Initiatives:* Suggests the role of educational initiatives in preparing women for a diverse range of careers.

- *Technology and Innovation:* Encourages the use of technology and innovation in creating flexible work arrangements that benefit women.
- *Global Comparisons:* Offers an opportunity to compare India's progress with global standards and practices in gender equality in the workforce.

### Conclusion

This comprehensive summary underscores the significance of EPFO's latest survey in understanding and improving the employment conditions of women in India. It reflects a collective effort towards achieving gender equality in the workforce, aligning with global goals and

## Uttarakhand Moves Towards a Uniform Civil Code

In a landmark decision, the Uttarakhand Cabinet has approved a draft for the implementation of the Uniform Civil Code (UCC), marking a significant step towards legal uniformity across different communities. This initiative aims to consolidate and standardize personal laws, affecting various aspects of civil life.



### Key Developments

- *Cabinet Approval:* The Uttarakhand Cabinet, led by Chief Minister Pushkar Singh Dhami, has officially approved the draft report on the UCC.
- *Committee Formation:* A five-member expert committee was formed to draft the UCC, reflecting a diverse range of legal and academic expertise.
- *Public Consultation:* The draft was prepared after extensive consultations with stakeholders across the state, ensuring a comprehensive approach to law reform.
- *Main Objectives:* The UCC aims to ensure equality and justice for all citizens, irrespective of their religion, in matters of personal law.
- *Legal Uniformity:* The move seeks to bring uniformity in laws governing marriage, divorce, inheritance, and adoption.

### Implications and Impact

- *Promotion of Gender Equality:* The UCC is seen as a crucial step towards promoting gender equality, offering equal rights in marriage, divorce, and inheritance.
- *Enhanced Social Integration:* By standardizing personal laws, the UCC aims to foster national integration and social cohesion.
- *Legal Simplification:* The code is expected to simplify the complex legal landscape, making laws more understandable and accessible to the general public.

- *Political Significance:* The decision by the Uttarakhand government is viewed as a pioneering move that could influence other states and the national legal framework.

### Challenges and Critiques

- *Diverse Opinions:* While many have welcomed the move, there are concerns about its impact on cultural and religious practices.
- *Legal and Constitutional Debates:* The implementation of UCC raises questions about its compatibility with the constitutionally guaranteed right to religious freedom.
- *Implementation Hurdles:* The practical challenges of enforcing a uniform code across diverse communities remain a significant concern.

### Looking Ahead

- *Legislative Process:* The approved draft is set to be tabled in the state assembly for further discussion and ratification.
- *National Dialogue:* Uttarakhand's initiative has reignited the debate on UCC at the national level, with implications for future legal reforms.
- *Continued Engagement:* The government has committed to ongoing dialogue with all stakeholders to address concerns and ensure a smooth implementation process.

### Conclusion

This summary encapsulates the pivotal moments and potential ramifications of Uttarakhand's approval of the UCC draft. As the state navigates through legal, social, and political landscapes, the nation watches closely, anticipating the outcomes of this historic decision.

## Delimitation in India: An Overview and Recent Developments

The process of delimitation is crucial in ensuring fair and equitable representation in the political landscape of India. It involves redrawing the boundaries of electoral constituencies based on the latest census data.

### Understanding Delimitation

- *Definition:* Delimitation is the act of redrawing the boundaries of electoral constituencies to reflect population changes.
- *Authority:* The Delimitation Commission, a high-power body, is responsible for carrying out the exercise.
- *Legislative Framework:* Established under the Delimitation Commission Act, the process is legally mandated to ensure fair representation.
- *Objectives:* To provide equal representation to equal segments of the population, ensure uniformity in the size of constituencies, and adjust for population shifts and densities.



### Historical Context

- *Periodic Exercise:* Delimitation exercises are conducted periodically, following each census to account for demographic changes.
- *Past Commissions:* India has seen multiple delimitation commissions set up since independence, with the most recent adjustments made based on the 2001 census data.
- *Freeze on Delimitation:* A freeze was placed on delimitation after the 1971 census, which lasted until the early 2000s, to encourage population stabilization efforts.

### Recent Developments

- *Current Exercise:* The latest delimitation exercise aims to redistribute parliamentary and assembly seats based on the 2011 census.
- *Technological Advancements:* Use of GIS technology to more accurately define constituency boundaries and make the process more transparent.
- *Regional Impacts:* The exercise has significant implications for states with varying population growth rates, potentially affecting their political representation.

### Challenges and Controversies

- *North vs. South Debate:* Concerns about penalizing southern states with lower population growth rates compared to the northern states.
- *Political Implications:* Potential shifts in political power dynamics, with more seats likely in faster-growing regions.
- *Tamil Nadu's Opposition:* The state has passed resolutions against the delimitation exercise, citing concerns over federalism and equitable representation.

### Implications for Democracy and Federalism

- *Representation vs. Population Control:* The exercise raises questions about balancing population control efforts with equitable representation.
- *Federal Concerns:* States fear loss of autonomy and influence in the national political arena due to redistribution of seats.
- *Electoral Fairness:* Delimitation aims to ensure that each vote has equal value, a principle central to democratic fairness.

### Looking Ahead

- *Implementation Challenges:* Ensuring the exercise does not disproportionately affect certain regions or communities.
- *Legal and Political Debates:* Ongoing discussions on the methodology and implications of delimitation.
- *Future Census Data:* Consideration of how future demographic changes will be addressed, especially with the upcoming census.

## Conclusion

- *A Balancing Act:* Delimitation is a complex but necessary process for maintaining a fair and representative electoral system in India.
- *Continued Dialogue:* It requires ongoing dialogue among stakeholders to address concerns and ensure a democratic outcome.
- *Adaptation and Review:* The process must continually adapt to changing demographics and legal frameworks to serve its purpose effectively.

## The Public Examinations (Prevention of Unfair Means) Bill, 2024: A Comprehensive Overview

In a significant move to uphold the integrity of public examinations in India, the Parliament has recently passed the Public Examinations (Prevention of Unfair Means) Bill, 2024. This landmark legislation aims to curb cheating and the use of unfair means in examinations across the country.



### Legislative Framework

- *Bill Introduction:* The bill was introduced in the lower house of Parliament, marking a crucial step towards reforming examination conduct.
- *Objective:* Aimed at preventing cheating and ensuring fairness in public examinations.
- *Coverage:* Applies to all public examinations conducted at the school and higher education levels, including entrance tests.

### Key Provisions

- *Strict Penalties:* The bill proposes strict penalties for individuals involved in facilitating cheating, including imprisonment and fines.
- *Technology Use:* Encourages the use of technology to prevent and detect cheating practices.
- *Role of the National Testing Agency (NTA):* Empowers NTA with greater responsibility to oversee the conduct of entrance examinations.
- *Whistleblower Protection:* Includes provisions to protect individuals who report cheating cases.

### Implications

- *For Students:* Ensures a level playing field for all candidates, rewarding merit and hard work.
- *For Educators:* Mandates stricter supervision and accountability measures for examination centers.
- *Legal Impact:* Establishes a legal framework for dealing with cases of examination malpractice.

### Challenges and Concerns

- *Implementation:* Questions about the practical implementation of the bill's provisions, especially in remote areas.
- *Digital Divide:* Concerns over the accessibility of technology-driven solutions for all students.
- *Privacy Issues:* The use of surveillance and technology raises questions about privacy rights.

### Public and Expert Opinions

- *Support:* Many educators and parents welcome the bill as a necessary step to ensure exam integrity.
- *Criticism:* Some critics argue that the bill may not address the root causes of cheating and could lead to increased stress among students.
- *Recommendations:* Experts suggest comprehensive reforms in the education system beyond punitive measures.

### Comparative Analysis

- *Global Practices:* Comparison with anti-cheating laws in other countries to evaluate the bill's effectiveness.
- *Previous Measures:* Analysis of how the new bill builds upon or differs from existing regulations against unfair practices in examinations.

### Looking Forward

- *Implementation Strategy:* Discussion on the strategies for the effective implementation of the bill's provisions.
- *Awareness Campaigns:* The importance of awareness campaigns to educate students, educators, and parents about the new regulations.
- *Feedback Mechanism:* Establishing channels for feedback and suggestions on the bill's implementation and impact.

### Conclusion

- *Commitment to Fairness:* The Public Examinations (Prevention of Unfair Means) Bill, 2024, underscores India's commitment to maintaining the integrity and fairness of its public examination system.
- *Ongoing Dialogue:* It opens up a dialogue on further educational reforms needed to complement the legal measures against cheating.
- *Future Revisions:* Acknowledges the possibility of future revisions to the bill based on its outcomes and feedback.

## Constitution (J&K) ST Order (Amendment) Bill, 2024

### Legislative Changes

- *Passage of Bills:* The Parliament passed the Constitution (Jammu and Kashmir) Scheduled Tribes Order (Amendment) Bill, 2024, along with amendments for Andhra Pradesh and Odisha, aiming to include new communities in the ST list.
- *Included Communities:* Pahari Ethnic Group, Paddari Tribe, Koli, and Gadda Brahmin communities have been included in the ST list of J&K.
- *Unaffected Reservations:* The reservation for existing ST communities, such as Gujjars and Bakarwals, will remain unaffected by the inclusion of new communities.



