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MONTHLY CURRENT AFFAIRS

FOR UPSC CIVIL SERVICE EXAMINATION

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DIGITAL AGRICULTURE MISSION SCHEME

The Union Cabinet Committee has recently given the green light to the Digital Agriculture Mission, with a total budget of ₹2,817 crore. Of this amount, ₹1,940 crore will be provided by the central government.

About-

Agri-Tech Start-Up Support:

- The Digital Agriculture Mission is designed to support agri-tech start-ups by using modern technologies such as cloud computing, earth observation, remote sensing, data analytics, and AI/ML.
- These technologies aim to boost precision, efficiency, and sustainability in agriculture.

Umbrella Scheme for Digital Agriculture:

- The initiative includes the development of Digital Public Infrastructure (DPI) and the implementation of the Digital General Crop Estimation Survey (DGCES), along with other IT-driven programs.
- It involves coordination between the Central Government, State Governments, and research institutions to digitally empower the agricultural sector.

Transforming Agriculture with Digital Solutions:

- The mission's core objective is to revolutionize India's agricultural landscape through digital tools, making farming smarter, more efficient, and data-driven.
- This digital transformation is aimed at fostering long-term growth in the sector.

Building Digital Public Infrastructure (DPI):

- A key part of the mission is the creation of Digital Public Infrastructure, which will contain verified data on farmers, including demographic details, land holdings, and crop information.
- This secure database will allow easy access to reliable information about both cultivators and tenant farmers.

Digital Farmer Identity - 'Kisan ki Pehchaan':

- One of the mission's highlights is to assign each farmer a unique digital identity, similar to Aadhaar.
- This digital identity, called 'Kisan ki Pehchaan' (Farmer ID), will connect farmers to various government databases, ensuring easier access to government schemes and benefits.

Farmer-Centric, Innovative Services:

- The mission will introduce advanced digital tools and services focused on farmers' needs, from crop estimation to financial support systems.
- These innovations will help improve the overall agricultural ecosystem, providing farmers with better resources and support.

Three Pillars of the Digital Agriculture Mission:

1. AgriStack Overview:

- AgriStack is a farmer-focused Digital Public Infrastructure (DPI) built on three key registries:
 - Farmers' Registry
 - Geo-referenced Village Maps
 - Crop Sown Registry
- These registries, managed by state and union territory governments, aim to provide localized data to improve decision-making and resource distribution.

2. Farmers' Registry:

- Every farmer will receive a unique digital identity, or Farmer ID, similar to Aadhaar.
- The Farmer ID will link to various data points, including:
 - Land records
 - Livestock ownership
 - Crops sown
 - Demographic and family information
 - Government schemes and benefits received
- Pilot projects for Farmer IDs have already been tested in six districts: Farrukhabad (Uttar Pradesh), Gandhinagar (Gujarat), Beed (Maharashtra), Yamuna Nagar (Haryana), Fatehgarh Sahib (Punjab), and Virudhunagar (Tamil Nadu).

3. Crop Sown Registry:

- This registry will monitor the crops planted by farmers in each season using mobile-based Digital Crop Surveys.
- It will provide valuable data on crop patterns, aiding in resource planning and agricultural monitoring.

Geo-referenced Village Maps:

These maps will connect land records with their exact physical locations, making land management more precise and helping identify the exact boundaries of agricultural fields.

Krishi Decision Support System (Krishi DSS):

- Krishi DSS is a geospatial system integrating remote sensing data on crops, soil, weather, and water resources.
- It will support:
 - Crop map generation to track planting patterns
 - Drought and flood monitoring
 - Model-based yield assessments for crop insurance, ensuring farmers receive timely compensation for crop loss.

Soil Profile Maps:

- The mission will create detailed Soil Profile Maps at a 1:10,000 scale, covering about 142 million hectares of agricultural land.
- These maps will provide insights into soil types and conditions across India. Currently, 29 million hectares have been surveyed.

Key Benefits of the Digital Agriculture Mission:

- **Data-Driven Farming:** The mission uses data analysis to help farmers make smarter decisions about crop choices, pest control, irrigation, and fertilization, leading to better productivity.
- **Precision Agriculture:** By utilizing AI, machine learning, and satellite imagery, farmers can monitor crops in real-time and apply resources exactly where needed, reducing waste and boosting yields.
- **Empowering Farmers:** Farmers gain access to real-time weather updates, market prices, and expert advice through digital platforms, reducing reliance on middlemen and improving decision-making.
- **Lower Input Costs:** Technology helps farmers optimize their use of water, seeds, fertilizers, and pesticides, cutting costs and promoting sustainability through tools like drones and sensors.
- **Climate-Resilient Farming:** AI and big data enable farmers to better adapt to climate change, offering accurate weather predictions and advice to mitigate the effects of adverse conditions.
- **New Employment Opportunities:** The mission fosters digital skills in rural areas, creating jobs in agri-tech, data analysis, and drone operation, boosting rural employment.

Conclusion:

The Digital Agriculture Mission is transforming Indian agriculture by introducing advanced technologies that improve productivity, sustainability, and empower farmers. It aims to make agriculture more competitive, resilient, and future-ready.

FUTURE OF SEMICONDUCTOR IN INDIA

The government has recently approved Kaynes Semicon Pvt Ltd's proposal to establish a semiconductor manufacturing unit in Sanand, Gujarat.



Key Insights on Government Approval for Semiconductor Plants:

- **Approval of Semiconductor Plants:** The Indian government has approved four semiconductor plants under the India Semiconductor Mission (ISM), including units in Sanand, Dholera (Gujarat), and Morigaon (Assam).
- **Background:** The Programme for Development of Semiconductors and Display Manufacturing Ecosystem in India was launched in December 2021 with a total budget of ₹76,000 crore to boost India's semiconductor production capabilities.

- **India Semiconductor Mission (ISM):**
 - Launched by the Ministry of Electronics and IT (MeitY) in 2021, ISM focuses on creating a sustainable ecosystem for semiconductor and display manufacturing in India.
 - **Key Components:**
 - **Display Fabs Scheme:** Supports the setup of display manufacturing units.
 - **Compound Semiconductors/ATMP Scheme:** Promotes the establishment of advanced semiconductor facilities, including Assembly, Testing, Marking, and Packaging (ATMP) units.
 - **Design Linked Incentive (DLI) Scheme:** Provides financial support and design infrastructure for developing semiconductor designs for ICs, chipsets, and other electronic components.
- **Nodal Role of ISM:** ISM acts as the nodal agency responsible for managing the schemes and assessing applications for semiconductor projects, while also working with stakeholders to attract investment in India.

Significance of Semiconductors:

- Semiconductors are essential for producing electronic devices like transistors, diodes, and integrated circuits due to their compactness, power efficiency, and low cost.
- Currently, around 70% of global semiconductor production is concentrated in countries like South Korea, Taiwan, China, the U.S., and Japan.

This initiative will help India establish itself as a key player in the global semiconductor industry, reducing dependence on foreign imports and strengthening the country's tech manufacturing capabilities.

Aparajita Bill - Changes in Rape Laws

The West Bengal Assembly has recently passed the Aparajita Woman and Child (West Bengal Criminal Laws Amendment) Bill, 2024, also known as the Aparajita Bill. This legislation aims to strengthen the protection of women and children by amending existing criminal laws in the state.

Overview of State Bills and Laws on Rape:

In response to the protests following the rape and murder of a young doctor in Kolkata, the West Bengal Assembly passed the Aparajita Bill (2024), introducing the death penalty for rape.

Key Amendments:

- The Bill amends provisions of:
 - Bharatiya Nyaya Sanhita, 2023 (BNS)
 - Bharatiya Nyaya Suraksha Sanhita, 2023 (BNSS)
 - Protection of Children Against Sexual Offences Act, 2012 (POCSO)

Similar Laws in Other States:

- Andhra Pradesh and Maharashtra Assemblies have also passed laws mandating the death penalty for rape.

Madhya Pradesh (2017) and Arunachal Pradesh (2018) introduced similar penalties earlier.

Can States Amend National Laws?

- Article 254(2) of the Constitution allows state legislatures to pass laws that contradict central laws on matters in the Concurrent List, but only with presidential assent.
- Presidential Approval: The President decides based on the advice of the central government, but is not obligated to approve. There is also no constitutional time limit for this process.

Major Challenges Regarding State Laws on Rape:

1. Legal Discrepancies Across States: Varying punishments across states may lead to unequal justice and inconsistency in the legal system.
2. Death Penalty Debate: The introduction of capital punishment raises human rights concerns, with international bodies like the UN advocating its abolition. This could bring international scrutiny.
3. Fragmented Criminal Justice: Differences in state laws could further divide the national criminal justice system.
4. Judicial Overload: Stricter timelines and penalties could overwhelm the judiciary and law enforcement, leading to delays despite expedited provisions.

Way Forward:

1. Uniform Implementation: States must secure presidential assent under Article 254(2) for these laws to be uniformly implemented.
2. Balancing Punishment with Rehabilitation: While harsher penalties serve as deterrents, focus on life imprisonment and rehabilitation programs for reformable convicts should also be a priority.
3. Strengthening Judicial and Investigative Infrastructure: Adequate infrastructure, recruitment of judges, and specialized courts are essential for faster trials.
4. Comprehensive Victim Support: Legal, financial, and psychological support for survivors, along with strict privacy protections, must be enforced.
5. Public Awareness Campaigns: Gender sensitivity and legal awareness programs are needed to change societal attitudes and promote respect for women's rights.
6. Gender-Sensitive Police Training: Specialized training for law enforcement to handle sexual assault cases with a victim-centered approach is crucial.
7. Collaboration Between States and Center: States must work with the central government to align laws and ensure a united front in tackling gender-based violence.

Conclusion: A holistic approach—combining stricter laws with better infrastructure, public awareness, and rehabilitation—will not only strengthen legal measures but also work toward preventing sexual violence and delivering timely justice.

Poshan Tracker Initiative

The Ministry of Women and Child Development won the National Award for e-Governance 2024 (Gold) for its Poshan Tracker initiative under Poshan 2.0.

About the Poshan Tracker Initiative:

- It is a modern ICT tool used to monitor and assess the nutritional status of children and identify any deviations from healthy growth patterns.
- The system uses real-time data to track growth for children aged 0-6, based on WHO growth charts, comparing height, weight, age, and sex standards.
- It empowers Anganwadi Workers (AWWs) to detect early signs of malnutrition and ensure timely interventions.

About Poshan 2.0:

- Poshan 2.0 builds on the National Nutrition Mission launched in 2018, aimed at combating malnutrition, stunting, and anemia in children and lactating women.

Konyak Tribe

The Konyak Union, the apex body of the Konyak tribe, has requested the Nagaland government to correct the disputed boundary between Mon district in Nagaland and Charaideo district in Assam as shown on Google Maps.

About the Konyak Tribe:

- Location: Primarily in Mon district, Nagaland, with smaller populations in Arunachal Pradesh, Assam, and Myanmar.

Known For:

- Tattoos: Famous for facial and hand tattoos, historically earned through headhunting.
- Head-hunting: Once known as fierce warriors, taking heads as trophies.

Name Origin: "Konyak" comes from "Whao" (head) and "Nyak" (black), meaning "men with black hair."

Ethnic Background: The Konyaks are of Mongoloid descent.

- Divided into Thendu (Tattooed Face) and Thentho (White Face) groups.

Cultural Traits:

- Patriarchal Society: Eldest sons inherit property, and men make key decisions.
- Skilled in gunsmithing, iron smelting, brass-working, and woodworking.
- Morung: Traditional learning institutions and a rich dance tradition.

Language: The Konyak language belongs to the Northern Naga sub-branch of the Sino-Tibetan family.

Religion: Originally animists, around 95% are now Christians.

Leadership: Chiefs are called Anghs or Wangs.



Port Blair Renamed as Sri Vijaya Puram

The government has announced the decision to rename Port Blair, the capital of the Andaman and Nicobar Islands, to "Sri Vijaya Puram." This move is part of efforts to reflect the region's cultural heritage and historical significance.

