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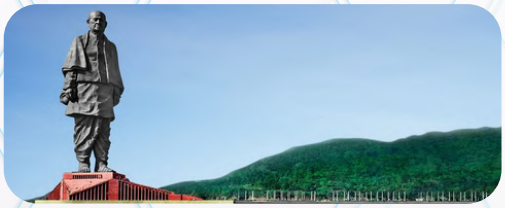
FOR UPSC CIVIL SERVICE EXAMINATION

OCTOBER 2024



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Union Cabinet Approves Classical Language Status for 5 Languages

The Union Cabinet has recently granted classical language status to Marathi, Bengali, Assamese, Pali, and Prakrit.

About-

Eighth Schedule of the Indian Constitution

- Eighth Schedule: Lists India's official languages, starting with 14 languages, now expanded to 22.
- Key Amendments:
  - Sindhi: Added in 1967 (21st Amendment).
  - Konkani, Manipuri, Nepali: Included in 1992 (71st Amendment).
  - Bodo, Dogri, Maithili, Santhali: Added in 2004 (92nd Amendment).

Classical Languages in India

Previously, all six classical languages were listed in the Eighth Schedule, but Pali and Prakrit are now exceptions.

What are Classical Languages? Classical languages, also known as Shastriya Bhasha, are ancient languages with rich literary and cultural heritage. They have significantly shaped the intellectual and cultural landscape of the region.

- Previously Recognized Classical Languages: Tamil, Telugu, Malayalam, Kannada, Sanskrit, and Odia.

Criteria for Classical Language Status

To qualify as a classical language, a language must meet these criteria:

- Ancient Origin: Historical texts dating back 1,500-2,000 years.
- Rich Literature: A valued collection of ancient literary works.
- Originality: A unique literary tradition, not borrowed.
- Distinct Evolution: Clear difference between the classical and modern versions of the language.

Benefits of Classical Language Status

The recognition brings several advantages:

- Research Centers: Establishes Centres of Excellence for deep study and research.
- Scholar Awards: Two major annual international awards for scholars in these languages.
- UGC Support: The UGC is encouraged to set up academic chairs for these languages in Central Universities.
- Cultural Recognition: Acknowledges the role of these languages in Indian heritage.
- Job Creation: Opens up job opportunities in archiving, translation, publishing, and digitization.

Banjara Virasat Museum

The Indian Prime Minister recently inaugurated the Banjara Virasat Museum in Poharadevi, Washim, Maharashtra, where he also paid tribute to Banjara leaders Sant Sevalal Maharaj and Sant Ramrao Maharaj.

About-

About the Banjara Virasat Museum

- Displays: The museum has 13 galleries that highlight the rich heritage of the Banjara community, featuring portraits of their leaders, significant historical events, and artifacts representing their traditional lifestyle.

Purpose:

- To protect and celebrate the cultural heritage of the Banjaras.
- To develop Poharadevi as a major cultural and religious center.

About Sant Sevalal Maharaj

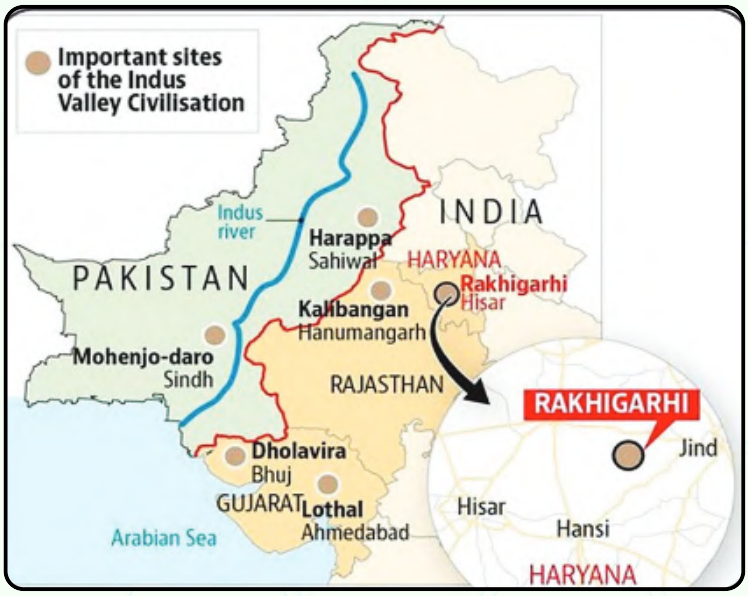
- Birth and Background: Born on February 15, 1739, in Surgondankoppa, Karnataka, Sant Sevalal Maharaj is a highly respected figure in the Banjara community.
- Reformer and Spiritual Leader: Recognized for his social reforms and spiritual guidance, he uplifted the Banjaras, advocating for their rights and well-being.
- Serving Nomadic Tribes: Known for traveling with his group, the Ladeniya Troup, he reached out to forest dwellers and nomadic tribes across the region.
- Expert in Ayurveda and Naturopathy: His knowledge in these fields helped clear superstitions and improve health practices among tribal communities.
- Lasting Influence: Inspired by his teachings, the Banjara community established permanent settlements called Tandas, moving away from their traditional nomadic life.