### Background and Development

- *Justice GD Sharma Commission:* Recommended ST status for Gadda Brahmin, Koli, Paddari Tribe, and Pahari Ethnic Group in 2019.
- *Union Government's Commitment:* Emphasized on the development of tribal communities while preserving their socio-cultural heritage.
- *Public Opposition:* Notable protests from the Gujjar-Bakarwal community in Jammu against the inclusion of the Pahari Ethnic group.

### Implications and Reactions

- *Assurances by Ministers:* Tribal Affairs Minister Arjun Munda assured that the benefits for existing STs would not be disturbed.
- *Political Row:* Political row erupted over restrictions on Omar Abdullah's movement amid these legislative changes.
- *Community Concerns:* Gujjars and Bakerwals expressed concerns over the potential dilution of their benefits due to the inclusion of new communities.

### Government's Position and Measures

- *Separate Quotas:* Government's assurance of separate reservation quotas for newly included STs and existing ST communities.
- *ST Reserved Constituencies:* Introduction of ST-reserved Assembly seats in J&K post-delimitation.
- *BJP's Strategy:* Attempts to balance support between Gujjars, Bakerwals, and the newly included ST communities for electoral gains.

### Socio-Cultural Impact

- *Population Dynamics:* Gujjars and Bakerwals, predominantly Muslim, outnumber the other groups newly classified under ST.
- *Demand for Inclusion:* Paharis sought ST status citing geographical challenges and lack of access to educational and health facilities.

- *Reservation Concerns:* Apprehensions about the impact of new inclusions on national-level government jobs and educational institution quotas.

### Educational and Employment Benefits

- *Major Schemes:* Introduction of pre-and post-matric scholarships, national overseas scholarships, and concessional loans for ST communities.
- *Reservation Benefits:* Entitlement to benefits of reservation in services and admission to educational institutions as per government policy.

## Ladakh's Demand for Statehood and Constitutional Safeguards

### Overview of the Situation

Ladakh has been vocal about its demand for statehood and inclusion in the Sixth Schedule of the Constitution following its separation from Jammu and Kashmir and conversion into a Union Territory without a legislature in 2019.

### Demands from Ladakh's Communities

- *Statehood for Ladakh:* Residents demand the restoration of statehood, aiming for self-governance and legislative powers.
- *Inclusion in the Sixth Schedule:* Seeks constitutional safeguards for tribal populations, allowing for the creation of autonomous development councils with legislative powers on land, public health, and agriculture.
- *Job Reservations:* Calls for reservation of jobs for locals, ensuring employment opportunities for Ladakh's youth.
- *Separate Parliamentary Seats:* Demands a parliamentary seat each for Leh and Kargil to represent their unique geopolitical interests.



### Public Demonstrations and Government Response

- *Widespread Protests:* Leh and Kargil witnessed massive protests, with citizens rallying against the 2019 constitutional changes and demanding the aforementioned rights.
- *Government's Assurance:* The Union Government has agreed to examine the implementation of the Sixth Schedule in Ladakh. Discussions include legal and constitutional experts from both civil society and government.

### Key Meetings and Agreements

- *High Powered Committee (HPC) Involvement:* A series of meetings between Ladakh's representatives and the HPC were held to address these demands.
- *Formation of Sub-Committees:* A joint sub-committee has been established to examine the details of Ladakh's demands thoroughly.

### Impact of Article 370 Abrogation

- *Loss of Special Status:* The abrogation of Article 370 led to the removal of special status and bifurcation of J&K, raising concerns about Ladakh's political and economic empowerment.
- *Cultural and Land Protection:* Concerns over land protection, cultural preservation, and employment for locals have been pivotal in the protests.

### Prominent Figures and Statements

- *Sonam Wangchuk's Advocacy:* The renowned education reformer has been vocal about including Ladakh in the Sixth Schedule, citing government promises and election manifestos.
- *Community Leaders' Unity:* Leaders from both Buddhist majority and Shia Muslim-dominated regions in Ladakh have united in their demands for statehood and constitutional safeguards.

### Government's Commitment

- *Assurance of Development:* The government has committed to fast-tracking development in Ladakh and addressing the aspirations of its people, including the protection of culture, land, and employment.

### Conclusion

The demands for Ladakh's statehood and inclusion in the Sixth Schedule reflect the region's quest for political representation, cultural preservation, and economic empowerment. The ongoing dialogues between the government and Ladakh's representatives showcase a critical juncture in addressing the region's unique challenges and aspirations.

## Historical Amendments to Scheduled Tribes and Castes Lists

### Legislative Actions

- *Bills Passed:* The Lok Sabha and Rajya Sabha have passed the Constitution (Scheduled Tribes) Order Amendment Bill, 2024, and the Constitution (Scheduled Castes and Scheduled Tribes) Order Amendment Bill, 2024.
- *Cross-Party Support:* These bills received support across party lines, indicating a collective commitment to tribal welfare.
- *Presidential Assent Pending:* The amendments await the President's notification to officially revise the ST and SC lists in Andhra Pradesh and Odisha.



### Inclusions and Modifications

- *PVTG Inclusions:* Seven Particularly Vulnerable Tribal Groups (PVTGs) in Odisha and Andhra Pradesh have been specifically added or recognized as synonyms/sub-tribes.
- *Phonetic Variations:* The bills include synonyms and phonetic variations of existing tribes, ensuring a more inclusive representation.
- *Shifts Between Lists:* Two entries were moved from the Scheduled Castes to the Scheduled Tribes list in Odisha.

### Community and Political Reactions

- *Demand for Comprehensive Review:* Opposition members have called for a Joint Parliamentary Committee to evaluate all ST status demands nationwide.

- *Streamlining Procedures:* Suggestions were made to simplify the inclusion and exclusion processes for ST status.
- *Concerns Over Genuine Demands:* There's a growing concern regarding the authenticity of the demands for ST status, with calls for a thorough review.

## Socio-Economic Implications

- *Enhanced Benefits:* Newly listed communities will gain access to government schemes, scholarships, and reservations in education and employment.
- *Focus on PVTGs:* The government's commitment to reaching out to PVTGs in remote areas has been emphasized, with schemes aimed at improving their socio-economic conditions.

## Cultural and Historical Significance

### Recognition of Tribal Heritage

- *Preservation of Socio-Cultural Identity:* The amendments aim to preserve the unique socio-cultural heritage of tribal communities.
- *Historical Anomalies Addressed:* The inclusion of new communities seeks to correct historical oversights and injustices.
- *Tribal Representation:* The significance of these bills is underscored by the current presidency of a tribal woman, symbolizing a commitment to tribal rights and representation.

## Future Directions and Challenges

### Ongoing Evaluations:

- *Consideration of Additional Communities:* The government is considering the inclusion of more communities based on specific criteria.
- *Criteria for Inclusion:* Emphasis on the character of communities rather than caste, highlighting the unique nature of tribal identities.

## Political and Social Discourse

- *Bipartisan Support:* The unanimous support for these bills reflects a national consensus on tribal welfare.
- *Criticism and Political Dynamics:* Some criticism has been directed at the government's approach to tribal and backward castes, especially during election periods.

## Economic Implications

- *Budgetary Allocations:* Significant increases in the budget for tribal affairs highlight the government's investment in tribal development.
- *Comprehensive Review Suggested:* Calls for a nationwide, inclusive review of the SC and ST lists to address all pending demands and ensure fairness.

## Conclusion and Reflection

- *Historic Legislation:* These legislative changes mark a significant step in recognizing and addressing the needs of tribal communities in India.

- *Commitment to Justice:* The government's efforts to include PVTGs and address historical injustices demonstrate a commitment to equity and justice for vulnerable communities.
- *Socio-Economic Development:* Access to government schemes and benefits is expected to significantly impact the socio-economic development of newly recognized tribes.
- *Cultural Preservation:* The emphasis on preserving the socio-cultural heritage of tribal communities underscores the importance of cultural identity in national development.
- *Future Challenges:* While these amendments are a positive step, ongoing challenges remain in ensuring all deserving communities are recognized and supported.
- *Political Will:* The bipartisan support for these bills reflects a strong political will to address tribal issues, setting a precedent for future legislative actions.
- *Public Awareness:* Increased public awareness and understanding of tribal issues are crucial for the continued support and integration of tribal communities into the broader socio-economic fabric of India.
- *Educational Opportunities:* Enhanced access to education for tribal communities is a key factor in their long-term socio-economic development.
- *Healthcare Access:* Improving healthcare access and outcomes for tribal communities remains a critical area of focus.
- *Sustainable Development:* Ensuring the sustainable development of tribal areas, while preserving their cultural and environmental heritage, is essential for inclusive national growth.

## Comprehensive Summary of RBI's Action on Paytm Payments Bank

### Regulatory Actions and Immediate Effects

- *RBI Restrictions:* RBI has imposed significant restrictions on Paytm Payments Bank, including a halt on accepting new customers and fresh deposits.
- *Audit Findings:* Persistent non-compliances and material supervisory concerns were revealed through a Comprehensive System Audit.
- *Operational Limitations:* No further deposits, credit transactions, or top-ups allowed post-February 29, 2024, except for interest, cashbacks, or refunds.
- *Withdrawal Permissions:* Customers can withdraw or utilize their existing balances without restrictions.
- *Service Cessations:* Services like fund transfers, BBPOU, and UPI facilities are to be discontinued after February 29, 2024.



- *Nodal Account Closure:* RBI directed the closure of Nodal Accounts of One97 Communications Ltd and Paytm Payments Services Ltd by February 29, 2024.