Reasons for Renaming Port Blair to Sri Vijaya Puram-

1. Colonial Legacy:

- **Historical Name:** Port Blair was named after British naval officer Archibald Blair, reflecting its colonial history. Renaming it aims to remove colonial imprints from the nation's identity.

2. Symbolism of Victory:

- **Freedom Struggle:** The new name, Sri Vijaya Puram, symbolizes the triumph of India's freedom movement and acknowledges the Andaman and Nicobar Islands' significant role in this struggle.

3. Acknowledging Historical Significance:

- **Freedom Fighters' Imprisonment:** The renaming honors the islands as a site where many freedom fighters, including Veer Savarkar, were imprisoned in the notorious Cellular Jail, known as Kaala Paani.

4. Historical Connection to the Imperial Cholas:

- **Chola Naval Strategy:** The Andaman Islands served as a strategic naval base for Rajendra Chola I in the 11th century, aiding in his expansionist campaigns.
- **Invasion of Srivijaya:** The Cholas launched a successful attack on the Srivijaya Empire (present-day Indonesia) from these islands, marking a significant moment in Indian naval history.

5. Chola Naval Dominance:

- **Impact on Southeast Asia:** This campaign established the Cholas' naval superiority in Southeast Asia, culminating in the capture of King Sangrama Vijayottunggavarman and the acquisition of treasures, including the Vidhyadara Torana.

The renaming reflects a desire to honor historical narratives and cultural significance while fostering national pride.

Approval of Pradhan Mantri Janjatiya Unnat Gram Abhiyan

The Union Cabinet has approved the Pradhan Mantri Janjatiya Unnat Gram Abhiyan with a total outlay of Rs. 79,156 crore. This initiative aims to improve the socio-economic conditions of tribal communities across India.

Key Details:

- **Total Outlay:** Rs. 79,156 crore
 - **Central Share:** Rs. 56,333 crore
 - **State Share:** Rs. 22,823 crore



Objectives:

- Aim: To enhance the socio-economic status of tribal communities by achieving saturation coverage for tribal families in tribal-majority villages and aspirational districts.

Coverage:

- Geographical Reach: The program will cover 549 districts and 2,740 blocks across all tribal-majority villages in 30 States and Union Territories.

Implementation:

- Interventions: The initiative comprises 25 interventions to be executed by 17 line ministries using funds allocated under the Development Action Plan for Scheduled Tribes (DAPST) over the next five years.

Mission Goals:

1. Goal 1: Developing Enabling Infrastructure
 - Establishing Pucca houses for households and improving village infrastructure.
2. Goal 2: Promotion of Economic Empowerment
 - Fostering skill development, promoting entrepreneurship, and enhancing livelihood opportunities through self-employment.
3. Goal 3: Universalization of Access to Good Education
 - Ensuring all tribal children have access to quality education.
4. Goal 4: Healthy Lives and Dignified Ageing
 - Focusing on health initiatives to promote well-being and support the elderly in tribal communities.

This initiative is a significant step toward enhancing the living standards of tribal populations, addressing various aspects of development, and promoting inclusivity in India's growth narrative.

OPERATION SADBHAV

India has initiated Operation Sadbhav to deliver humanitarian aid and disaster relief (HADR) to **Laos, Myanmar, and Vietnam**.

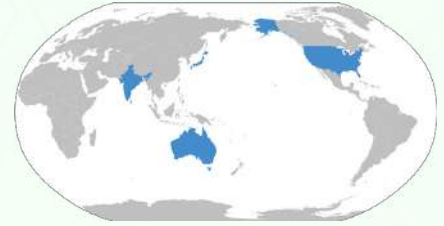
About Operation Sadbhav:

- Laos, Myanmar, and Vietnam have experienced severe flooding due to Typhoon Yagi.
- This operation aligns with India's commitment to humanitarian assistance and disaster relief (HADR) in the ASEAN region, reflecting its ongoing 'Act East Policy.'
- Typhoon Yagi, the strongest tropical cyclone in Asia for 2024, originated as a storm in the western Philippine Sea. It escalated to a Category 5 typhoon, making landfall in China's Hainan province with winds reaching 223 km/h. The cyclone has displaced millions and caused extensive destruction across Southeast Asia.



6TH Quad Leaders' Summit

Leaders of the Quad countries convened for their sixth summit at Archmere Academy, Delaware, where they announced a wide array of outcomes and initiatives. The meeting focused on enhancing collaboration and addressing regional and global challenges. The Quad, comprising India, the U.S., Australia, and Japan.



Origins and Resurgence:

- The group initially formed after the 2004 Indian Ocean tsunami to coordinate humanitarian and disaster relief efforts.
- It was formalized by former Japanese Prime Minister Shinzo Abe in 2007 but became inactive for about a decade.
- In 2017, it was revived in response to growing concerns over China's influence in the region.

Key Initiatives for 2024:

1. **Quad Cancer Moonshot:** A partnership aimed at combatting cervical cancer in the Indo-Pacific. India will supply \$7.5 million worth of HPV sampling and detection kits, alongside vaccines, with support from the Serum Institute of India and Gavi for up to 40 million HPV vaccine doses.
2. **Coast Guard Cooperation:** The inaugural "Quad-at-Sea Ship Observer Mission" set for 2025 to enhance maritime safety and interoperability among Coast Guards in the Indo-Pacific.
3. **Indo-Pacific Logistics Network:** A pilot project designed to facilitate rapid civilian disaster response across the region.
4. **Ports of the Future Partnership:** An initiative to promote sustainable and resilient port infrastructure development.
5. **Semiconductor Supply Chains Contingency Network:** A memorandum to strengthen resilience in semiconductor supply chains.
6. **UN Security Council Reform:** Acknowledgment of the need for a more representative and democratic council, with expanded membership.
7. **Digital Public Infrastructure Principles:** Guidelines aimed at enhancing digital infrastructure in the region.
8. **Maritime Initiative for Training in the Indo-Pacific (MAITRI):** To aid regional partners in monitoring and securing their waters, with India hosting the first workshop in 2025.

Strategic Significance of the Quad:

- **Act East Policy:** Enhances India's engagement with East Asia and strengthens maritime security.
- **Military Cooperation:** Provides a platform for joint exercises, intelligence sharing, and maintaining maritime law.
- **Counterbalancing China:** Essential for safeguarding maritime trade routes and ensuring freedom of navigation in international waters.
- **Support for Multipolar World:** Aligns with India's vision of a rule-based international order.

Pact for the Future - Reforms in UNSC

The United Nations General Assembly has approved the "Pact of the Future," committing to reform the United Nations Security Council (UNSC).

The 'Pact of the Future' was adopted by world leaders at the United Nations General Assembly, focusing on reforming the UN Security Council (UNSC).

Key agreements include:

- **Addressing Historical Injustices:** Prioritizing the representation of Africa and improving visibility for underrepresented regions like the Asia-Pacific, Latin America, and the Caribbean.
- **Enlarging the Security Council:** Expanding the UNSC to better reflect current UN membership and the realities of today's world.

Key Reform Issues:

1. Membership categories
2. The veto power of the five permanent members
3. Regional representation
4. The size and functioning of an enlarged Council
5. The relationship between the Security Council and the General Assembly

Need for UN Reforms:

- **Lack of Representation:** In 1945, the UNSC had 11 members out of 51 UN members (22%). Today, it has only 15 members out of 193 (less than 8%).
- **Financial Contributions:** Some non-permanent members contribute more to the UN budget than four of the five permanent members, notably Japan and Germany.
- **Inability to Fulfill Functions:** The UNSC struggles to perform its duties effectively, as demonstrated when Russia, a permanent member, vetoed resolutions regarding Ukraine.
- **Power Imbalance:** The current composition favors historical power dynamics; for instance, Europe, which has only 5% of the global population, holds 33% of the seats.
- **Need for Representation:** Countries like India, with significant populations and contributions to the UN, are overlooked in terms of representation.

Conclusion:

The UN Secretary-General has emphasized that the UNSC is becoming "outdated" and risks losing credibility without essential reforms in its structure and operations.

NIDHI COMPANIES

The Registrar of Companies (RoC) has recently penalized over two dozen Nidhi companies for violating the Companies Act. These penalties highlight ongoing efforts to enforce compliance within the corporate sector.

Nidhi Companies: Overview and Regulations

Definition:

- **Legal Framework:** Nidhi companies are defined under the Companies Act, 2013 in India.
- **Objective:** According to Section 406(1), Nidhi companies aim to promote savings and thrift among their members.
- **Membership Focus:** They operate on a mutual benefit basis, accepting deposits and providing loans exclusively to their members.

Operational Restrictions:

- **Business Limitations:** Nidhi companies cannot engage in chit funds, hire purchase, leasing, insurance, or acquire securities from any corporate body.
- **Debt Instruments:** They are prohibited from issuing preference shares, debentures, or other debt instruments.
- **Current Accounts:** Opening current accounts for members is not allowed.

Acquisition and Control:

- **Acquisition of Companies:** Nidhi companies can acquire other companies or control their Boards only with a special resolution and prior approval from the Regional Director.
- **Business Restrictions:** Their activities are limited to borrowing and lending in their own name.

Additional Restrictions:

- **Locker Facilities:** They can provide lockers, but rental income from this service must not exceed 20% of their gross income.
- **Membership Limitation:** Nidhi companies cannot accept deposits or lend to non-members.
- **Asset Management:** They cannot pledge members' assets as security or engage in activities involving corporate bodies.
- **Partnerships:** Forming partnerships for borrowing or lending is prohibited.
- **Advertising Restrictions:** They cannot solicit deposits through advertisements but may circulate fixed deposit scheme details privately among members.
- **Brokerage and Incentives:** Nidhi companies are not allowed to pay brokerage or incentives for mobilizing deposits, ensuring transparency and a focus on mutual benefit.

NPS Vatsalya

The government, along with the Pension Fund Regulatory and Development Authority (PFRDA), is set to launch NPS Vatsalya, a modified version of the National Pension System (NPS) aimed at minors. This initiative is part of a broader effort to promote early financial planning and savings for a secure financial future.

Key Features:

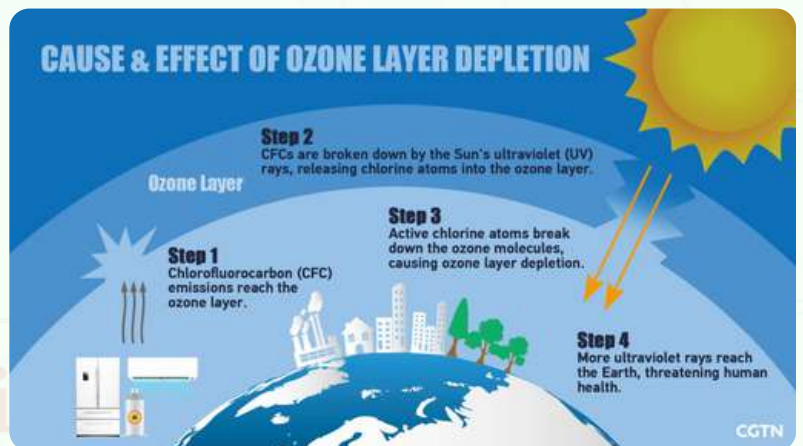
- **Purpose:** NPS Vatsalya is designed to encourage parents and guardians to start saving for their children's futures at an early age.
- **Early Start:** Parents or guardians can open an NPS account for their child or ward, contributing regularly to build a savings pool until the child turns 18.

- **Account Conversion:** Upon reaching 18, the account can be converted into a regular NPS account, giving the beneficiary the freedom to manage the account and choose their investment strategy.
- **Minimum Investment:** The scheme allows for a modest starting investment, with a minimum monthly contribution of ₹500 or an annual contribution of ₹6,000.

NPS Vatsalya aims to foster a habit of saving among young individuals, setting the stage for a financially secure future.

WORLD OZONE DAY

The Ministry of Environment, Forest, and Climate Change recently celebrated the 30th World Ozone Day in New Delhi.



About World Ozone Day:

- **Date:** Celebrated every year on 16th September, marking the signing of the Montreal Protocol in 1987.
- **Purpose:** The Montreal Protocol aims to phase out ozone-depleting substances globally.