The Banjara Community

- Heritage: Often called “Gypsies,” the Banjaras have a vibrant history tied to a nomadic lifestyle.
- Origin of Name: The word "Banjara" is derived from “Vanaj” (trade) and “Jara” (travel), symbolizing their role in trading and supplying goods across villages.
- Spread Across India: While originating in Rajasthan, the Banjara community is now spread across multiple states and known by different names:
- Lambada or Lambadi in Andhra Pradesh, Lambani in Karnataka, Gwar or Gwaraiya in Rajasthan
- Language: Their unique language, “Gorboli” or “Gormati Boli,” belongs to the Indo-Aryan language group.

National Maritime Heritage Complex (NHMC)

The Union Cabinet has approved the development of the National Maritime Heritage Complex at Lothal in Gandhinagar, Gujarat.



About-

Project Highlights

- Purpose: The NHMC aims to celebrate India's extensive 4,500-year-old maritime history, setting out to be the largest maritime heritage complex in the world.
- Lead Ministry: The project is managed by the Ministry of Ports, Shipping, and Waterways.

- Key Attractions:
  - A state-of-the-art Lighthouse Museum
  - Pavilions representing different coastal states
  - A maritime-themed eco-resort, among other attractions

About Lothal

- Discovery: The site was discovered in 1954 by Indian archaeologist S.R. Rao.
- Location: Lothal is the southernmost city of the Indus Valley Civilization and its only known port-town.
  - Situated on the Bhogava River, a tributary of the Sabarmati River, close to the Gulf of Khambhat.
- Name Origin: "Lothal" comes from the Gujarati words "Loth" (dead) and "thal" (mound), meaning "mound of the dead."

- Historical Trade Hub:
  - Lothal was a bustling trade center known for beads, gems, and ornaments.
  - Its dockyard supported maritime trade with ancient civilizations like Mesopotamia and Egypt.

Doddalathur Megalithic Burial Site

A team of scholars from the University of Mysore is currently excavating megalithic burial sites in Chamarajanagar district, Karnataka.

About-

About Doddalathur Megalithic Burial Site

- Location: The site is in Doddalathur village, a small valley surrounded by the Male Mahadeshwara Hill ranges in Hanur taluk, Chamarajanagar district, Karnataka.
- Period: The site dates back to the Megalithic-Iron Age, between 1200 BCE and 300 CE.
- Discovery: The site was first discovered in 1961 by C. Krishnamurti of the Archaeological Survey of India (ASI).
- Burial Features: The site includes burials marked by large stone boulders arranged in circular patterns.

About Megaliths

- Definition: A megalith is a large stone used to build prehistoric structures or monuments, either alone or with other stones.
- Purpose: These structures were built either as burial sites or as memorials for commemorative purposes.
- Era: Most megalithic monuments in India were constructed during the Iron Age, from 1500 BC to 200 AD.
- Geographic Spread: Megaliths are found across Peninsular India, particularly in states like Maharashtra, Karnataka, Tamil Nadu, Kerala, Andhra Pradesh, and Telangana.

Sardar Patel's 150th Birth Anniversary

The government has announced a two-year-long nationwide celebration to commemorate the 150th birth anniversary of Sardar Vallabhbhai Patel, beginning this year.

Sardar Patel's 150th Birth Anniversary

Context: The government has announced a two-year-long nationwide celebration to commemorate the 150th birth anniversary of Sardar Vallabhbhai Patel, beginning this year.

About Sardar Vallabhbhai Patel-

- Birth and Early Life: Born on 31st October 1875 in Nadiad, Gujarat.
- Key Positions: He was the first Home Minister and Deputy Prime Minister of independent India, known for his leadership in national integration.
- Ideology: Sardar Patel was a strong advocate for a united India (Ek Bharat) and a prosperous India (Shresth Bharat). His vision aligns with the Atma Nirbhar Bharat initiative, which promotes self-reliance.
- Legacy: Known as the "Iron Man of India," Sardar Patel's contributions to India's independence, unity, and governance have left an indelible mark on the nation.

Sardar Vallabhbhai Patel's Contributions in the Freedom Movement

- Kheda Satyagraha (1918): Patel fought for farmers in Gujarat against unjust British taxes, integrating their cause into the national freedom struggle.
- Bardoli Satyagraha (1928): His leadership in resisting unjust land revenue hikes led the women of Bardoli to honor him with the title of 'Sardar' (leader).
- Advocacy for Social Reforms: Patel worked against alcoholism, untouchability, and caste discrimination, promoting women's empowerment in Gujarat and beyond.
- Indian National Congress Leadership: As President of the Indian National Congress (INC) in 1931, he led the Karachi session, supporting the Gandhi-Irwin Pact and passing resolutions on Fundamental Rights and Economic Policy.