### Market Impact and Company Response

- *Market Reaction:* Paytm's stock plummeted nearly 20% following the RBI's announcement.
- *Clarification on Impact:* Vijay Shekhar Sharma clarified that restrictions primarily affect the lending arm, not Paytm's core operations.
- *Stakeholder Structure:* Paytm owns 49% of PPBL, with Vijay Shekhar Sharma owning the remaining 51%.
- *User Impact:* Paytm wallet users can use existing balances but cannot recharge their accounts with new funds.
- *Public Debate:* The RBI's actions sparked discussions on regulatory overreach versus the need for compliance in the fintech sector.
- *Future Prospects:* Despite operational challenges, there are no planned job cuts, and discussions with RBI and banking partners are ongoing.

### Long-Term Implications and Industry Perspective

- *Financial Impact:* An estimated annual impact of ₹300-500 crore on Paytm's operating profit due to the ban.
- *Reputation Risk:* The ban poses a risk to Paytm's existing contracts with lending partners, potentially affecting future negotiations.
- *Wallet and FASTag Users:* Wallet recharges and FASTag operations are directly impacted, requiring backend migrations to third-party accounts.
- *Merchant Challenges:* Migrating merchant accounts and nodal accounts to third-party banks could be time-consuming and require physical interventions.
- *Potential for Reversal:* Given the history of non-compliance, a near-term reversal of the ban appears unlikely.

### Historical Context and Regulatory Background

- *Previous Restrictions:* Paytm Payments Bank has faced regulatory challenges before, including a ban on new customer onboarding in 2018 and 2022.
- *KYC Lapses:* The 2022 ban cited lapses in KYC processes, highlighting ongoing compliance issues.
- *Monetary Penalty:* A significant monetary penalty of ₹5.39 crore was levied against Paytm Payments Bank, the highest by any bank to RBI.

### Operational and Strategic Considerations

- *Operational Disruption:* The restrictions can potentially render Paytm Payments Bank's operations dysfunctional in a few weeks.

- *Impact on One97 Communications:* Several businesses dependent on the payment bank face the risk of redundancy.
- *Strategic Adjustments:* Paytm may need to adjust its operational strategies, including migrating accounts and services to maintain continuity.
- *Industry Reactions:* The fintech industry's reaction has been mixed, with some advocating for regulatory leniency to foster innovation.

### Conclusion and Forward-Looking Statements

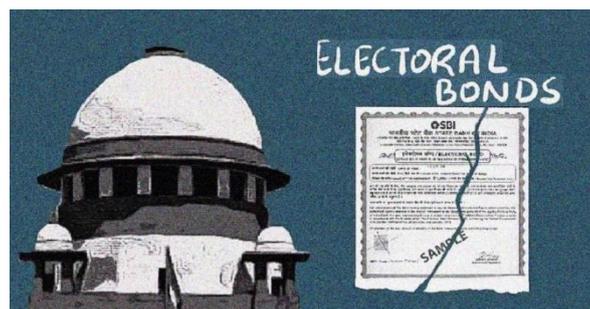
- *Navigating Regulatory Challenges:* Paytm Payments Bank must address the identified non-compliances to potentially lift the RBI's restrictions.
- *Market Confidence:* Restoring market confidence will be crucial for Paytm, requiring transparent communication and strategic partnerships.
- *Innovation vs. Compliance:* The situation underscores the balance fintech companies must maintain between innovation and regulatory compliance.
- *Customer Impact Mitigation:* Efforts to minimize disruption for customers and merchants will be key to maintaining Paytm's market position.
- *Regulatory Dialogue:* Ongoing discussions with the RBI and strategic adjustments are essential for Paytm's path forward.
- *Industry Implications:* The RBI's actions against Paytm Payments Bank may have broader implications for regulatory expectations in the fintech sector.

## Supreme Court Invalidates Electoral Bonds Scheme

In light of the recent Supreme Court verdict striking down the Electoral Bonds Scheme, it's crucial to understand the implications and the journey of this controversial financial instrument introduced for political donations.

### Introduction to Electoral Bonds

- *Launch and Purpose:* Introduced by the Modi government in 2017, electoral bonds were pitched as a reform to bring transparency and curb black money in political funding.
- *Nature of Bonds:* These are bearer instruments, like promissory notes, that do not carry the name of the buyer or the payee, allowing anonymous donations.
- *Eligibility for Political Parties:* Only parties that secured at least 1% of the votes in the last Lok Sabha or assembly elections were eligible to receive donations through these bonds.



### Key Amendments and Concerns

- *Legislative Amendments:* The scheme was notified in 2018, with amendments to the Representation of the People Act, Income Tax Act, Companies Act, RBI Act, and FCRA, facilitating anonymous donations.
- *Removal of Donation Caps:* Amendments allowed companies to donate without a cap on the percentage of their profits, raising concerns about undue influence on the political system.
- *Foreign Influence:* Changes to the FCRA enabled foreign entities to potentially influence Indian politics through donations, posing risks to national integrity and security.

### Supreme Court's Verdict and Rationale

- *Unconstitutionality of the Scheme:* On February 15, 2024, the Supreme Court unanimously declared the Electoral Bonds Scheme unconstitutional, citing violations of the right to information under Article 19(1)(a) of the Constitution.
- *Violation of Right to Information:* The court highlighted that anonymous donations infringe upon the fundamental right to information, essential for participatory democracy.
- *Rejection of Government's Arguments:* The court found the government's justification for the scheme, such as curbing black money, unconvincing and not meeting the proportionality test.
- *Impact on Political Transparency:* The verdict emphasized that economic inequality and anonymous contributions could lead to quid pro quo arrangements, undermining the democratic process.

### Implications and Directions

- *Immediate Cessation of Bond Issuance:* The State Bank of India (SBI) was ordered to stop issuing electoral bonds forthwith.
- *Disclosure of Donations:* Political parties are required to disclose details of donations received through electoral bonds since April 12, 2019, enhancing transparency.
- *Refund of Unencashed Bonds:* Electoral bonds that have not been encashed within their validity period must be returned for a refund, ensuring accountability.

### Historical Context and Criticism

- *Critiques and Legal Challenges:* The scheme faced criticism for enabling anonymous funding, potentially leading to corruption and undue influence in politics.
- *Disproportionate Benefit to Ruling Party:* Reports indicated that the BJP was a major beneficiary of the scheme, raising concerns about the equitable distribution of political donations.
- *Concerns Over Foreign Donations:* Amendments allowing foreign companies to donate through electoral bonds sparked fears of external influence on Indian politics.

### Future of Political Funding in India

- *Call for Transparency:* The verdict has been hailed as a step towards more transparent political funding, demanding greater accountability from political parties.
- *Reevaluation of Political Donations:* The judgment prompts a reevaluation of methods for political donations, emphasizing the need for transparency and fairness.
- *Impact on Upcoming Elections:* The decision is expected to have a significant impact on the funding mechanisms of political parties in the run-up to future elections.
- *Advocacy for Reform:* The ruling underscores the need for comprehensive electoral finance reform, aligning with democratic principles and the right to information.

## Understanding Article 142: The Supreme Court's Intervention in Chandigarh's Mayoral Election

### The Power of Article 142

- Article 142 grants the Supreme Court unique authority to ensure "complete justice" in cases where laws may fall short.
- It allows the Court to transcend legal limitations to resolve disputes fittingly.

### Historical Context and Judicial Interpretation

- The scope of Article 142 has been defined through landmark judgments, ensuring it aligns with constitutional and statutory provisions.
- Notable cases like the Bhopal Gas Tragedy highlight its broad applicability for justice.



### Critiques and Safeguards

- Despite its noble intent, Article 142 faces criticism for potential arbitrary use due to its broad discretion.
- The judiciary has placed checks on itself, emphasizing that Article 142 should supplement, not supplant, statutory laws.

### The Chandigarh Mayoral Election Case

- The Supreme Court invoked Article 142 to overturn the Chandigarh mayoral election results, citing electoral malpractices.
- Kuldeep Kumar was declared the validly elected candidate after the Court found that votes were unlawfully invalidated.

### Electoral Democracy and Judicial Responsibility

- The intervention underscored the Court's commitment to protecting electoral democracy from subterfuges.
- It highlighted the judiciary's role in preserving democratic principles at all levels of governance.

### Implications of the Ruling

- The ruling was significant for its immediate impact on Chandigarh's political landscape and for setting a precedent for electoral integrity.
- It demonstrated the Court's willingness to intervene in local elections to uphold democratic values.

### Article 142's Broader Influence

- Beyond electoral disputes, Article 142 has been pivotal in various landmark decisions, from human rights protections to environmental justice.
- It underscores the Supreme Court's expansive role in addressing issues of national importance.

### Looking Ahead: The Role of Judicial Activism

- The use of Article 142 reflects the Supreme Court's proactive stance in filling legal voids and addressing societal challenges.
- It reaffirms the judiciary's essential role in shaping India's democratic and legal landscape.

### Conclusion

The Supreme Court's application of Article 142 in the Chandigarh mayoral election is a testament to its commitment to justice and democracy. By ensuring electoral integrity, the Court not only rectified an immediate injustice but also reinforced the foundational principles of democratic governance in India.