Theme for 2024:

- **Theme:** "Montreal Protocol: Advancing Climate Actions"
 - This emphasizes the protocol's role in not only protecting the ozone layer but also advancing global climate action.

India's Leadership:

- **Global Leader:** India has been a leader in meeting Montreal Protocol targets ahead of schedule, helping protect the ozone layer and combat climate change.

Key Initiatives:

- **Mission LiFE:** Promotes an environmentally conscious lifestyle, encouraging individuals to make eco-friendly choices.
- **Ek Ped Maa Ke Naam:** A national tree-planting initiative, emphasizing the importance of trees for a sustainable future.

India's Commitment:

- **Montreal Protocol:** India has been a member since 1992 and has successfully phased out several ozone-depleting substances, including CFCs, halons, and methyl bromide.
- **Current Focus:** India is working on phasing out Hydrochlorofluorocarbons (HCFCs) as per the protocol's accelerated timeline.

Assam Cascade Frog (Amolops formosus)

Scientists from the Wildlife Institute of India recently studied the Assam Cascade Frog, also known as the hill stream frog, in the Churdhar Wildlife Sanctuary, Himachal Pradesh.



Key Details:

- **Distribution:** Found primarily in the Himalayan region of India, as well as in fast-flowing streams in northern Bangladesh, Bhutan, and Nepal.
- **Ecological Significance:**
 - Acts as an indicator species, meaning its presence helps monitor the health of hilly streams.
 - The well-being of these frogs reflects the ecological condition of their habitat, making them vital for environmental monitoring.

Unique Adaptations:

- **Aquatic Survival:** Equipped with adhesive disks on their digits, these frogs can cling to rocks in fast-flowing streams, a crucial adaptation for survival.

Diversity:

- The Amolops genus includes 72 species, thriving in high-gradient streams across southern and Southeast Asia.

Common Names:

- Known as the Assam sucker frog, Beautiful stream frog, Assam cascade frog, and Hill stream frog.

Conservation Status:

- Listed as Least Concern by the International Union for Conservation of Nature (IUCN), meaning the species is not currently at immediate risk of extinction.

Cyclones Frequency in the Arabian Sea

A rare cyclone, Asna, recently formed in the Arabian Sea, surprising meteorologists due to its unusual timing and origin.

Cyclone Asna, the first cyclonic storm in the Arabian Sea since 1976 during August.

Key Points about Cyclone Asna:

- **Naming:** Given by Pakistan, Asna formed unexpectedly over land in Rajasthan, far from typical oceanic origins.
- **Path:** It moved into the Arabian Sea, affecting the Kachchh coast and parts of Pakistan.
- **Coriolis Effect:** Cyclones rarely cross the equator due to the Coriolis effect, which is weaker near the equator, making this event rare.
- **Uncommon Timing:** The Arabian Sea generally sees fewer cyclones than the Bay of Bengal, especially during August, making Asna a rare occurrence.

Why Cyclones Are More Common in the Bay of Bengal than in the Arabian Sea

1. **Shallow Waters:** The Bay of Bengal is shallower than the Arabian Sea, allowing for greater heat transfer from water to air. This increase in temperature enhances moisture and instability, essential for cyclone formation.
2. **Surrounding Landmass:** The Bay is bordered by land on three sides, which contributes to additional moisture and instability, increasing the likelihood of cyclone development. Its low-lying coastal areas also make it prone to storm landfalls.
3. **Larger Area:** The Bay's expansive area supports storm growth and sustains cyclones, providing ample space for development and energy accumulation.
4. **Cooler Arabian Sea:** The Arabian Sea is partially landlocked, bordered by several countries. This geography makes it more saline and cooler, which reduces the chances of cyclone formation compared to the warmer Bay of Bengal.
5. **River Contributions:** Major rivers like the Ganges and Brahmaputra discharge warm freshwater into the Bay, maintaining a warm and less saline surface layer that favors cyclone formation.
6. **Reduced Convective Activity:** The Arabian Sea experiences less convective activity during pre-monsoon seasons and cools down during the post-monsoon, leading to fewer cyclones—about half the number compared to the Bay.
7. **Depth and Width:** The Arabian Sea is deeper and narrower than the Bay, making it more challenging for cyclones to form. The shallow waters of the Bay heat up more quickly, providing ideal conditions for storm development.
8. **Temperature Requirements:** A sea surface temperature of at least 27°C is needed for cyclones to intensify. Currently, the Bay of Bengal maintains temperatures between 28-30°C, while the Arabian Sea has temperatures around 27-28°C. Parts of the Arabian Sea even drop below 26°C, which is not conducive to cyclone formation.

Overall, the combination of geography, water temperature, and moisture levels explains why the Bay of Bengal experiences significantly more cyclones than the Arabian Sea.

Reasons for Increasing Cyclones in the Arabian Sea

1. **Rising Sea Surface Temperatures (SST):** Climate change has led to warmer temperatures in the Arabian Sea, providing more energy and moisture essential for cyclone formation and intensification.
2. **Reduced Vertical Wind Shear:** Historically, strong vertical wind shear in the Arabian Sea inhibited cyclone development. However, recent years have seen a decrease in this wind shear, especially during the pre- and post-monsoon seasons, facilitating easier cyclone formation. Additionally, weakened southwest monsoon winds have further reduced disruption to cyclonic systems.
3. **Positive Indian Ocean Dipole (IOD) Events:** The IOD is characterized by temperature differences between the western and eastern Indian Ocean. Recently, positive IOD events have become more frequent, warming the western Indian Ocean, including the Arabian Sea, which enhances cyclone potential.
4. **Influence of El Niño and La Niña:** These global climatic phenomena significantly affect the Indian Ocean. El Niño typically reduces cyclone activity in the Bay of Bengal while increasing it in the Arabian Sea, particularly during the post-monsoon season.



These factors collectively contribute to the rising frequency and intensity of cyclones in the Arabian Sea, highlighting the need for ongoing monitoring and adaptation to changing climatic conditions.

Mission Mausam: An Overview

The Union Cabinet has recently approved Mission Mausam, a transformative initiative with an investment of Rs. 2,000 crore over the next two years.

Key Features:

- **Objective:** Mission Mausam aims to enhance India's weather and climate-related science, research, and services, improving the accuracy of weather forecasts and nowcasts.
- **Implementation:** The initiative will be primarily executed by three institutes under the Ministry of Earth Sciences:
 - India Meteorological Department
 - Indian Institute of Tropical Meteorology
 - National Centre for Medium-Range Weather Forecasting
- **Critical Components:**
 - Next-generation radars and satellite systems
 - High-performance supercomputers
 - Development of advanced Earth system models
 - GIS-based decision support systems for real-time data sharing
- **Significance:** Mission Mausam is expected to benefit multiple sectors, including:
 - Agriculture
 - Disaster management
 - Defence
 - Environment
 - Aviation
 - Water resources
 - Power
 - Tourism
 - Shipping and transport
 - Energy
 - Health

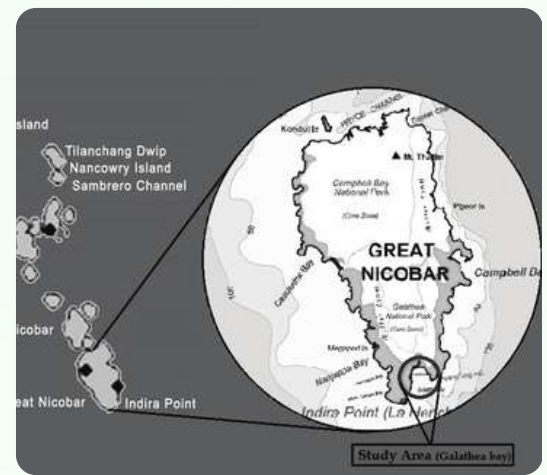
This initiative marks a significant step towards improving India's capacity for weather forecasting and climate resilience.

Galathea Bay Designated as Major Port

The government has officially designated the international trans-shipment hub at Galathea Bay in the Andaman & Nicobar Islands as a Major Port.

Key Details:

- **Authority to Designate:** The designation was made by the Central Government under Section 5 of the Indian Ports Act, 1908.
- **Function of a Trans-shipment Port:** Galathea Bay will serve as a crucial hub where cargo is transferred from one vessel to another for onward transportation to its final destination.



About the Galathea Bay Project

- **Project Cost:** The proposed mega project is valued at Rs. 44,000 crore and is eligible for central funding.
- **Development Model:** It will be developed under a public-private partnership (PPP) model.
- **Strategic Importance:** The port aims to capture a significant share of trans-shipped cargo currently handled at ports outside India.
- **Development Phases:** The project will unfold in four phases:
 - Phase 1 is set to be commissioned by 2028, with an initial handling capacity of 4 million TEUs (Twenty-foot Equivalent Units).
 - The capacity is expected to increase to 16 million TEUs by 2058 during the final stage of development.

This initiative marks a significant step in enhancing India's maritime infrastructure and improving its cargo handling capabilities.

INS Malpe and INS Mulki

Recently, the Indian Navy launched two Anti-Submarine Warfare Shallow Water Crafts (ASW-SWC) at Cochin Shipyard.

About ASW-SWCs:

- **Contract Details:** These vessels are part of a contract for eight ASW-SWCs aimed at replacing the Abhay-class ASW Corvettes of the Indian Navy.
- **Vessel Names:** The new vessels are named INS Malpe and INS Mulki, marking them as the fourth and fifth in the Mahe-class series.

Key Features:

- **Speed and Endurance:** The crafts can achieve a maximum speed of 25 knots and have an endurance of 1,800 nautical miles.
- **Design Specifications:** Each ship has a displacement of approximately 900 tons and is equipped with indigenously developed sonar for effective underwater surveillance.

Capabilities:

- **Armament:** The vessels are outfitted with:
 - Light-weight torpedoes
 - ASW rockets and mines
 - Close-in weapon systems (30mm guns)
 - 12.7mm stabilized remote-control guns



- **Propulsion Power:** Each vessel boasts an installed propulsion power of around 12 MW.
- **Operational Roles:** The ASW-SWC vessels are designed for various roles, including:
 - Anti-submarine operations in coastal waters
 - Low-intensity maritime operations (LIMO)
 - Mine-laying operations

These new crafts enhance the Indian Navy's capabilities in maritime security and underwater warfare.

Indigenous Light Tank “Zorawar”

India has successfully completed field firing trials for its new indigenous light tank, Zorawar, designed for deployment in high-altitude areas.



About the Zorawar Tank:

- **Design:** The Zorawar boasts a high power-to-weight ratio, offering substantial firepower, protection, surveillance, and communication capabilities.
- **Naming:** It is named after the 19th-century Dogra General Zorawar Singh.
- **Operational Capability:** This tank can function in extreme environments, including harsh weather and high altitudes, with minimal logistical support.
- **Timeline:** The Zorawar is expected to be handed over to the Indian Army for user trials by August 2025.
- **Purpose:** It aims to provide the Army with versatile operational capabilities across various terrains and threats.
- **Development:** The tank was developed by the Combat Vehicles Research & Development Establishment (CVRDE) under DRDO, in collaboration with Larsen & Toubro Limited.

PROJECT STRAWBERRY - OpenAI'S

OpenAI is reportedly preparing to launch its most powerful AI model, codenamed Project Strawberry, which may be integrated into ChatGPT-5.

About Project Strawberry:

- **Formerly Project Q*:** Originally known as Project Q* (Q-star), this initiative aims to advance OpenAI's pursuit of Artificial General Intelligence (AGI), with capabilities akin to the human brain.
- **Advanced Problem-Solving:** The model will be equipped to tackle math problems it hasn't been explicitly trained on, engage in high-level tasks such as market strategy design, solve complex word puzzles, and conduct "deep research."
- **Foundation for Orion:** Project Strawberry will also contribute to the development of OpenAI's next large language model (LLM), named Orion.

BepiColombo Mission

The BepiColombo mission, a collaboration between the European Space Agency (ESA) and the Japan Aerospace Exploration Agency (JAXA), has successfully completed its fourth of six planned gravity assist flybys at Mercury.