### Special Watch

#### Interim Budget 2024 Highlights

##### Economic Growth and Fiscal Policy

- *Economic Growth Projection:* The Finance Ministry expects FY24 economic growth to exceed the central bank's projection of 7%, aiming for a close to 7% growth in FY25 despite geopolitical risks.
- *Fiscal Deficit Targets:* Aiming to reduce the fiscal deficit to 5.1% of GDP in FY25, with a further goal of 4.5% by FY26.
- *Capital Expenditure:* An 11% increase in capital expenditure to Rs 11.1 lakh crore for the next fiscal year.
- *Tax Collections:* Projected tax receipts for 2024-25 at Rs 26.02 lakh crore, with direct tax collections having tripled in the last decade.



##### Taxation and Financial Inclusion

- *No Change in Tax Rates:* Direct and indirect tax rates, including import tax, remain unchanged.
- *Tax Relief for Startups:* Extension of tax breaks for startups and investments by Sovereign wealth funds until March 31, 2025.
- *Financial Relief Measures:* Withdrawal of old disputed direct tax demands benefiting 1 crore taxpayers.

##### Infrastructure and Development

- *Railways Investment:* Allocation of Rs 2.4 lakh crore to the Railways, including the development of three major economic corridors.
- *Housing Initiatives:* Target to build 2 crore houses under PM Awas Yojana, with a focus on middle-class housing schemes.
- *Digital Infrastructure:* Emphasis on investments in digital infrastructure, cybersecurity, and skill development for sustainable growth.

## Healthcare and Education

- *Healthcare Expansion:* Extension of healthcare facilities under Ayushman Bharat to all Aasha and Anganwadi workers.
- *Education Budget:* A 14.5% increase in the education budget to Rs 1.25 lakh crore for 2024/25.
- *Medical Colleges:* Plans to set up more medical colleges using existing hospital infrastructure.

## Energy and Environment

- *Renewable Energy:* Viability gap funding for wind energy and initiatives for coal gasification and liquefaction.
- *Rooftop Solarization:* Enabling 1 crore houses to obtain up to 300 units of free electricity per month through rooftop solar technology.

## Agriculture and Rural Development

- *Agri-Investment:* Promotion of investment in post-harvest activities and empowerment of dairy farmers.
- *Rural Housing:* Close to achieving the target of 3 crore houses under PM Awas Yojana (Gramin), with plans for 2 crore more in the next five years.

## MSMEs and Industry Support

- *MSME Special Package:* Expectations for a special package to address credit availability and competitive cost challenges.
- *PLI Scheme Allocation:* Rs 6,200 crore allocated for the PLI scheme to promote manufacturing and exports.

## Tourism and Connectivity

- *Tourism Promotion:* Interest-free loans to states to promote tourism, including development in Lakshadweep.
- *Air Connectivity:* Launch of 517 new routes under the Udan Scheme to enhance air connectivity.

## Technology and Innovation

- *Sunrise Technologies:* Proposal for a Rs 1 lakh crore corpus to drive private investment in sunrise technologies.
- *Digital Commerce Boost:* Reimagining the digital commerce ecosystem to eliminate challenges for stakeholders.

## Social Welfare and Inclusion

- *Maternal and Child Healthcare:* Comprehensive programs for improved nutrition delivery and early childhood care.
- *Financial Assistance to Farmers:* Direct financial assistance to 11.8 crore farmers under PM-KISAN.

## Governance and Regulatory Framework

- *Regulatory Simplification:* Measures for simplified regulatory procedures and reduced compliance burden to empower startups and MSMEs.
- *Taxpayer Services:* Focus on improving taxpayer services and reducing the processing time of tax returns.

## Miscellaneous

- *Women's Empowerment:* Initiatives for women's participation in higher education and support for women entrepreneurs.
- *Skill Development:* Skill India mission's role in training over 1.4 crore youth for job readiness.
- *Public Health Initiatives:* Vaccination of 9-14-year-old girls for cervical cancer and expansion of healthcare facilities.

## Conclusion

These points encapsulate the key highlights and initiatives from the Budget 2024, reflecting the government's focus on economic growth, infrastructure development, healthcare, education, and support for MSMEs, among other areas.

## *PRACTICE EXERCISE*

### **World Leprosy Day**

This is now the third year of the Global Appeal to End Stigma and Discrimination against Persons Affected by Leprosy, which has been conducted as part of the "Don't Forget Leprosy/ Hansen's disease" campaign, and the third year WHO has marked World Neglected Tropical Diseases Day, which falls on the 30th of January, drawing attention to a group of 21 diseases, including leprosy, that primarily affect the world's poorest people. All these initiatives: World NTD Day, World Leprosy Day, the Global Appeal and the Don't Forget Leprosy campaign, can bring us together and accelerate progress towards a leprosy-free world. On World Leprosy Day, we renew our call for a person-centered approach that addresses stigma, discrimination, and psychological and social wellbeing, as part of our shared journey to reach the unreached, achieve universal health coverage, and attain health for all. On this day and throughout the year: Unite. Act. Eliminate leprosy. To achieve a world free of leprosy and the problems it causes, however, medical interventions are not enough. As we move towards interruption of transmission and elimination of leprosy, we must also address the social and psychological aspects of the disease. Together, we must do more to eliminate the stigma associated with leprosy and promote the dignity of those affected by the disease.

<https://www.who.int/news/item/28-01-2024-joint-message-by-dr-fedros-adhanom-ghebreyesus-director-general-of-the-world-health-organization-and-mr-yohei-sasakawa-who-goodwill-ambassador-for-leprosy-elimination>

Q.1) What is the theme for World Leprosy Day 2024?

- A) End Stigma
- B) Leave No One Behind
- C) Zero Discrimination
- D) Beat Leprosy

Q.2) Which state in India had a prevalence rate of 2.3 per 10,000 population for leprosy in 2023?

- A) Bihar
- B) Chhattisgarh
- C) Jharkhand
- D) Maharashtra

Q.3) Which of the following is NOT a reason why Neglected Tropical Diseases (NTDs) receive less funding and attention?

- A) NTDs are easily preventable and treatable with existing technologies.
- B) NTDs affect primarily high-income countries and wealthy populations.
- C) NTDs are less well-known than diseases like tuberculosis, HIV-AIDS, and malaria.

D) NTDs primarily affect marginalized communities in low-resource settings.

Q.4) What is the target year set by India's National Strategic Plan (NSP) & Roadmap for Leprosy to achieve zero transmission of leprosy?

- A) 2025
- B) 2027
- C) 2028
- D) 2030

Q.5) What is the overarching aim of SDG 3.3?

- A) To promote mental health and well-being
- B) To ensure universal health coverage
- C) To end the epidemics of major diseases by 2030
- D) To reduce maternal mortality

### Brainware

Induced pluripotent stem cell (iPSC) technology is also being used to create 3D models to understand the pathology of some neurological diseases. These organoids are capable of simulating the environment in an Alzheimer's brain, including incorporating the presence of astrocytes, vasculature, and dysregulated microglia, which are all linked to the disease. While a brain organoid can be employed to explore the development of the human brain, as well as model neurodegenerative diseases and brain tumors to aid in drug screening, its alliance with AI has sparked intrigue in computing research as well as the beginning of a new era of machine learning technology as we know it. Despite the challenges with organoid development and maintenance as well as the fact that Brainware isn't on par with traditional AI-based computing approaches yet, brain organoids have proven adaptability and plasticity that could emulate supercomputers, and might possibly be enroute to mimic the way an actual human brain performs, with the help of more training. Since AIs are developed using silicon computer chips that direct the artificial neural networks - machine learning models made up of simulated neurons - training these networks on the chips not only eats up time but also a lot of energy.

<https://www.labiotech.eu/trends-news/brainware-brain-organoid-ai/>

Q.6) Brainware integrates brain organoids with:

- A) Silicon chips
- B) Microelectrodes
- C) Mechanical gears

D) Optical fibers

Q.7) What type of cells are used to grow the “brain organoid” in Brainware?

A. Adult Stem Cells

B. Embryonic Stem Cells

C. Induced Pluripotent Stem Cells

D. Somatic Cells

Q.8) How does the emergence of Big Data enhance the utility of artificial neural networks (ANN) in marketing?

A) Big Data limits the scope of ANN applications

B) It reduces the need for cloud computing in ANN operations

C) It enables ANNs to identify trends from vast datasets for predictive analytics

D) It diminishes the accuracy of ANN predictions

Q.9) Which neurodegenerative disease is characterized by the accumulation of alpha-synuclein protein in the brain?

A. Alzheimer's

B. Parkinson's

C. Huntington's

D. ALS (Amyotrophic Lateral Sclerosis)

Q.10) Which learning algorithm is primarily used for training deep neural networks through backpropagation by optimizing the weights to minimize error?

A. Genetic Algorithm

B. Gradient Descent

C. Simulated Annealing

D. Decision Tree

## Grammy Award 2024

Each year, the Grammy Awards brings a healthy mix of referential glamour and of-the-moment beauty trends—and tonight's Grammys 2024 red carpet was no exception. The 66th annual event delivered nods to pop culture, recent runways, Old Hollywood, and even TikTok trends. First-time Grammy winner Miley Cyrus kicked things off with a higher-the-hairstyle that was equal parts Dolly Parton and Marc Jacobs dolly. Lana Del Rey went full Priscilla (romantic ribbon included), while Dua Lipa's enduring mermaid sensibilities extended to her burgundy beach waves. Makeup artist Pat McGrath took a break from owning social feeds to offer Tyla a preternatural glow that played well with her soft, goddess-like coils. Subtly edgy details found fans in Doja Cat, who debuted a body embellished (if temporarily) with fine line tattoos, and Taylor Swift, whose textural blonde, sharp cat eye, and red lip hinted at a new (old) era. Ice Spice proved the power of a standout signature, her close-cropped ginger curls rendering anything more than a swing of black liner unnecessary—though glowing skin and a nude pout are always welcome. And finally, Olivia Rodrigo's viral cherry cola lip brought her would-be classic glamour into the present tense. Here, the best beauty looks from the Grammys 2024 red carpet.

<https://www.vogue.com/slideshow/best-beauty-looks-grammys-2024>

Q.11) Who became the artist with the most Grammy wins for Album Of The Year in 2024?

- A. Miley Cyrus
- B. SZA
- C. Taylor Swift
- D. Jon Batiste

Q.12) Which artist won the Best New Artist award at the 2024 Grammy Awards?

- A. Miley Cyrus
- B. SZA
- C. Sia
- D. Victoria Monét

Q.13) Who won the Best Hall Performance at the 2024 Grammy Awards?

- A. Sleep Token
- B. Lamb of God
- C. Slipknot
- D. Metallica

Q.14) Which statement accurately describes the GRAMMY Hall of Fame Award?

- A. It is awarded to artists for their contributions in the current year.
- B. Sir Georg Solti and Alison Krauss have won the most GRAMMY Hall of Fame Awards.
- C. The award is given by a special committee to recognize significant musical compositions.
- D. The award is focused solely on classical music compositions.

Q.15) What is the title of the album for which Zakir Hussain won a Grammy for Best Contemporary Instrumental Album in 2024?

- A) The Journey
- B) This Moment
- C) As We Speak
- D) Global Harmony

### Global Burden of Cancer: WHO

The burden of cancer is related to several factors. The statement from WHO suggests that people in countries with a lower human development index may receive diagnoses later and have a lower chance of access to quality treatment. This can significantly increase the risk of poor cancer health outcomes. Another struggle is people's ability to get governmental assistance for cancer-related services. In this statement, the WHO referenced survey data from 115 countries on components of their universal health coverage. This survey data found that only 39% of these countries included basic cancer management as part of health benefit packages for their citizens. Health benefit packages also varied considerably between countries. For example, high-income countries were more likely to have lung cancer-related services, radiation services, and stem-cell transplantation as part of their health benefit packages than low-income countries were. Environmental factors and lifestyle choices also contribute to cancer's impact. For example, the WHO statement suggests that the increase in lung cancer cases is related to the continued use of tobacco in Asia. They also note that the data reflects increases in the aging population and population growth. Alcohol use, tobacco use, and obesity continue to contribute to cancer rate increases overall. Exposure to air pollution is also a likely contributing factor.

<https://www.medicalnewstoday.com/articles/an-estimated-35-million-new-cancer-cases-to-occur-in-2050-who-warns#Factors-contributing-to-rising-cancer-cases>

Q.16) Which country accounted for 23 per cent of deaths that occurred due to cervical cancer globally?

- A) United States
- B) China
- C) India

D) Australia

Q.17) Which type of cancer is most common in women in 25 countries, particularly in sub-Saharan Africa?

- A) Breast Cancer
- B) Lung Cancer
- C) Cervical Cancer
- D) Ovarian Cancer

Q.18) What is the theme for World Cancer Day 2024?

- A) I Am and I Will
- B) We Can, I Can
- C) Close the Care Gap
- D) Not Beyond Us

Q.19) Which of the following statements about the International Agency for Research on Cancer (IARC) is incorrect?

- A) The IARC was created in 1965 by a resolution of the World Health Assembly.
- B) The IARC is the specialized cancer agency of the World Health Organization.
- C) The objective of the IARC is to promote international collaboration in cancer research.
- D) The IARC comprises 50 member countries.

Q.20) What is the primary causative agent of cervical cancer?

- A) Hepatitis B virus (HBV)
- B) Human Immunodeficiency Virus (HIV)
- C) Human Papillomavirus (HPV)
- D) Herpes Simplex Virus (HSV)

## UPI Goes Global from Eiffel Tower

In 2023, India and France committed to nurturing a thriving ecosystem and building collaborations that empower their citizens and ensure their full participation in the digital century, according to the India-France joint statement. NPCI International Payments Limited (NIPL) and France's Lyra Collect executed an agreement to implement the Unified Payment Interface (UPI) in France and Europe. During his visit to France in July last year, Prime Minister Narendra Modi announced that India and France have agreed to use the UPI payment mechanism and it will begin from the iconic Eiffel Tower. PM Modi said that Indian tourists in France will now be able to make payments in rupees. While addressing the Indian community at La Seine Musicale in Paris on July 14, PM Modi said, "Be it India's UPI or other digital platforms, they have brought a huge social transformation in the country and I am happy that India and France are also working together in direction. India and France have agreed to use UPI in France. I will leave after the agreement. However, it is your job to move forward. Friends, in the coming days, its beginning will be made from Eiffel Tower, which means that Indian tourists will now be able to make payments in Rupees, through UPI, at Eiffel Tower.

<https://www.etvbharat.com/en/!bharat/significant-step-towards-taking-upi-global-pm-modi-on-launch-of-upi-at-eiffel-tower-enn24020200172>

Q.21) How many countries officially support Unified Payment Interface (UPI) payment as of 2024?

- A) 4
- B) 5
- C) 7
- D) 10

Q.22) Which of the following statements about using UPI outside India is correct?

- A) UPI requires a 10 digit PIN for all transactions for International Users.
- B) UPI payments outside India do not require enabling international payments on the respective apps.
- C) UPI payments outside India could incur a small fee charged by the bank to process the transaction.
- D) All international locations and merchants can receive UPI payments.

Q.23) Which payment app had the highest share of UPI transactions as of 2023?

- A) Google Pay
- B) PhonePe
- C) Paytm
- D) Amazon Pay

Q.24) What is the name of the feature that enables recurring payments up to ₹5,000 through UPI?

- A) UPI AutoPay
- B) UPI Lite X
- C) Tap & Pay
- D) UPI Easy!

Q.25) Which of these is the first company to launch a UPI-ATM as a White Label ATM in India in 2023?

- A) India1 Payments
- B) Tata Communications Payment Solutions
- C) Hitachi Payment Services
- D) Vakrangee

#### Indian Oil Market Outlook to 2030: IEA

Biofuels are also expected to play a key role in India's decarbonization of the transport sector. The South Asian nation is already the world's third-largest producer and consumer of ethanol, as domestic production has tripled over the last five years. "India has advanced by five years its deadline for doubling nationwide ethanol blending in gasoline to 20% in Q4 2026. Achieving 20% ethanol blending in such a short time frame presents several challenges, not least rapidly expanding feedstock supplies," the report said. The country's economic growth story would bring challenges for its security of energy supplies. India was already the world's second-largest crude oil net importer in 2023, having boosted imports by 36% over the past decade to 4.6 million b/d to meet rising refinery intake. Increased refining processing will lift crude oil imports further to 5.8 million b/d by 2030, with major implications for India's supply security. "The energy crisis and recent surge in long-haul crude sources, notably from Russia, has also added further impetus to sustaining the country's oil resilience in case of market disruptions. "India needs to enhance its capacity to respond to possible oil supply disruptions by implementing and strengthening its strategic petroleum reserve program and improving oil industry readiness," the report said.

<https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/oil/020724-india-to-be-largest-source-of-oil-demand-growth-until-2030-iea>

Q.26) Which fuel is identified as the single largest source of oil demand growth in India as of 2024?

- A. Petrol
- B. Diesel/gasoil
- C. Jet-kerosene
- D. LPG

Q.27) What is India's projected position in global oil demand growth by 2030?

- A. Second largest
- B. Third largest
- C. Largest
- D. Fourth largest

Q.28) Which organization's annual report forecasts oil demand to increase by 17% by 2045?

- A) OAPEC
- B) UNEP
- C) OPEC
- D) MERCOSUR

Q.29) Which country is projected to have the highest oil production in 2024?

- A. Russia
- B. Saudi Arabia
- C. United States
- D. UAE

Q.30) Which of the following statements about the establishment of the IEA is correct?

- A. The IEA was established in 1974 in Paris, France, by OECD members in response to the 1973 Arab oil embargo.
- B. The IEA was established in 1980 in New York, USA, by UN members in response to the 1979 energy crisis.
- C. The IEA was established in 1960 in Baghdad, Iraq, by oil-exporting countries in response to the oil glut.
- D. The IEA was established in 2000 in Vienna, Austria, by OPEC members in response to the 1999 oil price crash.

Q.31) Which company is known as a leading electric vehicle (EV) manufacturer in India in 2023?

- A) MG Motors

- B) Mahindra
- C) Nissan
- D) TATA Motors

Q.32) What is the name of the Indian government's initiative to promote electric vehicles?