About BepiColombo:

- **Mission Overview:** This international mission involves two spacecraft traveling together to Mercury, aimed at studying the planet from distinct perspectives.
- **Launch Details:** The spacecraft were launched on October 20, 2018, using an Ariane 5 rocket from French Guiana, and are expected to begin orbiting Mercury in 2025.
- **Objectives:** BepiColombo aims to investigate Mercury's magnetic field, surface composition, geological features, and interaction with solar wind, as well as its exosphere and geological history.
- **Significance:**
- **First Image of Mercury's South Pole:** This recent flyby marked the first-ever capture of Mercury's elusive South Pole.
- **Data Collection:** The flyby provided valuable insights into Mercury's magnetic field and exosphere, enhancing our understanding of the planet.

Bio-RIDE scheme

The Union Cabinet has recently approved the Bio-RIDE Scheme (Biotechnology Research Innovation and Entrepreneurship Development), aiming to enhance India's position in the biotechnology sector.

About the Bio-RIDE Scheme: This scheme consolidates two existing initiatives under the Department of Biotechnology (DBT) and introduces a new component focused on biomanufacturing and biofoundry.

Objectives:

- **Global Leadership:** Strengthen India's standing as a global leader in biomanufacturing and biotechnology.
- **Bioeconomy Goal:** Achieve a US\$300 billion bioeconomy by 2030.

Administration:

- **Nodal Ministry:** The scheme will be overseen by the Ministry of Science & Technology.

Funding and Duration:

- **Financial Outlay:** The scheme has a budget of ₹9,197 crore for the 15th Finance Commission period (2021-22 to 2025-26).

Key Components:

- Biotechnology Research and Development (R&D)
- Industrial and Entrepreneurship Development (I&ED)
- Biomanufacturing and Biofoundry



ISRO's Missions Approved

The Union Cabinet has approved funding for four major projects by ISRO, aligning with the agency's Vision 2047.

Approved Projects:

1. Chandrayaan-4 Mission:

- Budget: ₹2,014 crore
- Launch Date: Scheduled for 2027, lasting 36 months.
- Objective: To lay the groundwork for India's plan to land astronauts on the Moon by 2040.
- Modules: The mission will feature five modules launched in two phases, aiming to land on the Moon, collect samples, and return them to Earth.

2. Venus Orbiter Mission:

- Budget: ₹1,236 crore
- Tentative Launch: March 2028, coinciding with the closest approach of Earth and Venus.
- Mission Goals:
 - Study surface and subsurface geology to understand Venus' history.
 - Analyze the composition and dynamics of its thick atmosphere, focusing on the greenhouse effect.
 - Examine interactions between Venus' ionosphere and solar activities, enhancing knowledge of planetary atmospheres.

3. Gaganyaan and Bhartiya Antriksh Station (Indian Space Station):

- Bhartiya Antriksh Station (BAS): Planned to be India's own space station, operational by 2035. The first module (BAS-1) is set to be developed by December 2029.
- Gaganyaan Programme: Aiming for human spaceflight to Low Earth Orbit (LEO), with eight missions planned by December 2029.
- Budget: Combined cost for Gaganyaan and BAS is ₹20,193 crore.

4. Next Generation Launch Vehicle:

- Objective: Increase ISRO's launch capability from 10 tonnes to 30 tonnes in LEO.
- Significance: Essential for the Bhartiya Antriksh Station.
- Budget: ₹8,239 crore, with three development flights planned over eight years.

These initiatives mark significant advancements in India's space exploration capabilities and ambitions.

Global Cybersecurity Index (GCI) 2024

The International Telecommunication Union (ITU) recently released the Global Cybersecurity Index (GCI) 2024, which evaluates countries' commitment to cybersecurity.

Key Points of the GCI:

- **Assessment Criteria:** The GCI measures countries based on five pillars:
 - Legal Measures
 - Technical Measures
 - Organizational Measures
 - Capacity Development
 - Cooperation

India's Performance:

- **Tier-1 Status:** India achieved Tier-1 ranking in the GCI 2024.
- **Ranking Score:** With a score of 98.49, India stands among the top 47 countries demonstrating strong commitment to cybersecurity.

GLOBAL INNOVATION INDEX 2024

India has made significant strides in the Global Innovation Index (GII) 2024, ranking 39th among 133 global economies.

Overview of the Global Innovation Index:

- **Published By:** The index is released by the World Intellectual Property Organization (WIPO), a UN agency.
- **Assessment Criteria:** It evaluates innovation through various criteria, including:
 - Institutions
 - Human capital and research
 - Infrastructure
 - Credit and investment
 - Knowledge creation, absorption, and diffusion
 - Creative outputs

Key Findings from the GII 2024:

- **Top Performers:** The leading countries are Switzerland, Sweden, the United States, Singapore, and the United Kingdom.
- **Fastest Climbers:** Over the past decade, China, Turkiye, India, Vietnam, and the Philippines have shown the most improvement.

India's Performance:

- **Progress:** India has climbed from 81st place in 2015 to 39th in 2024, reflecting a consistent upward trajectory.
- **Strengths:** India excels in several areas:
 - 1st in ICT services exports globally
 - High levels of venture capital investment
 - 8th rank globally for unicorn companies

Initiatives Boosting Innovation in India:

- **Atal Innovation Mission:** This initiative has significantly expanded the innovation ecosystem.
- **Anusandhan National Research Foundation (ANRF):** Established to promote research culture across universities and research institutions.
- **Biotechnology Industry Research Assistance Council (BIRAC):** Supports emerging biotechnology enterprises in research and innovation.
- **National Research Foundation (NRF):** Introduced as part of the National Education Policy 2020, the NRF aims to fund interdisciplinary research and foster a culture of innovation in higher education.

SAHARIYA TRIBE

Recently, over 172 cases of malnourished children have been reported within the Sahariya tribal community in Baran district, Rajasthan.

About the Sahariya Tribe:

- The Sahariya tribe is recognized as one of India's Particularly Vulnerable Tribal Groups (PVTGs), primarily residing in Madhya Pradesh, Rajasthan, and Chhattisgarh.
- Known by various names such as Seher, Sair, Sawar, Saor, and Sahara, the tribe has a deep historical presence in the region.
- The Sahariyas claim their lineage traces back to the era of the Ramayana, emphasizing their ancient cultural roots.
- Despite their rich heritage, they face significant socio-economic challenges, making them one of the most disadvantaged and vulnerable population groups in India.



Particularly Vulnerable Tribal Groups (PVTGs)

Definition: PVTGs are a category of tribal groups recognized for their increased vulnerability compared to other tribal communities.

Historical Background:

- 1973: The Dhebar Commission established the category of Primitive Tribal Groups (PTGs) for less developed tribes.
- 2006: The term was updated to Particularly Vulnerable Tribal Groups (PVTGs) by the Government of India.
- Identification:
 - 1975: Initially, 52 PVTGs were identified.
 - 1993: An additional 23 groups were added, bringing the total to 75 PVTGs among the 705 Scheduled Tribes.

Characteristics of PVTGs:

- Homogeneity: PVTGs generally share similar social and cultural practices.
- Isolation: They tend to be physically isolated from mainstream society.
- Lack of Written Language: Most do not possess a written language.
- Slower Rate of Change: Their lifestyles evolve at a slower pace.

Geographic Distribution:

- The largest concentration of PVTGs is found in the state of Odisha.

GREAT STUPA OF SANCHI

The External Affairs Minister recently visited a replica of the East Gate of the Great Stupa of Sanchi, located in front of the Humboldt Forum museum in Berlin.

What is a Stupa?

- **Definition:** A stupa is a distinctive Buddhist monument, typically housing sacred relics of the Buddha or other revered figures.
- **Significance:** Stupas symbolize the path to enlightenment, serving as meditation, reflection, and pilgrimage sites while embodying key Buddhist teachings.

Historical Origins:

- **Pre-Buddhist Roots:** Stupas originated from ancient burial mounds in India, initially marking sacred sites and memorializing the deceased.



- **Evolution:** Over time, they transformed to represent the Buddha's enlightenment, incorporating elements reflecting Buddhist cosmology.

The Great Stupa of Sanchi:

- **Location:** Situated in Madhya Pradesh, the Great Stupa is one of the most significant examples of stupa architecture, commissioned by Emperor Ashoka in the 3rd century BCE.
- **Features:** It is the largest and oldest structure in a complex that includes several stupas and monasteries, with construction continuing until the 12th century CE.
- **Symbolism:** The stupa was built to house the Buddha's relics, highlighting his teachings.

Architectural Highlights:

- **Design:** The Great Stupa features a hemispherical mound representing the universe, topped by a chhatra (parasol) symbolizing protection and enlightenment.
- **Toranas (Gateways):** Four intricately designed gateways (toranas) align with the cardinal directions, symbolizing the universality of the Buddha's teachings.
- **Sculptural Art:** The toranas are adorned with bas-reliefs depicting significant events from the Buddha's life and stories from the Jataka tales.

The East Gate:

- **Historical Importance:** The East Gate gained fame through its rediscovery by British officer Henry Taylor in 1818, leading to restoration efforts in the early 20th century.
- **Casts and Replicas:** Lt. Henry Hardy Cole cast the East Gate in plaster for the Victoria and Albert Museum in the late 1860s, resulting in multiple copies, including the one in Berlin.

Architectural Significance of the East Gate:

- **Upper Architrave:** Features representations of the seven Manushi Buddhas, highlighting the cyclical nature of existence.
- **Middle Architrave:** Illustrates the Great Departure, depicting Prince Siddhartha's transition to asceticism.
- **Lower Architrave:** Shows Emperor Ashoka's visit to the Bodhi tree, a pivotal moment in Buddhist history.
- **Decorative Elements:** Includes symbols like the shalabhanjika and motifs of elephants and peacocks, enhancing its cultural richness.

Karam Parv

Recently, tribal communities across Jharkhand, West Bengal, Bihar, Madhya Pradesh, Chhattisgarh, Assam, and Odisha celebrated the harvest festival of Karma, also known as Karam Parv.



About Karam Parv

- **Dedication:** Karam Parv is a harvest festival honoring Karam Devta, the deity associated with power and youthfulness.
- **Cultural Roots:** The festival is especially significant for the Oraon/Kurukh people, who link it to the agricultural cycle. They celebrate it as the festival of grains (dhaan/anaaj) after watering their fields during the autumn rains.

Symbolism of the Karam Tree

- **Central Focus:** The Karam tree, also known as the Kadam tree (*Neolamarckia cadamba*), plays a vital role in the festival. It symbolizes Karam Devta and is an evergreen tropical tree native to South and Southeast Asia.

Participating Communities - The Karma festival is celebrated predominantly by the Munda, Ho, Oraon, Baiga, Kharia, and Santhal tribes, reflecting their rich cultural heritage and agricultural traditions.

Jivitputrika Vrat

Recently, a tragic incident occurred in Bihar during the 'Jivitputrika' festival, where approximately 46 individuals, including 37 children, drowned while performing ritual baths in rivers and ponds.

About Jivitputrika Vrat:

- **Festival Overview:** Jivitputrika Vrat, also known as Jitiya Vrat, is a significant festival dedicated to the well-being and prosperity of children, primarily observed by mothers. The festival involves women fasting and taking holy dips.

Significance:

- **Devotion to Children:** Mothers perform this vrat to pray for the long life and health of their children, reflecting their deep maternal love and devotion.
- **Cultural Heritage:** Jivitputrika is an integral part of the cultural and religious practices in many Indian families, symbolizing the strong bond between mothers and their children.

Celebration Details:

- **Date of Celebration:** The festival is celebrated annually on the Ashtami (eighth day) of the Shukla Paksha (waxing phase of the moon) in the month of Ashwin (September-October), coinciding with the festive season in India.
- **Community Gathering:** Jivitputrika fosters a sense of community as families gather for prayers, share meals, and participate in communal celebrations.
- **Cultural Activities:** Various cultural events, including folk songs and dances, enhance the sense of togetherness during the festival.

Symbol of Protection:

The vrat is believed to invoke divine protection for children, ensuring their health, safety, and prosperity throughout their lives.

Ramon Magsaysay Award 2024

Renowned Japanese filmmaker Hayao Miyazaki has been honored with the prestigious Ramon Magsaysay Award.

About the Ramon Magsaysay Award:

- **Origin and Significance:** Established in 1957, the Ramon Magsaysay Award is Asia's highest honor, recognizing individuals who have made exceptional contributions to the welfare of the people in Asia, regardless of their background.
- **Annual Presentation:** The award is presented each year on August 31st, coinciding with the birthday of Ramon Magsaysay, the third President of the Philippines. It is often referred to as Asia's Nobel Prize.
- **Award Categories:** Originally given across six categories, the award is now presented solely for the Emergent Leadership category.

Other Recipients

This year's recipients alongside Miyazaki include:

- Farwiza from Indonesia
- Nguyen Thi Ngoc Phuong from Vietnam
- Karma Phuntsho from Bhutan
- The Rural Doctors Movement (RDM) from Thailand

Exercise AIKYA - NDMA & IASC

The National Disaster Management Authority (NDMA) and the Indian Army's Southern Command are organizing Exercise AIKYA in Chennai.

Overview:

- **Meaning:** "Aikya," meaning "Oneness" in Tamil, reflects the exercise's aim to unite India's disaster management community.
- **Objective:** The exercise aims to enhance collaboration, preparedness, and integration among various disaster management stakeholders across India.

Participation:

- Representatives from six southern states and Union Territories—Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, Telangana, and Puducherry—are involved.

Key Agencies:

- Participants include the NDMA, Indian Army, Navy, Air Force, National Disaster Response Force (NDRF), India Meteorological Department (IMD), Indian National Centre for Ocean Information Services (INCOIS), and research institutions like IIT Madras and NIOT.

Disaster Scenarios:

- The exercise will simulate various emergency situations, including tsunamis, landslides, floods, cyclones, industrial accidents, and forest fires, to test response strategies and improve coordination among agencies.

45th Chess Olympiad

India's men's and women's chess teams have made history by winning their first-ever gold medals at the 45th Chess Olympiad held in Budapest. This marks only the second time a country has achieved gold in both sections since the Soviet era; China last accomplished this in 2018.

About the Chess Olympiad:

- **Organizer:** The event is organized by FIDE (International Chess Federation).
- **Location:** The 45th Chess Olympiad took place in Budapest, Hungary.
- **Trophies Awarded:**
 - The top Open team received the Hamilton-Russell Cup.
 - The best Women's team was awarded the Vera Menchik Cup.
 - The Nona Gaprindashvili Trophy was given for the best combined classification in both the Open and Women's sections.

Advanced Ballistics for High Energy Defeat (ABHED)

The Defence Research & Development Organisation (DRDO) has partnered with researchers from IIT Delhi to create the ABHED (Advanced Ballistics for High Energy Defeat) bulletproof jacket.

About the ABHED Jacket:

- The ABHED jacket is designed to be lightweight and highly effective.
- It incorporates advanced polymers and boron carbide ceramic materials, offering a superior strength-to-weight ratio.
- The jacket can withstand high-velocity projectiles, significantly improving soldier safety in combat situations.
- Its indigenous development enhances India's defense capabilities and positions the country as a strong competitor in the global defense market.



Megalithic Burial Site in Kerala

A rainwater harvesting initiative by the Koduvayur grama panchayat in Kerala has led to the discovery of numerous megalithic urn burials, shedding light on ancient burial practices in the region.

About Urn Burials

- Urn burials involve placing ashes and bones in pottery vessels after cremation.

About Megaliths

- Megaliths are large stones used to construct ancient structures or monuments.

Types of Megaliths:

- **Underground Components:**
 - Pit Burials: Unlined pits for burying the deceased.
 - Cist Burials: Stone-lined graves, typically rectangular.
 - Urn Burials: Mortal remains placed in terracotta urns.
 - Sarcophagus Burials: Terracotta containers with lids, sometimes shaped like animals.
- **Surface Components:**
 - Menhirs: Single, minimally altered stones used as markers or memorials.
 - Boulder Circles: Circular arrangements of rocks or boulders marking burial sites.
 - Cairns: Earth mounds covering burials or structures.
 - Dolmenoid Cists: Partially underground stone structures with a capstone.
 - Dolmens: Large freestanding stone structures topped with a capstone.

Key Findings from the Burial Site

- **Location:** The urns were discovered on Kundlikkad hill in the Kollengode range of the Nenmara forest, Palakkad district.
- **Archaeological Importance:** The urns may provide insights into the connections between the Mesolithic and Iron Age periods in Kerala. Finding urns on a hilltop is unusual, as burial sites are typically in lower areas.
- **Estimated Age:** The burials are believed to be over 2,500 years old.
- **Unique Findings:** Unlike most hill sites in Kerala, which contain cairn heaps and dolmens, this site had an unusually high number of urn burials.
- **Damage During Digging:** Some urns were damaged during the excavation for rainwater harvesting. However, one urn remained intact with its capstone, alongside numerous pottery fragments (including black ware, red ware, and black-and-red ware).

Features of the Urns and Pottery

- **Size and Thickness:** The urns measured 8 mm to 2 cm in thickness.
- **Fingerprint Marks and Designs:** Some urns displayed fingerprint impressions, while smaller pots had cord-impressed designs.
- **Chiseling Marks:** Evidence of chisels was found on rocks, indicating their use in crafting the capstones and surrounding stones of the urns.



Supreme Court on LGBTQIA+

The Department of Social Justice and Empowerment (DoSJE) is seeking input from stakeholders and the public to enhance the inclusivity and effectiveness of policies aimed at the LGBTQIA+ community.

About LGBTQIA+

- **Definition:** The acronym LGBTQIA+ encompasses a diverse range of sexual orientations and gender identities, representing lesbians, gays, bisexuals, transgender individuals, queer/questioning, intersex, asexuals, and more.
- **Purpose:** Each letter signifies a specific group within the LGBTQIA+ spectrum.

Recent Developments:

This initiative follows significant actions by the Government of India in response to the Supreme Court's directives in 2023, aimed at protecting LGBTQIA+ rights and clarifying their entitlements.

Supreme Court Directives on LGBTQIA+ Rights

In the 2023 *Supriyo@Supriya vs. Union* case, the Supreme Court addressed the rights of LGBTQIA+ individuals, emphasizing the need to combat discrimination despite not recognizing same-sex marriages. Subsequently, the Government formed a committee in April 2024, led by the Cabinet Secretary, to tackle discrimination in social welfare, healthcare, public services, and policing.

Interim Actions Taken by the Government

1. Ration Cards:

- The Department of Food and Public Distribution has advised states and UTs to recognize partners in queer relationships as part of the same household for ration card purposes, ensuring no discrimination in their issuance.

2. Joint Bank Accounts:

- The Department of Financial Services has clarified that LGBTQIA+ individuals can open joint bank accounts without restrictions and can designate their partners as nominees to receive account balances upon the account holder's death.

3. Healthcare Initiatives:

- The Ministry of Health and Family Welfare has directed states to uphold LGBTQIA+ rights in healthcare, prohibit conversion therapy, ensure access to sex reassignment surgeries, and revise curricula as needed.
- The guidelines also include provisions for claiming bodies when no next of kin is available and address medical interventions for intersex infants and children.
- Efforts are underway to develop guidelines focusing on the mental health and well-being of the LGBTQIA+ community.

This comprehensive approach aims to foster a more inclusive society and protect the rights of the LGBTQIA+ community in India.

Atacama Salt Flat & Lithium Mining



Chile's Atacama salt flat is sinking at a rate of 1 to 2 centimeters per year due to lithium brine extraction, according to a study by the University of Chile.

About Atacama Salt Flat

- **Size and Features:** The Atacama Salt Flat is the largest salt deposit in Chile, spanning 750,000 acres (300,000 km²). It features a rugged white surface with a substantial salt lake beneath.

Atacama Desert

- **Location:** Nestled in northern Chile between the coastal Cordillera de la Costa mountains and the Andes Mountains, the region is often referred to as the "shadow of rain."
- **Significance:** The Atacama Desert is recognized as the driest nonpolar desert in the world.
- **Mars Mission Potential:** Its barren, dry landscapes provide ideal conditions for simulating Mars missions.
- **Climate Factors:** The desert's extremely arid climate is influenced by:
 - **Cool Humboldt Current:** This cold ocean current flows along the coast, contributing to low moisture levels.
 - **Pacific Anticyclone:** A high-pressure system that further inhibits the presence of moisture.

About Lithium

- **Elemental Information:** Lithium (Li) is a soft, silvery-white metal with the atomic number 3.
- **Density:** It is the least dense metal and the lightest solid element under standard conditions.
- **Reactivity:** Lithium is highly reactive and flammable, necessitating storage in controlled environments. It is typically kept in a vacuum or immersed in inert substances like kerosene or mineral oil to prevent unwanted reactions.

Causes of the Salt Flat Sinking

1. Over-Extraction of Lithium Brine:

- **Exceeding Recharge Rates:** The extraction of lithium-rich brine is outpacing the natural recharge of aquifers, leading to significant environmental imbalances.
- **Subsidence:** This over-extraction causes subsidence, or the sinking of the Earth's surface.

2. Impact on Aquifers:

- **Depletion:** Excessive pumping depletes aquifers, diminishing the available water for natural replenishment.
- **Disruption of Water Balance:** This disruption affects the overall water balance, further contributing to the sinking of the salt flat.

The study highlights the urgent need to address sustainable lithium extraction practices to protect this crucial ecosystem.

Hold on One Nation, One Election

The Union Cabinet has accepted the recommendations of a High-Level Committee led by former President Ram Nath Kovind regarding the “One Nation, One Election” (ONOE) initiative. This proposal aims to hold simultaneous elections for the Lok Sabha, state assemblies, and local bodies in a phased manner.



Key Details:

- **Phased Implementation:**
 - **First Phase:** Align elections for the Lok Sabha and state assemblies.
 - **Second Phase:** Conduct local body elections within 100 days of the first phase.

Understanding Simultaneous Elections:

- **Definition:** This initiative proposes conducting elections for the Lok Sabha and all state assemblies together, ensuring a unified election cycle across the country.
- **Historical Context:**
 - India initially held simultaneous elections between 1951 and 1967. This practice ended due to political instability and the rise of regional parties.
- **Global Examples:** Countries like South Africa, Sweden, Germany, and Britain also conduct simultaneous elections.

Significance of ONOE:

- **Cost Efficiency:** Reduces election-related expenses for governments and political parties.
- **Reduced Voter Fatigue:** Fewer elections can decrease voter fatigue, encouraging higher participation.
- **Policy Continuity:** Minimizes disruption from frequent elections, enabling governments to focus on long-term goals.
- **Less Black Money:** Fewer election cycles can limit the circulation of unaccounted campaign funds.
- **Improved Public Services:** Reduces interruptions in public services due to election duties.
- **Enhanced National Unity:** Encourages a national perspective in elections over regional interests.

Challenges of Implementation:

- **Constitutional Amendments:** Requires changes to several constitutional provisions, which could alter the federal structure.
- **Logistical Issues:** Managing simultaneous elections nationwide presents significant challenges, including coordinating security and handling electronic voting machines.
- **Potential Erosion of Federalism:** Local concerns might be overshadowed by national issues, favoring national parties over regional ones.

Voter Behavior: Evidence suggests that voters may favor the same party for both state and central elections when held simultaneously.

Way Forward:

- **National Dialogue:** Engage with political parties, civil society, and experts to build consensus. The high-level committee has already gathered over 20,000 responses, with 81% supporting the initiative.
- **Gradual Implementation:** Begin with pilot programs that align some state elections with Lok Sabha elections to identify challenges.
- **Legal Framework:** Develop necessary constitutional amendments and laws to support the initiative while maintaining democratic principles.
- **Safeguarding Federalism:** Ensure regional issues remain central in elections, preserving India's diverse federal structure.
- **Strengthening the Election Commission:** Enhance resources and technology for managing simultaneous elections.
- **International Learning:** Study successful models from countries like South Africa and Germany to improve the feasibility of ONOE.

Supreme Court on Bulldozer Justice

Recently, the Supreme Court of India suggested establishing “pan-India” guidelines concerning the controversial practice known as “bulldozer justice.” This comes in the wake of a plea challenging demolition drives, particularly in Delhi’s Jahangirpuri area, following the 2022 riots.