- A) Green India
- B) Power India
- C) FAME India
- D) EV India

### High Altitude Pseudo-Satellite (HAPS)

In the Americas, the United States and Canada have shown significant interest in HAPS technologies due to their promising advancements in environmental monitoring, intelligence, surveillance, and reconnaissance. Driven by the increasing utilization of commercial drones, there is a noticeable shift in consumer needs towards advanced communication systems. Furthermore, rising government expenditure in advancing military infrastructure has also propelled the growth of HAPS in this region. In Europe, investment from both private corporations and government organizations such as the European Space Agency (ESA) substantiates the region's commitment to HAPS technology. Research efforts are also geared toward harnessing solar-powered HAPS. HAPS also serves a crucial role in monitoring climate change and environmental disasters, and Europe's tech enterprises, along with the European Space Agency, are leading innovative efforts in developing HAPS equipped with advanced sensory technology for these purposes. The Asia-Pacific region, with economies such as China, Japan, and India, continues to grow as a hub for HAPS technologies due to its expansive consumer base and demand for advanced connectivity services. Due to this region's susceptibility to natural calamities, HAPS can provide real-time data and surveillance necessary for disaster response and recovery. Consumer behavior in these regions underlines the growing need for quick, reliable, and wide network coverage, a feat achievable with HAPS technology.

<https://www.openpr.com/news/3404725/high-altitude-pseudo-satellite-market-worth-5-87-billion>

Q.33) Which organization successfully completed the first test of a solar-powered “pseudo satellite” in 2024?

- A. Indian Space Research Organisation (ISRO)
- B. National Aeronautical Development Agency (NADA)
- C. National Aerospace Laboratories (NAL)
- D. Hindustan Aeronautics Limited (HAL)

Q.34) Where was the first test flight of High Altitude Pseudo-Satellite (HAPS) conducted in India?

- A. Hyderabad
- B. Pune
- C. Karnataka
- D. Ahmedabad

Q.35) What is the deployment target year for HAPS?

- A. 2026
- B. 2027
- C. 2028
- D. 2030

Q.36) Which statement best describes the deployment mechanism of an Air-Launched Unmanned Aerial Vehicle (ALUAV)?

- A) Launched exclusively from submarines for maritime surveillance.
- B) Deployed by hand from ground forces in combat scenarios.
- C) Launched from an aircraft, typically a military transport plane.
- D) Catapulted from naval carriers to monitor oceanic regions.

Q.37) At what altitude range is a High Altitude Pseudo-Satellite (HAPS) designed to operate?

- A) 5-10 km
- B) 18-20 km
- C) 30-32 km
- D) 40-45 km

Q.38) In which year was the CSIR-National Aerospace Laboratories (NAL) established?

- A) 1947
- B) 1959
- C) 1965

D) 1972

Q.39) Which UAV developed for Intelligence, Surveillance, Target Acquisition, and Reconnaissance (ISTAR) applications is in an advanced stage of developmental trials for India in 2024?

- A. Tapas MALE UAV
- B. Bhishma UAV
- C. Rustom UAV
- D. Nishant UAV

### Bharat Ratna Awardees 2024

For the first time in the history of Independent India, the ruling government has announced five Bharat Ratna awards in single year. The official records of the Ministry of Home Affairs show that 2024 happens to be the highest number of Bharat Ratna recipients in one year since the awards inception in 1954. Before this, it was the year 1999 that saw Bharat Ratna being awarded to four dignitaries. Back then, those who were awarded Bharat Ratna included Jayaprakash Narayan (Posthumous), Professor Amartya Sen, Lokpriya Gopinath Bordoloi (Posthumous) and Pandit Ravi Shankar. Born in 1902 at Meerut's Noorpur in a farmer family, [x] was graduated in science in 1923 and did his post-graduation at Agra University in 1925. Later, he started his practice in law in Ghaziabad after training. [x] was first elected to the UP Legislative Assembly in 1937 from Chhaprauli. He went on to represent the constituency in 1946, 1952, 1962 and 1967. He was Parliamentary Secretary in Pandit Govind Ballabh Pant's government in 1946. In 1951, [x] was appointed Cabinet Minister in the State and given charge of the Departments of Justice and Information. Later, he took over as the Minister for Revenue and Agriculture in the Cabinet of Sampurnanand in 1952. When he resigned in April 1959, he was holding charge of the Department of Revenue and Transport.

<https://www.financialexpress.com/india-news/bharat-ratna-2024-winners-full-list-2024-bharat-ratna-winners-profile-bkg/3389275/#:~:text=On%20Friday%2C%20Prime%20Minister%20Narendra,will%20be%20awarded%20Bharat%20Ratna>

Q.40) Which award [x] was conferred on PV Narasimha Rao, Chaudhary Charan Singh, and MS Swaminathan in 2024?

- A) Padma Vibhushan
- B) Padma Bhushan
- C) Bharat Ratna
- D) Padma Shri

Q.41) What is the shape of the Bharat Ratna medallion?

- A. Indian Rosewood leaf
- B. Arjuna leaf
- C. Ashoka leaf
- D. Peepal leaf

Q.42) What is inscribed on the reverse of the Bharat Ratna medallion?

- A. State Emblem of India and the motto “Satyameva Jayate”
- B. An image of the Sun and the words “Bharat Ratna”
- C. The recipient’s name
- D. The year of award

Q.43) What is the color of the ribbon of the Bharat Ratna?

- A. Red
- B. Blue
- C. Green
- D. White

Q.44) Who is the first female elephant mahout in India who was awarded the Padma Shri in 2024?

- A. Chami Murmu
- B. Parbati Baruah
- C. Sangthankima
- D. Jageshwar Yadav

Q.45) Who was the first recipient of the Bharat Ratna award?

- A) Jawaharlal Nehru
- B) C. Rajagopalachari
- C) S. Radhakrishnan
- D) Bhagwan Das

Q.46) Who is the only Prime Minister of Pakistan to have received the Bharat Ratna?

- A) Liaquat Ali Khan
- B) Benazir Bhutto
- C) Zulfikar Ali Bhutto
- D) Khan Abdul Ghaffar Khan

### Atmospheric River

"With these atmospheric rivers occurring in succession, it doesn't leave a lot of recovery time in between these precipitation events. So it can turn what would have been a beneficial storm into a more hazardous situation," she says. It's not yet clear if or how climate change is affecting those groups of storms—"families," as one study calls them. It's also too early to say exactly how much more likely or intense climate change made the current storms on the West Coast. But "in general, we can expect them to all be intensified to some degree" by human-driven climate change, Michaelis says. Scientists also don't yet know if climate change is affecting how often atmospheric rivers form, or where they go. And climate change doesn't mean that "every single atmospheric river storm that we are going to experience in the next couple of years will be bigger than every other storm" in history, says Samantha Stevenson, an atmospheric and climate scientist at the University of California, Santa Barbara. But West Coast communities do need to "be prepared in general for dealing with these extremes now," says Stevenson. "Because we know that they're a feature of the climate and their impacts are only going to get worse."

<https://www.npr.org/2024/02/06/1229226051/how-are-atmospheric-rivers-affected-by-climate-change>

Q.47) What factor supercharged the Atmospheric River storms in 2024?

- A. La Niña
- B. El Niño
- C. Global Warming
- D. Polar Vortex

Q.48) What was the impact of the Atmospheric River on the Sierra Nevada mountains in February 2024?

- A. Drought
- B. Wildfires
- C. Snowfall
- D. Earthquakes

Q.49) What is the average amount of water vapor transported by an atmospheric river compared to?

- A. Amazon River
- B. Nile River
- C. Mississippi River
- D. Yangtze River

Q.50) What is a well-known example of a strong atmospheric river?

- A. Amazon Express
- B. Nile Express
- C. Mississippi Express
- D. Pineapple Express

Q.51) What is the main goal of the National Oceanic and Atmospheric Administration (NOAA) for the fiscal year 2024?

- A. Building a climate-ready nation
- B. Expanding global reach
- C. Increasing staff size
- D. Launching new satellites

Q.52) Which category of atmospheric river is primarily hazardous but also has some beneficial aspects?

- A) Category 1
- B) Category 2
- C) Category 4
- D) Category 6

Q.53) What type of air mass is characterized by warm temperatures and high humidity?

- A) Continental Polar (cP)

- B) Maritime Tropical (mT)
- C) Continental Tropical (cT)
- D) Maritime Polar (mP)

### CMS COP14

The IMFSS concerns 9 threatened species of the Sahelo-Saharan megafauna, of which 6 species exist in Morocco: addax, scimitar-horned oryx, Barbary mouflon, Cuvier's gazelle, dama gazelle and dorcas gazelle, and aims to encourage the States of the Sahelo-Saharan region to develop and implement action plans for the conservation of these species. ANEF stressed that its commitment to the conservation of endemic Sahelo-Saharan megafauna has been comforted by the implementation of a set of concrete measures, within the framework of the "2020-2030 Morocco's Forests" Strategy, launched by HM King Mohammed VI on February 13, 2020, aimed at the conservation and rehabilitation of these species and their habitats. Morocco, "leader in the region" in conservation programs for Sahelo-Saharan megafauna, has "the largest numbers in semi-captivity and in the wild of the dama gazelle, the cuvier gazelle, the Barbary mouflon and the addax," ANEF pointed out. The IMFSS therefore offers "a collaborative framework where Morocco will play a leadership role in the region to strengthen the conservation of these migratory species and improve their conservation", the same source added. Morocco-sponsored Sahelo-Saharan Megafauna Initiative (IMFSS) was adopted during the 14th session of the Conference of the Parties (COP14) of the Convention on Migratory Species (CMS), held on February 12-17 in Samarkand, Uzbekistan.