Key Insights from the Supreme Court’s Observations:

- **Criticism of Demolition Practices:** The Court condemned the trend of demolishing properties based solely on criminal allegations, highlighting the necessity for due legal process.
- **Need for Comprehensive Guidelines:** The Court stressed that comprehensive guidelines are vital to ensure demolitions adhere to proper procedures, thereby preventing the targeting of legal structures or communities. It also invited suggestions from relevant parties for these guidelines.
- **Unauthorised Properties:** The Court clarified that it would not provide protection for unauthorized constructions.

Understanding Bulldozer Justice:

- **Definition:** Bulldozer justice refers to the practice where authorities demolish properties of individuals accused of serious crimes like communal riots, rapes, and murders without due legal process.
- **Group Penalty:** This approach results in punishment before a determination of guilt, often affecting innocent family members of the accused.
- **Incidence Across States:** The practice has been prevalent in several states, including:
 - **Uttar Pradesh:** The Chief Minister, Yogi Adityanath, popularized the term ‘Bulldozer Baba’ for his stance on demolishing properties linked to crime.
 - **Madhya Pradesh:** Former Chief Minister Shivraj Singh Chouhan earned the nickname ‘bulldozer mama’ after ordering demolitions in Khargone following communal clashes.
 - **Delhi:** Notable incidents occurred in April 2022 after communal riots in Jahangirpuri.
 - **Maharashtra and Haryana:** Similar demolition practices were observed in response to communal violence.

Concerns Regarding Bulldozer Justice:

- **Violation of Due Process:** Often executed without adhering to legal procedures, undermining principles of natural justice. For example, homes in slums may be demolished without hearings for residents.
- **Infringement of Fundamental Rights:** Hasty decisions can violate individual or community rights, particularly the right to shelter, which is protected under Article 21 of the Indian Constitution.

- **Lack of Transparency:** Decisions are frequently made without informing or involving affected parties, such as local communities in infrastructure projects.
- **Authoritarian Use:** Bulldozer justice may serve political agendas, disproportionately affecting those opposing the ruling party.
- **Erosion of Public Trust:** The perception of forced justice can diminish public confidence in institutions, leading to backlash against municipal authorities.

Proposed Way Forward:

- **Upholding Rule of Law:** It's crucial to safeguard individual rights against excessive state control. The *Maneka Gandhi vs Union of India* case established that legal procedures must be fair and reasonable.
- **Judicial Directives:** The Supreme Court's recent directive represents significant progress against unlawful demolitions. Guidelines should be comprehensive and inclusive of all stakeholders.
- **Natural Justice:** Emphasizing the need for fair processes, the *Municipal Corporation Ludhiana vs Inderjit Singh* ruling stated that demolitions cannot occur without notice and an opportunity to be heard.
- **Judicial Intervention:** Courts must actively intervene to maintain rule of law in cases of bulldozer justice, as seen in the Punjab and Haryana High Court's actions in Nuh.
- **Independent Review Mechanisms:** Investigations into punitive demolitions should be conducted to ensure compliance with legal standards, as called for by organizations like Amnesty International.
- **Community Engagement and Compensation:** Adequate compensation and rehabilitation should be offered to families displaced by demolitions, adhering to international human rights standards.

Conclusion

While the intent behind bulldozer justice may be to achieve rapid results or maintain order, the ethical implications and potential violations of rights cannot be ignored.

- Sustainable solutions must balance efficiency with empathy, ensuring that justice is not only swift but also fair. Institutions must commit unwaveringly to principles of justice, transparency, and human rights.



Universal Basic Income

The concept of Universal Basic Income (UBI) has gained significant attention in India, especially following the International Labour Organization's latest report, which highlights job growth declines and rising inequality linked to increased automation and artificial intelligence (AI).

Reasons for Growing Popularity of UBI in India:

- Budget 2024 Initiatives:** The Indian government's focus on capital-intensive projects (e.g., railways, highways, power) is evident in the substantial capital expenditure outlay of ₹11.1 lakh crore. However, these projects offer limited direct employment opportunities.
- Impact on Employment:** Modern construction techniques associated with these projects create fewer jobs compared to traditional methods, exacerbating employment challenges.
- E-commerce Disruption:** The growth of e-commerce is displacing local stores, leading to job losses in the retail sector.
- Shift to Job-Loss Growth:** As the economy transitions from jobless growth to job-loss growth, displaced workers face difficulties in finding new employment, resulting in increased low-income self-employment.
- Existing UBI-like Programs:** India has initiated various cash transfer programs for farmers, women, and unemployed youth. While these resemble UBI, they are not universal in nature.

The Need for UBI in India:

- Reducing Inequality:** UBI could help bridge the income gap by providing financial support to everyone, regardless of socio-economic status. According to the ILO, nearly one-third of young women globally are not engaged in employment, education, or training.
- Safety Net for Informal Workers:** With around 80% of India's workforce employed in the informal sector, UBI could offer essential financial stability and security.
- Streamlining Welfare Programs:** The current welfare system in India is complex and inefficient. UBI could simplify this by providing direct cash transfers, reducing intermediaries and fund leakage.
- Promoting Entrepreneurship:** A guaranteed basic income may empower individuals to take risks in business, education, or creative endeavors without the fear of financial instability.
- Addressing Agrarian Distress:** UBI could act as a financial buffer for farmers facing challenges due to low income and crop failures.
- Supporting Women and Vulnerable Groups:** Direct cash transfers could enhance the financial independence of women, particularly in rural and low-income households.
- Combating Rural Poverty:** UBI could alleviate rural poverty and reduce migration to urban areas, providing a basic economic security level in rural regions.

Challenges to Implementing UBI in India

- **High Financial Cost:** Providing a basic income to every citizen would require significant financial resources. For example, a UBI of ₹7,620 per year per person was estimated to cost about 4.9% of GDP.
- **Universal vs. Targeted Approaches:** A universal UBI could lead to resource wastage on those who do not need it, while a targeted approach may reintroduce exclusion errors prevalent in current welfare schemes.
- **Potential Inflation:** Large cash injections into the economy might trigger inflation, particularly in essential goods, potentially negating UBI's benefits for the poorest.
- **Unequal Access:** If not carefully designed, UBI could exacerbate gender inequalities, as men in patriarchal households may control the income, sidelining women.
- **Dependency Concerns:** There are fears that UBI might foster a culture of dependency, reducing motivation to seek education or employment.
- **Labor Market Impact:** Critics argue that a guaranteed income could lessen the incentive to work, negatively affecting labor-intensive sectors like agriculture.

Way Forward for UBI Implementation

- **Localized Experiments:** Pilot projects in diverse regions, inspired by global examples like Finland, could help assess UBI's feasibility in India, focusing on data collection for evaluating impacts.
- **Targeted Initial Implementation:** Starting with the most vulnerable populations—such as small farmers, informal workers, and marginalized communities—could minimize fiscal strain and ensure immediate support reaches those in need.
- **Streamlining Existing Subsidies:** Rationalizing overlapping welfare programs could free up resources to fund UBI.
- **Tax Reforms for Sustainable Funding:** The government could explore new revenue sources, like wealth or carbon taxes, to finance UBI without exacerbating the fiscal deficit.
- **Monetary Policy Coordination:** The Reserve Bank of India should collaborate with the government to manage potential inflation arising from cash transfers, possibly by phasing in UBI over time.
- **Leveraging Existing Infrastructure:** Strengthening systems like Aadhaar and Direct Benefit Transfers (DBT) can ensure efficient and transparent cash transfers to beneficiaries, minimizing corruption.
- **Linking UBI with Economic Empowerment:** UBI initiatives should include provisions for work opportunities to prevent societal division and maintain dignity among recipients, encouraging productive activities.

Conclusion

By learning from international experiences, leveraging technology, and addressing India's unique socio-economic challenges, UBI can be implemented to enhance the country's welfare architecture while minimizing associated risks.

Inquiry Wing Constituted by Lokpal

The Lokpal has recently established an inquiry wing to conduct preliminary investigations into graft-related offences committed by public servants. This initiative is in line with the provisions of the Lokpal and Lokayuktas Act, 2013.

Key Highlights of the Notification:

1. Legal Provision:

- Section 11 of the Lokpal and Lokayuktas Act, 2013 mandates the formation of an inquiry wing to investigate any offences punishable under the Prevention of Corruption Act, 1988 committed by specified public servants and functionaries.

2. Structure:

- The inquiry wing will be integrated into the judicial wing of the Lokpal.
- An approved organogram outlines the staffing requirements, detailing the necessary officers and staff for effective functioning.

3. Leadership:

- The inquiry wing will operate under the Lokpal Chairperson.
- The Director of Inquiry will lead the wing, assisted by three Superintendents of Police (SP), each focusing on different areas:
 - SP (General)
 - SP (Economic and Banking)
 - SP (Cyber)
- Each SP will have additional inquiry officers and staff for support.

About Lokpal

- Establishment: The Lokpal is a statutory body created by the Lokpal and Lokayuktas Act, 2013 to function as a constitutional ombudsman.
- Mandate: It is responsible for investigating allegations of corruption against certain public functionaries and related matters.
- First Lokpal: The first anti-corruption ombudsman of India was Shri Pinaki Chandra Ghose, a former Supreme Court judge and member of the National Human Rights Commission.

Appointment Process:

- Members of the Lokpal are appointed by the President of India based on recommendations from a Selection Committee, which is advised by a search committee.
- Selection Committee Composition:
 - The Prime Minister (Chairman)
 - The Speaker of Lok Sabha
 - The Leader of the Opposition
 - The Chief Justice of India

Composition:

- The Lokpal consists of a Chairperson and a maximum of 8 members (1 chairperson + 8 members).
- Chairperson: Must be a former Chief Justice of India, former Supreme Court judge, or an eminent person with a minimum of 25 years of expertise in relevant fields.
- Members: At least half of the maximum 8 members must be judicial, and 50% of the members must represent SC, ST, OBC, minorities, and women.
 - Judicial Members: Must be former judges of the Supreme Court or Chief Justices of High Courts.
 - Non-Judicial Members: Should possess integrity and at least 25 years of experience in anti-corruption, public administration, finance, law, and management.

Tenure:

- The term for the Lokpal Chairman and Members is 5 years or until the age of 70.

Jurisdiction:

- The Lokpal has jurisdiction over:
 - The Prime Minister
 - Ministers
 - Members of Parliament
 - Group A, B, C, and D officers and officials of the Central Government.
- Exceptions: The Prime Minister is under the Lokpal's jurisdiction except for allegations related to international relations, security, public order, atomic energy, and space. Complaints against the PM can only be investigated with the approval of at least two-thirds of the Lokpal members.

Lokayukta

- The Lokpal and Lokayuktas Act, 2013 mandates each state to establish a Lokayukta.
- Each state must appoint a Lokayukta through legislation by the State Legislature.
- The Lokayukta will address corruption cases involving public servants within the respective state's institutions.

Conclusion

The establishment of the inquiry wing under the Lokpal signifies a strengthened commitment to combating corruption among public servants in India, reinforcing accountability and transparency in governance.



23rd Law Commission

The Government of India has recently established the 23rd Law Commission, which will operate from September 1, 2024, to August 31, 2027. This commission serves as an advisory body to the Ministry of Law and Justice.

About the 23rd Law Commission:

- **Composition:**
 - A full-time Chairperson
 - Four full-time members
 - Secretaries of the Legal Affairs and Legislative Departments (as ex-officio members)
 - Up to five part-time members
- **Objectives:**
 - Identify and recommend laws that have become obsolete for repeal
 - Conduct audits of laws impacting the poor
 - Provide views and recommendations on any law referred to it by the Ministry of Law and Justice

About the Law Commission:

- **Nature:** The Law Commission is an executive body and is classified as a non-statutory body set up by the Government of India.
- **Historical Background:**
 - The first Law Commission was established in 1834 during the British era by the Charter Act of 1833, presided over by Lord Macaulay.
 - The first Law Commission of Independent India was formed in 1955, chaired by M. C. Setalvad.
- **Time Frame:** The Law Commission is constituted for a period of three years.
- **Mandate:** Its primary function is to work towards legal reform and act as an advisory body to the Ministry of Law and Justice, providing recommendations on legal matters and promoting the reform of laws in the country.

Conclusion - The establishment of the 23rd Law Commission reflects the government's commitment to legal reform and addressing issues within the legal framework, particularly those affecting marginalized sections of society. Through its efforts, the commission aims to ensure that the law remains relevant, effective, and aligned with contemporary societal needs.

3rd Joint Defence Cooperation Committee Meeting - India & Kenya

India hosted the third edition of the Joint Defence Cooperation Committee (JDCC) meeting with Kenya on September 3, 2024, in New Delhi. This meeting aims to strengthen bilateral defense ties and enhance cooperation between the two nations.

Bilateral Defense Cooperation Between India and Kenya

- **Memorandum of Understanding (MoU):**
 - India and Kenya signed an MoU on Defence Cooperation in July 2016, establishing a legal framework for collaboration in various defense sectors.
- **Joint Defence Cooperation Committee:**
 - The JDCC serves as a platform to holistically discuss defense cooperation issues between India and Kenya.
- **Aid:**
 - India gifted 30 Field Ambulances to the Kenya Defence Forces, enhancing their capabilities in combat and humanitarian operations.
- **Maritime Cooperation:**
 - In 2023, both countries issued a Joint Vision Statement on Maritime Cooperation in the Indian Ocean Region, known as “BAHARI.”
 - India conducted joint hydrographic surveys in Kenyan waters in 2013 and 2014, furthering maritime collaboration.
- **Training:**
 - India offers annual training courses for Kenya Defence Forces personnel in various military institutions. Indian officers also visit Kenyan institutes on deputation to enhance bilateral training and expertise.
- **Areas of Cooperation:**
 - The two nations are expanding cooperation across multiple sectors, including:
 - Defence production
 - Intelligence sharing
 - Counterterrorism
 - Cybersecurity
 - Anti-money laundering
 - Small arms and light weapons
 - Drugs and human trafficking
- **Military Exchanges:**
 - Regular official visits and study tours are conducted by delegations from both countries to share best practices.
 - Ships from the Indian Navy frequently make goodwill visits to Mombasa, reinforcing naval ties and cooperation.



Conclusion - The JDCC meeting signifies the commitment of both India and Kenya to bolster their defense partnership. By focusing on training, maritime cooperation, and intelligence sharing, both nations aim to enhance their security frameworks and address regional challenges collaboratively.

TAPI Pipeline Project

The Taliban chief minister's visit to Turkmenistan aimed to re-inaugurate the long-delayed Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline project, which is a significant natural gas initiative.



Key Features of the TAPI Pipeline Project

- **Objective:**
 - The TAPI pipeline aims to transport natural gas from Turkmenistan to Afghanistan, Pakistan, and India. This project is vital for energy security and economic cooperation in the region.
- **Route:**
 - The pipeline begins at the Galkynysh gas field in Turkmenistan, which is one of the largest natural gas reserves globally.
 - It travels through Afghanistan and Pakistan before terminating at Fazilka in northwestern India.
- **Financing:**
 - The project is financed primarily by the Asian Development Bank (ADB).
 - Turkmenistan secured a \$700 million loan from the Islamic Development Bank to support the project.
 - The remaining three countries—Afghanistan, Pakistan, and India—collectively contributed an initial investment of \$200 million.

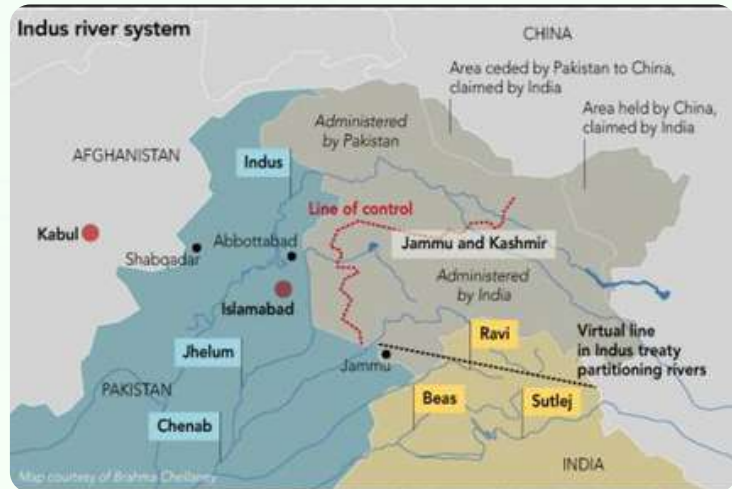
Significance for India

- **Energy Consumption:**
 - According to the BP Energy Outlook 2035, India is projected to account for 9% of world energy consumption while maintaining a 5% share in global production.
 - The TAPI pipeline is expected to enhance India's energy security by diversifying its natural gas sources, thereby reducing dependence on other suppliers.

Conclusion - The TAPI pipeline project represents a crucial step in regional energy cooperation, with potential benefits for all participating countries. It aims to foster economic development and energy security, particularly for India, which is looking to increase its energy supply amid growing demand.

Indus Water Treaty

India has recently sent a formal notice to Pakistan, seeking amendments to the Indus Water Treaty (IWT). This move highlights the ongoing complexities and challenges surrounding water-sharing agreements between the two nations.



Overview of the Indus Water Treaty

- **Background:**
 - The Indus Water Treaty is a water-sharing agreement between India and Pakistan, arranged by the World Bank.
 - Signed in 1960 in Karachi by Jawaharlal Nehru and Ayub Khan, the treaty regulates the use of the Indus River and its tributaries.

Distribution of River Water

- **Eastern Rivers (Beas, Ravi, Sutlej):**
 - India controls these rivers, which have a total flow of 41 billion m³ annually.
 - India utilizes 80% of the water from the eastern rivers.
- **Western Rivers (Indus, Chenab, Jhelum):**
 - Pakistan controls these rivers, which have a total flow of 99 billion m³ annually.
 - Pakistan relies on 80% of the water from the western rivers.
 - India is permitted to use the western rivers for limited irrigation and non-consumptive purposes, such as power generation and navigation.

Issues and Concerns

1. Ratle Hydroelectric Plant Dispute:

- Pakistan has raised objections to India's 850 MW Ratle Hydroelectric Plant and seeks arbitration to resolve the issue.
- Previous disputes, such as those related to the Baglihar Power Plant and Kishanganga Plant, have been resolved through the Permanent Court of Arbitration (PCA) or neutral experts.

2. Groundwater Use:

- Pakistan extracts groundwater from eastern rivers (Ravi and Sutlej) without facing formal objections from India, raising concerns about potential treaty violations.
- India's initiatives to utilize water or construct dams often meet objections from Pakistan, as seen in the Tulbul Navigation Project dispute.

3. Flooding in Kutch:

- Pakistan's river works have led to flooding in India's Great Rann of Kutch, which is viewed as a violation of the treaty.

Conclusion - The recent notice from India reflects ongoing tensions related to the Indus Water Treaty and highlights the importance of dialogue in addressing water-sharing issues between India and Pakistan. As both nations navigate these challenges, the treaty remains a critical framework for managing shared water resources in a region where water scarcity and disputes are prevalent.

Bangladesh Plans to Extradite Sheikh Hasina from India

The Chief Prosecutor of Bangladesh's International Crimes Tribunal (ICT) intends to seek the extradition of former Prime Minister Sheikh Hasina from India.

Background:

- Seeking Refuge: Sheikh Hasina fled to India in August after a mass uprising forced her resignation.
- Extradition Treaty: India and Bangladesh have an extradition treaty that could facilitate her return to face trial.

Extradition Treaty Overview:

- Definition: Extradition is the process by which one country requests the surrender of an individual from another country to face criminal charges.
- 2013 Treaty: India and Bangladesh signed an extradition treaty in 2013 to address issues like insurgency and terrorism along their borders.
- 2016 Amendment: The treaty was amended to streamline the process for extraditing fugitives.

Legal Justification for Extradition:

- Extraditing Sheikh Hasina is seen as essential for a fair trial under the International Crimes (Tribunals) Act of 1973.

Precedents:

- The treaty has enabled the extradition of notable figures, including:
 - Mujibur Rahman Assassination Case (2020): Two convicts were extradited for the 1975 assassination of Sheikh Mujibur Rahman.
 - Anup Chetia: The leader of the banned United Liberation Front of Assam (ULFA) was extradited after 18 years in a Dhaka prison.

Extradition Criteria:

- Minimum Sentence: The treaty mandates extradition for crimes carrying a minimum one-year sentence.
- Dual Criminality: The offense must be punishable in both countries. The charges against Hasina meet this criterion.

India's Extradition Framework:

- India has extradition treaties with 48 countries, including the USA, UK, and Australia, governed by the Indian Extradition Act of 1962.
- This Act covers all aspects of extradition, including composite offenses that occur in both India and abroad.

3 Cooperation Initiatives - Ministry of Cooperation

As part of the first 100 days of the third NDA government, the Union Home and Cooperation Minister has unveiled three key initiatives from the Ministry of Cooperation:

- White Revolution 2.0
- Standard Operating Procedure for Cooperation among Cooperatives
- Margdarshika for the formation and strengthening of 2 lakh new multi-purpose Primary Agricultural Credit Societies (MPACS), Dairy, and Fishery Cooperatives.

White Revolution 2.0

Key Focus Areas:

- **Women Empowerment:** Supports women milk farmers through formal employment and direct payment into their bank accounts, combating malnutrition.
- **Local Milk Production:** Aims to increase cooperative-led milk procurement from 66 million liters per day to 100 million liters per day.
- **Dairy Infrastructure Development:**
 - Computerization of 67,930 PACS (Primary Agricultural Credit Societies).
 - Establishment or upgrading of 100,000 cooperative societies for direct milk procurement.
- **Dairy Exports:** India aims to contribute one-third of global milk supply by 2030, with dairy exports expected to grow by 13% between 2024 and 2032.

Importance of the Dairy Sector:

- **Income Source:** Dairy provides 70-80% of the final market value to farmers, accounting for one-third of rural household income in India.
- **Consumer Versatility:** Dairy products serve various needs, from protein sources to indulgent foods like yogurt and ice cream.
- **Development Goals:** The sector supports farmer livelihoods, job creation, agricultural industrialization, and improved nutrition.
- **Risk Diversification:** Small farmers often combine agriculture and dairy farming for additional income.
- **Women Empowerment:** Women make up 69% of the workforce in dairy farming, significantly contributing to rural economies.

Challenges:

- **Rising Feed Costs:** Increased fodder and raw material prices are pushing dairy prices higher.
- **Fragmented Industry:** A regional and fragmented supply chain complicates quality and quantity maintenance.
- **Low Productivity:** India's average milk yield is only 50% of the global average, and only 22% of milk is processed.
- **Environmental Vulnerability:** Climate change and dairy farming's methane emissions pose sustainability challenges.
- **Marketing Issues:** The industry struggles with long supply chains and inadequate infrastructure.
- **Disease Outbreaks:** The sector is susceptible to diseases like Foot and Mouth Disease and Influenza.
- **Anti-Dairy Trends:** The rise of vegan options and plant-based alternatives is affecting dairy consumption.
- **Quality Concerns:** Issues with water contamination, milk adulteration, and pesticide use highlight the need for better handling and processing.

Way Forward:

- **Build Processing Infrastructure:** Rapid development of milk processing facilities is needed as India aims for 270 MT of milk production by 2050. This presents \$10 billion investment opportunities in high-value products.
- **Adopt Breeding Technologies:** Enhance milk yield through genetic improvements, such as sex-sorted semen technology, which increases the probability of female calf births.
- **Improve Animal Feed:** Farmers should cultivate high-yielding, protein-rich fodder to reduce reliance on expensive feed.
- **Invest in New Technologies:** Embrace innovations like Bulk Milk Coolers, IoT, and Blockchain for efficiency in milk handling and processing.

54th GST Council

The 54th GST Council convened in New Delhi under the leadership of the Union Minister for Finance & Corporate Affairs.