<https://www.fananeews.com/language/en/cms-cop14-adopts-morocco-sponsored-sahelo-saharan-megafauna-initiative/>

Q.54) What is the slogan of CMS COP 14 2024?

- A. "Nature Knows No Borders"
- B. "Conservation Without Borders"
- C. "Unity in Diversity"
- D. "One World, One Nature"

Q.55) What significant global biodiversity event occurred before CMS COP 14?

- A. The Paris Agreement
- B. The Kunming-Montreal Global Biodiversity Framework
- C. The Aichi Biodiversity Targets
- D. The Rio Earth Summit

Q.56) What significant report was launched at CMS COP 14 2024?

- A. The Dynamics of Earth's Nomadic Creatures
- B. The State of the World's Migratory Species
- C. Wings Across Continents: The Saga of Aerial Migrants
- D. Nomads of the Wild: The Untold Stories of Migratory Species

Q.57) Which of these initiatives was launched by UN Climate Change and partners at the Bonn Climate Change Conference 2023 to promote nature-based solutions for climate action?

- A) Global Peatlands Initiative
- B) Global Mangrove Alliance
- C) Global Coalition for Biodiversity
- D) Global Goal for Nature

Q.58) Which of the following is an incorrect match?

- A) COP19 - Poland
- B) COP 21 - France
- C) COP 24 - Poland
- D) COP 26 - Qatar.

Q.59) How many biodiversity hotspots are found in India?

- A. Two
- B. Six
- C. Four
- D. Eight

Q.60) Which of the following statements accurately describes the IUCN Red List and its use?

- A) The IUCN Red List stands as an authoritative archive, systematically documenting the taxonomic designations and the degree of endangerment for a myriad of species.

- B) By emphasizing downlisting, the IUCN Red List underscores the dynamic nature of species preservation, where concerted efforts can lead to positive transformations in their conservation status.
- C) The IUCN Red List excels in cataloging species and their population dynamics, providing a foundation for further analysis and the formulation of conservation measures, which are typically beyond its scope.
- D) The IUCN Red List is an essential tool for informing conservation decisions, policy changes, and is used by a variety of stakeholders.

### *Answers and Explanations*

Q.1) Answer - D

[ Explanation: World Leprosy Day (WLD) is celebrated on the last Sunday of January. The theme for World Leprosy Day 2024 is “Beat Leprosy”. This theme encapsulates the dual objectives of the day: to eradicate the stigma associated with leprosy and to promote the dignity of people affected by the disease. ]

Q.2) Answer - B

[ Explanation: In 2023, Chhattisgarh had a prevalence rate of 2.3 per 10,000 population for leprosy. Leprosy is endemic in several regions of the world. ]

Q.3) Answer - B

[ Explanation: Option B is incorrect because NTDs predominantly affect low-income, marginalized communities in developing regions, not high-income countries and wealthy populations. This demographic disparity contributes to the lower levels of research and treatment funding for NTDs. ]

Q.4) Answer: B

[ Explanation: The National Strategic Plan (NSP) & Roadmap for Leprosy (2023-27) sets a bold target to achieve zero transmission of leprosy by 2027. This ambitious goal is aimed at eliminating the disease as a public health problem three

years before the Sustainable Development Goal (SDG) 3.3, which aims to end the epidemics of various diseases by 2030. The NSP's specific targeting of 2027 demonstrates India's commitment to tackling leprosy aggressively and ahead of the global schedule. ]

Q.5) Answer: C

[ Explanation: SDG 3.3 is specifically focused on ending the epidemics of AIDS, tuberculosis, malaria, neglected tropical diseases, and combatting hepatitis, water-borne diseases, and other communicable diseases by the year 2030. This goal is part of the broader Sustainable Development Goals aimed at improving global health and wellbeing. By targeting the eradication of these major epidemics, SDG 3.3 addresses critical health challenges that affect millions of people worldwide, particularly in developing countries. ]

Q.6) Answer: B

[ Explanation: Brainware integrates brain organoids with microelectrodes, which enables the formation of an organoid neural network that directly incorporates living brain tissue into the computing process. ]

Q.7) Answer: B

[ Explanation: The “brain organoid” in Brainware is grown in a Petri dish using

human stem cells. While the exact type of stem cells is not specified, embryonic stem cells are often used for such purposes due to their ability to differentiate into any cell type. ]

Q.8) Answer: C

[ Explanation: It enables ANNs to identify trends from vast datasets for predictive analytics. The recent emergence of Big Data has significantly improved the utility of ANNs, especially in marketing. By analyzing extensive datasets, ANNs can predict consumer behavior, forecast sales, and optimize marketing campaigns based on trends identified from previous data. ]

Q.9) Answer - B

[ Explanation: The hallmark of Parkinson's disease is the accumulation of alpha-synuclein protein in Lewy bodies within neurons. This accumulation disrupts normal brain function, leading to motor symptoms such as tremors, stiffness, and balance problems. ]

Q.10) Answer - B

[ Explanation: Gradient Descent is a first-order iterative optimization algorithm used to minimize the cost function in a neural network. It adjusts the weights of neurons by calculating the gradient of the cost function, making it fundamental for the backpropagation algorithm. ]

Q.11) Answer - C

[ Explanation: Artists made history and made memorable moments at the 2024 GRAMMYS: women won several of the major GRAMMY categories and general dominated the night; several artists won their first-ever GRAMMY, including Miley Cyrus; and Taylor Swift became the artist with the most GRAMMY wins for Album Of The Year. ]

Q.12) Answer - D

[ Explanation: Victoria Monét won best new artist during the Sunday (Feb. 4) Grammy Awards, which were held in Los Angeles, besting fellow nominees including Noah Kahan, Ice Spice and Jelly Roll. ]

Q.13) Answer - D

[ Explanation: Metallica won Best Metal Performance at the 2024 Grammy Awards on Sunday (February 4th) for their song "72 Seasons," the title track to their 2023 album. The trophy was handed out during the streaming "Premiere Ceremony," with bassist Robert Trujillo accepting on the band's behalf. ]

Q.14) Answer - C

[ Explanation: The GRAMMY Hall of Fame Award is bestowed by a vote of special committee members comprised of music industry professionals and historians. This committee selects works of significant cultural impact, ensuring the award recognizes songs and albums that have stood the test of time. ]

Q.15) Answer: C

[ Explanation: Zakir Hussain won a Grammy for Best Contemporary Instrumental Album for "As We Speak." This award highlights albums that are primarily instrumental and span various music genres, making "As We Speak" the correct choice among the options. "The Journey," "This Moment," and "Global Harmony" do not specifically match the award Hussain received. ]

Q.16) Answer: C

[ Explanation: According to a study published last year in The Lancet Global Health, India accounted for 23 per cent of deaths that occurred due to cervical cancer

globally, equivalent to one in four cervical cancer cases being reported in the country. In India, cervical cancer's five-year survival rate was 51.7 per cent. ]

Q.17) Answer: C

[ Explanation: Cervical cancer was the eighth most commonly occurring cancer globally and the ninth leading cause of cancer death, accounting for 661 044 new cases and 348 186 deaths. It is the most common cancer in women in 25 countries, many of which are in sub-Saharan Africa. ]

Q.18) Answer - C

[ Explanation: The theme for World Cancer Day 2024 is "Close the Care Gap". This theme emphasizes the inequities in access to quality cancer care across different populations and regions. ]

Q.19) Answer: D

[ Explanation: The International Agency for Research on Cancer (IARC) was indeed created in 1965 by a resolution of the World Health Assembly. It is the specialized cancer agency of the World Health Organization, and its objective is to promote international collaboration in cancer research. However, the IARC does not comprise 50 member countries. It actually comprises 27 member countries. ]

Q.20) Answer: C

[ Explanation: HPV is a group of more than 200 related viruses, with at least 14 types known to cause cancer (high-risk HPV types). HPV is the most common viral infection of the reproductive tract and the primary cause of cervical cancer. Nearly all cases of cervical cancer can be attributed to HPV infection, particularly types 16 and 18, which are responsible for approximately 70% of cases worldwide. ]

Q.21) Answer - C

[ Explanation: Here is the list of countries that officially support UPI payment: Sri Lanka, Mauritius, France, UAE, Singapore, Bhutan and Nepal. Bhutan was one of the first countries to adopt UPI payments outside India back in 2021 in collaboration with the Royal Monetary Authority (RMA) of Bhutan. Besides, Bhutan is also one of the first countries to adopt and issue RuPay bank cards. ]

Q.22) Answer: C

[ Explanation: As these are international transactions, and you will be paying using Indian rupees, there could be a small fee that your bank might charge you to process the transaction. ]

Q.23) Answer: B

[ Explanation: PhonePe had the highest share of UPI transactions as of 2023, with 46.4% of all UPI transactions coming from PhonePe. PhonePe surpassed Google Pay in 2022 and became the most popular UPI payment app in India. ]

Q.24) Answer - A

[ Explanation: NPCI has introduced UPI AutoPay feature for recurring payments up to ₹5,000, enhancing customer convenience and merchant retention. UPI AutoPay allows users to set up recurring payments for various purposes, such as subscriptions, bill payments, donations, etc. Users can create, approve, modify, pause, or revoke the e-mandate for the recurring payments through UPI apps. ]

Q.25) Answer - C

[ Explanation: Last week, Hitachi Payment Services launched the country's first UPI-based ATM at the Global Fintech Fest in Mumbai. These white-label UPI-ATMs,

launched in partnership with the National Payments Corporation of India, allow customers to withdraw cash without a debit or credit card. ]

Q.26) Answer - B

[ Explanation: Further the report found that massive industrial expansion means that diesel/gasoil is the single largest source of oil demand growth, accounting for almost half of the rise in the nation's demand and more than one-sixth of total global oil demand growth through to 2030. ]

Q.27) Answer: C

[ Explanation: According to the IEA report, India will in seven years become the largest source of global oil demand growth as its domestic production shrinks 22 per cent. ]

Q.28) Answer: C

[ Explanation: The Organization of the Petroleum Exporting Countries (OPEC), the global oil cartel that supplies 51% of the world's oil and controls 81% of proven oil reserves, forecast in its annual report released last month that it expects oil demand to increase by 17% by 2045. ]

Q.29) Answer - C

[ Explanation: The US heads into 2024 producing more oil than any country in history, leading strong non-OPEC+ supply growth that exceeds the rising global demand, according to the latest oil markets outlook by S&P Global Commodity Insights. ]

Q.30) Answer: A

[ Explanation: The IEA was established in 1974 in Paris, France, by OECD members in response to the 1973 Arab oil embargo. It was created to ensure the security of oil supplies and to help its members respond

to major oil supply disruptions. The IEA initially emphasized long-term supply, information transparency, supply security, international energy relations, and research and development. ]

Q.31) Answer - D

[ Explanation: The major players in the Indian electric vehicle market are listed below. In 2023, the domestic EV market was dominated by Tata Motors (72 percent), followed by MG Motors (10.8 percent) and Mahindra (9 percent), with the top selling models being Tiago, Nexon and Tigor from Tata Motors, the MG ZS, and Mahindra XUV400. ]

Q.32) Answer - C

[ Explanation: The Indian government started the FAME India project on April 1, 2015, to reduce the use of gasoline and diesel vehicles. This project was a critical component of India's electric mobility. The FAME India Program intends to encourage using all types of automobiles. ]

Q.33) Answer - C

[ Explanation: Bengaluru's National Aerospace Laboratories (NAL) has completed the first successful test of a solar-powered "pseudo satellite," marking a significant advancement in India's surveillance capabilities along its borders. ]

Q.34) Answer - C

[ Explanation: Scientists at the CSIR-National Aerospace Laboratories (NAL) have successfully tested an unmanned aerial vehicle, called High Altitude Pseudo Satellite (HAPS) at Challakere, Karnataka, earlier this month. ]

Q.35) Answer - B

[ Explanation: NAL aims to further develop HAPS technology with the goal of achieving a deployment target by 2027. HAPS technology is considered crucial for enhancing surveillance and monitoring capabilities in border areas, especially following events like the Doklam standoff in 2017. ]

Q.36) Answer: C

[ Explanation: Option C accurately describes the deployment mechanism of an ALUAV. They are designed to be launched from an aircraft, allowing them to quickly reach strategic locations for reconnaissance, surveillance, and intelligence gathering. This deployment method leverages the mobility and range of the host aircraft, enhancing the operational capabilities and flexibility of the military forces. ]

Q.37) Answer - B

[ Explanation: HAPS operates in the stratosphere (which extends from 6-50 km above the earth's surface), flying at altitudes of 18-20 km, nearly double the heights of commercial aeroplanes. This altitude allows them to provide surveillance capabilities akin to satellites. ]

Q.38) Answer - B

[ Explanation: National Aerospace Laboratories (NAL), a constituent of the Council of Scientific and Industrial Research (CSIR), India, established in the year 1959 is the only government aerospace R&D laboratory in the country's civilian sector. ]

Q.39) Answer - A

[ Explanation: The Tapas Medium Altitude Long Endurance (MALE) UAV developed for Intelligence, Surveillance, Target Acquisition, and Reconnaissance (ISTAR)

applications is in an advanced stage of developmental trials. ]

Q.40) Answer: C

[ Explanation: The Bharat Ratna, India's highest civilian award, was conferred on former Prime Ministers PV Narasimha Rao and Chaudhary Charan Singh, as well as agricultural scientist MS Swaminathan in 2024. This prestigious award recognizes their many contributions to the country. ]

Q.41) Answer - D

[ Explanation: The current medal is in the shape of a peepal leaf, approximately 25/16 inches (59 mm) long, 17/8 inches (48 mm) wide and 1/8 inch (3.2 mm) thick and rimmed in platinum. ]

Q.42) Answer - A

[ Explanation: The words "Bharat Ratna" on the obverse side remained the same as the 1954 design as did the emblem of India and "Satyameva Jayate" on the reverse side. ]

Q.43) Answer - D

[ Explanation: A 2-inch-wide (51 mm) white ribbon is attached to the medal so it can be worn around the neck. ]

Q.44) Answer - B

[ Explanation: Parbati Baruah is India's first female mahout and has been recognized for her commitment towards mitigating human-elephant conflict with the help of scientific practices. ]

Q.45) Answer: B

[ Explanation: C. Rajagopalachari, along with S. Radhakrishnan and C.V. Raman, were the first recipients of the Bharat Ratna in 1954. Rajagopalachari was recognized for his contributions to Indian independence,

his tenure as the last Governor-General of India, and his profound influence on Indian politics and education. ]

Q.46) Answer: D

[ Explanation: Khan Abdul Ghaffar Khan, also known as Frontier Gandhi, was not a Prime Minister of Pakistan but is the only Pakistani citizen to have been awarded the Bharat Ratna, in 1987. This question is a trick question as it plays on the common misconception regarding his political role. Ghaffar Khan was a prominent freedom fighter and a close associate of Mahatma Gandhi, recognized for his non-violent opposition to British rule in India. ]

Q.47) Answer: B

[ Explanation: The El Niño effect in 2024 altered the atmospheric circulation patterns over the Pacific Ocean, leading to changes in the position and intensity of the jet stream, which supercharged the Atmospheric River storms. ]

Q.48) Answer - C

[ Explanation: Year-to-date percent of normal snowfall increased by 10-20% across the Sierra Nevada mountains. ]

Q.49) Answer: C

[ Explanation: The average atmospheric river carries an amount of water vapor roughly equivalent to the average flow of water at the mouth of the Mississippi River. ]

Q.50) Answer: D

[ Explanation: The “Pineapple Express” is a well-known example of a strong atmospheric river that is capable of bringing moisture from the tropics near Hawaii over to the U.S. West Coast. ]

Q.51) Answer: A

[ Explanation: The fiscal year 2024 budget demonstrates strong support for NOAA’s goal of building a climate-ready nation where communities, individuals, and industries have the authoritative and actionable information they need to address climate impacts. ]

Q.52) Answer: C

[ Explanation: Category 4 atmospheric rivers are described as mostly hazardous due to their potential to cause significant flooding and damage. However, they also carry some beneficial aspects, such as contributing to reservoir replenishment. This category is distinguished from the others by its balance leaning more towards hazardous impacts, despite also offering benefits. ]

Q.53) Answer: B

[ Explanation: Maritime Tropical (mT) air masses form over warm and moist oceanic regions, making them warm and highly humid. This differentiates them from the other types of air masses, which have distinct temperature and humidity characteristics based on their source regions. ]

Q.54) Answer: A

[ Explanation: The slogan for CMS COP 14 2024 is “Nature Knows No Borders”. This slogan signifies that the journeys of migratory species do not adhere to political boundaries, and their survival is dependent on international collaboration and transboundary conservation efforts. ]

Q.55) Answer - B

[ Explanation: The Kunming-Montreal Global Biodiversity Framework was adopted in 2022, making it the most significant global biodiversity event prior to CMS COP 14. ]

Q.56) Answer - B

[ Explanation: The triennial international meeting will highlight the issues of habitat conservation and restoration as well as threats to species such as overexploitation, habitat loss and fragmentation, pollution and climate change. It will also provide a unique opportunity for the launch of major new reports and guidelines, including the first-ever report on the 'State of the World's Migratory Species', new global guidelines on light pollution, and best practices for linear infrastructure to minimize impacts on migratory species. ]

Q.57) Answer: D

[ Explanation: The Global Goal for Nature is a new initiative launched by UN Climate Change, WWF, UNEP and other partners at the Bonn Climate Change Conference 2023. It aims to mobilize support for a global target of protecting and restoring at least 30% of the world's land and ocean by 2030 as part of the post-2020 global biodiversity framework. ]

Q.58) Answer: D

[ Explanation: COP26 took place in Glasgow,UK. There main agenda were -

- India announced Net Zero targets 2070
- India called a phase down of coal based power
- Glasgow Breakthrough Agenda ]

Q.59) Answer - C

[ Explanation: India is a host to 4 biodiversity hotspots- the Western Ghats, the Himalayas, the Indo-Burma region, and the Sundaland region. Biodiversity hotspots are those regions of the world that are rich in species which are endemic to that region

only. Currently, there are 36 biodiversity hotspots in the world. ]

Q.60) Answer - D

[ Explanation: The IUCN Red List is an essential tool for informing conservation decisions, policy changes, and is used by a variety of stakeholders. The information provided in the report highlights that the IUCN Red List is more than just a list of species and their status. It is a crucial resource for informing and catalyzing action for biodiversity conservation. It provides detailed information about species, including range, population size, habitat, threats, and conservation actions, making it indispensable for conservation efforts. ]