Here are the key decisions made during the meeting:

1. **Reduction in GST on Cancer Drugs:** The GST rate for cancer drugs, including Trastuzumab Deruxtecan, Osimertinib, and Durvalumab, will be lowered from 12% to 5%.
2. **Metal Scrap Supply:** A Reverse Charge Mechanism (RCM) will be introduced for the supply of metal scrap.
3. **Exemption for R&D Services:** The Council recommends exempting the supply of research and development services provided by government entities or institutions using government or private grants.
4. **Future of Compensation Cess:** A Group of Ministers (GoM) will be formed to explore the future of the compensation cess.
5. **Review of Life and Health Insurance GST Issues:** Another GoM has been established to review GST-related issues concerning life and health insurance.
6. **Launch of B2C E-Invoicing Pilot:** The Council has initiated a pilot program for B2C e-invoicing, a significant step towards digitalization.

About the GST Council:

- **Formation:** Established under Article 279A(1) through the 101st Constitutional Amendment Act.
- **Role:** The GST Council recommends GST rates for both the Union and State governments as per Article 279A(4).
- **Composition:**
 - **Chairperson:** Union Finance Minister
 - **Members:** Includes the Union Minister of State for Revenue and nominated members from each State Government, typically responsible for finance or taxation.
 - **Vice-Chairperson:** Elected from among the members (Article 279A(3)).
- **Decision-Making Process:**
 - GST rates are set collaboratively by the states and the central government during meetings.
 - A quorum of at least half the members is required for meetings.
 - Decisions are made by a majority of at least three-fourths of the weighted votes of members present. The central government holds one-third of the total votes, while the states collectively hold two-thirds.

Periodic Labour Force Survey (PLFS) – Annual Report

The National Sample Survey Office (NSSO) is releasing its Seventh Annual Report based on the Periodic Labour Force Survey conducted from July 2023 to June 2024.

Conceptual Framework of Employment and Unemployment Indicators

1. **Labour Force Participation Rate (LFPR):** The LFPR measures the percentage of the working-age population (ages 16-64) that is either employed or actively seeking employment.
2. **Worker Population Ratio (WPR):** This ratio indicates the percentage of the population that is currently employed.
3. **Unemployment Rate (UR):** The UR represents the percentage of individuals in the labor force who are unemployed.
4. **Activity Status:** This is defined by the activities a person engages in during a specific reference period.
 - **Usual Activity Status:** Reflects a person's activity over the last 365 days and includes:
 - **Principal Activity Status (ps):** The activity in which a person spent the most time during the previous year.
 - **Subsidiary Economic Activity Status (ss):** Any additional economic activities performed for 30 days or more in the past year.
 - **Current Weekly Status (CWS):** Determines activity status based on the last seven days preceding the survey.

Key Findings from the PLFS Annual Report:

- **Labour Force Participation Rate (LFPR):**
 - Rural Areas: Increased from 50.7% in 2017-18 to 63.7% in 2023-24.
 - Urban Areas: Rose from 47.6% to 52.0%.
 - Males: Increased from 75.8% to 78.8%.
 - Females: Jumped from 23.3% to 41.7%.
- **Worker Population Ratio (WPR):**
 - Rural Areas: Increased from 48.1% to 62.1%.
 - Urban Areas: Increased from 43.9% to 49.4%.
 - Males: Rose from 71.2% to 76.3%.
 - Females: Increased from 22.0% to 40.3%.
- **Unemployment Rate (UR):**
 - Rural Areas: Decreased from 5.3% to 2.5%.
 - Urban Areas: Dropped from 7.7% to 5.1%.
 - Males: Decreased from 6.1% to 3.2%.
 - Females: Decreased from 5.6% to 3.2%.



About the Periodic Labour Force Survey (PLFS)

- Conducted by the National Statistical Office (NSO) under the Ministry of Statistics and Programme Implementation (MoSPI) to assess employment and unemployment in India.
- Launched in April 2017, the PLFS replaced the previous Employment and Unemployment Survey (EUS).

Objectives of the PLFS:

- Estimate key employment and unemployment indicators such as the WPR, LFPR, and UR.
- Provide quarterly estimates for urban areas using the Current Weekly Status (CWS).
- Annually assess indicators for both rural and urban areas through the Usual Status and CWS.

Global Plastic Pollution Ranking

India has become the leading plastic polluter globally, releasing 9.3 million tonnes (Mt) of plastic each year, accounting for nearly one-fifth of the world's total plastic emissions.

Other Major Polluters:

- Nigeria: 3.5 Mt
- Indonesia: 3.4 Mt
- China: Now in fourth place due to improved waste management practices, including incineration and controlled landfills.

Global Trends in Plastic Pollution:

- Main Sources:
 - In the Global North, littering is the primary cause of plastic emissions.
 - In the Global South, uncollected waste significantly contributes to plastic pollution.
- Top Polluting Countries:
 - 69% of global plastic waste emissions originate from just 20 countries, primarily low- and middle-income nations.
- High-Income Countries:
 - While high-income countries generate more plastic waste, they do not rank among the top 90 polluters due to their more effective waste collection and disposal systems.

Understanding Plastic Emissions

Plastic emissions refer to the movement of plastic from controlled environments to unmanaged ones, occurring throughout the plastic lifecycle, from production to disposal.



Causes of Plastic Emission:

- **Improper Waste Management:** Inefficient systems lead to plastic waste being dumped in landfills, oceans, and other areas.
- **Industrial and Urban Runoff:** Plastic waste from factories and urban areas often flows into water bodies due to runoff.
- **Open Burning:** Burning plastic waste in open spaces, particularly in rural regions, contributes to emissions.

Status of Waste Generation in India

- **Low Waste Generation Estimates:** India officially reports a waste generation of 0.12 kilograms per person per day, which raises concerns about the accuracy of waste management statistics.

This data highlights the urgent need for improved waste management and pollution control strategies in India and worldwide.

International Big Cat Alliance (IBCA)

India, along with Nicaragua, Eswatini, and Somalia, has recently joined the International Big Cat Alliance (IBCA).

About IBCA:

- **Launch:** The alliance was initiated by the Prime Minister in 2023, celebrating 50 years of Project Tiger in India.
- **Objective:** IBCA aims to engage 97 range countries that encompass the natural habitats of the seven big cat species: tiger, lion, leopard, snow leopard, cheetah, jaguar, and puma. Notably, India is home to five of these species: tiger, lion, leopard, snow leopard, and cheetah, while puma and jaguar are absent.
- **Membership:** A total of 24 countries, including India, have agreed to become members of IBCA. All UN member countries are eligible to join.
- **Governance:** IBCA operates through a General Assembly composed of all member nations, an elected Council of member nations, and a Secretariat.
- **Funding:** The alliance has received an initial funding commitment of Rs. 150 crore from the Government of India for a period of five years (2023-24 to 2027-28).
- **Headquarters:** The headquarters of IBCA is located in India.

This collaboration aims to enhance conservation efforts for big cats globally, fostering cooperation and resource sharing among member nations.



State of the Rhino 2024 Report

The International Rhino Foundation (IRF) has published the State of the Rhino 2024 report, highlighting the current status of rhinos worldwide.

Key Findings:

- **White Rhino Population:** Increased from 15,942 in 2022 to 17,464 in 2023.
- **Stable Populations:** The populations of black rhinos and greater one-horned rhinos remain stable.
- **Overall Decline:** Fewer than 28,000 rhinos exist globally, a stark decrease from approximately 500,000 in the early 20th century.

About the One-Horned Rhino:

- **Species:** One of the five distinct rhino species.
- **Significance:** The largest of all rhino species.
- **Distribution:**
 - Native to: India, Bhutan, Nepal, Indonesia, and Malaysia.
 - Habitat in India: Found primarily in Assam, West Bengal, and Uttar Pradesh.
- **Protected Areas:**
 - Pobitora Wildlife Reserve
 - Rajiv Gandhi Orang National Park
 - Kaziranga National Park
 - Manas National Park
- **Protection Status:**
 - IUCN Red List: Vulnerable
 - CITES: Appendix I
 - Wildlife Protection Act, 1972: Schedule I

Sunlight-Powered Method to Remove Toxic Chromium

Researchers at the Institute of Nano Science and Technology (INST) have created an affordable method for removing toxic chromium from industrial wastewater.

Key Highlights:

- **Sunlight as a Catalyst:** This innovative method utilizes sunlight to convert harmful hexavalent chromium (Cr(VI)) into less toxic trivalent chromium (Cr(III)).
- **Microfluidic Technology:** The process employs a continuous flow photoreduction technique using microfluidic reactors and titanium dioxide (TiO₂) nanoparticles.

About Chromium:

- **Properties:** Chromium is a hard, brittle, and corrosion-resistant transition metal known for its shiny, steely-grey appearance.
- **Uses:**
 - Essential for producing alloys and stainless steel.
 - Plating provides a polished finish to steel.
 - Used as an industrial catalyst and in pigments.
 - Commonly applied in leather tanning.

Chromium Toxicity:

- **Hexavalent Chromium Risks:** Cr(VI) is highly toxic and linked to severe health issues, including lung cancer, allergies, and eczema.
- **WHO Guidelines:**
 - Recommended limit for Cr(VI) in drinking water is 0.05 mg/L.
 - For trivalent chromium (Cr(III)), the limit is set at 5 mg/L.

Agni-4 Ballistic Missile

India successfully conducted a test launch of the Agni-4 Intermediate Range Ballistic Missile from the Integrated Test Range in Chandipur, off the Odisha coast.



About Agni-4:

- **Range and Importance:** The Agni-4 is India's longest-range missile to date, playing a critical role in the country's nuclear deterrent strategy.
- **Technology:** This missile features Multiple Independently Targetable Reentry Vehicles (MIRVs), enhancing its strike capability.
- **Testing Authority:** The test was executed by the Strategic Forces Command, which is part of India's Nuclear Command Authority (NCA).
- **Development:** The missile was developed by the Defence Research and Development Organisation (DRDO).

Key Features:

- **Range:** Capable of striking targets up to 4,000 kilometers away.
- **Specifications:** The 20-meter-long missile has a payload capacity of 1,000 kg and can be launched from a road-mobile platform.
- **Type:** It is a surface-to-surface missile with a mobile, two-stage solid-fuel system.

Strategic Significance:

The Agni-4 enhances India's deterrence capability, particularly in relation to potential threats from China and Pakistan.

India at Paralympic Sports

India achieved its best-ever performance at the Paris Paralympics, securing a total of 29 medals: seven gold, nine silver, and 13 bronze.

About the Paralympics:

The Paralympics is the premier international event for athletes with disabilities, occurring shortly after the Olympic Games.

- The inaugural Paralympics took place in Rome in 1960 and is organized by the International Paralympic Committee (IPC), recognized by the International Olympic Committee (IOC).

Ethical Challenges in the Paralympics:

1. Fairness in Competition:

- **Equipment and Advantage:** Advanced prosthetics and enhancements can provide unfair advantages, raising issues of equality. Access to technology can vary among athletes, creating disparities.

2. Inspiration vs. Achievement:

- As performances improve through enhancements, the essence of true achievement may be overshadowed, calling into question the spirit of sport.

3. Safety Concerns:

- Enhanced equipment must prioritize safety. Performance should not come at the expense of safety standards for participants.

4. Definition of Equality:

- Differences in prosthetic heights complicate fair competition. Balancing inclusivity with fairness poses ethical dilemmas.

5. Performance Evaluation:

- Evaluating performance should include ethical, social, and psychological aspects, rather than focusing solely on physical ability or technology.

6. Commercialization and Exploitation:

- The commercialization of Paralympic sports may prioritize profit over athlete welfare, leading to exploitative practices.

Way Forward:

To enhance integrity and fairness in Paralympic sports, a multidisciplinary approach is crucial:

- **Fair Equality of Opportunity:** Establish clear guidelines to ensure all athletes have equitable access to competition and address disparities in equipment and technology.
- **Integration of Able and Impaired Competitions:** Promote joint events while respecting the unique challenges faced by para-athletes, helping to bridge the gap between able-bodied and para-sports.
- **Addressing Economic Injustices and Standardization of Equipment:** Tackle economic disparities in access to equipment and standardize specifications to ensure fairness.