About Statue of Unity

- Purpose: The Statue of Unity was built in honor of Sardar Vallabhbhai Patel.
- Inauguration: It was inaugurated on 31st October 2018 to mark Patel's 143rd birth anniversary.
- Height: Standing at 182 meters, it is the tallest statue in the world.
- Recognition: In 2020, the Statue of Unity was added to the 'Eight Wonders' of the Shanghai Cooperation Organization (SCO).

Russian Traveler Afanasy Nikitin

A concert organized by the Kozhikode Corporation and the Russian House in Kozhikode celebrates 555 years since the visit of Russian traveler Afanasy Nikitin to India.

About Afanasy Nikitin

- Background: Afanasy Nikitin was a Russian explorer who reached India long before Vasco da Gama. His arrival at Cambay (Khambhat) in Gujarat in 1469 opened doors to understanding India's rich and diverse culture.
- Historical Context: Nikitin's journey, made in 1469, marked a significant moment in the historical connections between Russia and India. He also visited the court of Bahamani Sultan Muhammad Shah III.

Voyage Beyond Three Seas (1466–1472)

- Journey: Nikitin's journey to India spanned from 1466 to 1472. He crossed the Caspian Sea, the Black Sea, and the Arabian Sea to reach India.
- Travelogue: His literary work, Voyage Beyond Three Seas, is one of the earliest travelogues by a European on India, providing valuable insights into 15th-century Indian society and politics.
- Cultural Observations:
  - Political Landscape: He observed the conflicts between the Bahmani Sultanate and the Vijayanagara Empire.
  - Royal Processions: Nikitin described royal processions during Ulu Bayram (Eid) and noted social divisions, with upper castes wearing silk and others wearing simpler clothing.
  - Market Dynamics: From Bidar, he documented the bustling marketplace, particularly the trade of horses and textiles.

Return Journey

- After Three Years: Following his three-year stay in India, Nikitin sailed from Dabhol to Ethiopia and then to Muscat before returning to Russia. His journey contributed to enriching global perspectives and understanding cross-cultural connections.

Circular Migration: A Solution for Global Skill Shortage

A concert organized by the Kozhikode Corporation and the Russian House in Kozhikode celebrates 555 years since the visit of Russian traveler Afanasy Nikitin to India.

About Circular Migration

- Definition: Circular migration refers to the repeated movement of people between their home country and a destination country, typically in response to seasonal employment opportunities. This can occur across international borders or within a country between rural and urban areas. It is most common among low-income groups who seek temporary work abroad.
- Criteria for Circular Migration (Philippe Fargues):
  - Temporary residence in the destination country.
  - Multiple entries into the destination country.
  - Freedom of movement between the origin and destination countries.
  - Legal right to stay in the destination country.
  - Protection of migrants' rights.
  - Demand for temporary labor in the destination country.
- Movement Frequency: A person is considered a circular migrant after completing at least two cycles of migration between the origin and destination countries (e.g., A to B, back to A, then A to B again).

Costs of Circular Migration

- Brain Drain: Loss of skilled workers from the home country, affecting human resource development.
- Limited Skill Utilisation: Migrants may work in low-skilled jobs abroad, gaining little relevant experience to bring back home.
- Social Impact: Temporary separation of families can disrupt social structures, particularly for children left behind.
- Exploitation: Migrants may face deception and exploitation, leading to forced labor in some cases.
- Example: A tragic building fire in Kuwait resulted in the deaths of 45 Indians and three Filipino nationals, highlighting the risks faced by migrant workers.
- Gender Issues: Traditional gender roles often limit women's participation in circular migration.
- Health Risks: Migrants may face health risks due to isolation, poor living conditions, and potential disease transmission to home countries.
- Language Barriers: Migrants may face difficulties in adapting to new environments due to language differences, often leading to reliance on intermediaries who may exploit them.
- Example: The Kafala system in the UAE has been criticized for giving employers excessive control over immigrant laborers, especially those in low-wage jobs.
- Skill-Matching: Government-to-Government (G-to-G) agreements require precise skill matching between sending and receiving countries, making the selection process complex.

Recommendations to Enhance India's Opportunities Amid Global Skill Shortages

1. Facilitating International Mobility: Simplify visa processes for students, professionals, and skilled workers to ease international movement.
2. Mutual Recognition of Qualifications: Create agreements for the mutual recognition of educational and professional qualifications.
3. Incentivizing Return Migration: Offer incentives for skilled workers to return to India, such as tax benefits or grants for starting businesses.
4. Reintegration Programs: Develop initiatives to help returning migrants reintegrate into India's economy and society.
5. Expand Mobility Partnerships: Negotiate more Migration and Mobility Partnership Agreements (MMPAs) with countries facing skill shortages.
6. Other Measures:
   - Harmonize labor laws to protect workers' rights.
   - Provide social security and health benefits to migrants.
   - Enhance skill development programs to increase employability and income potential.

Global Multidimensional Poverty Index (MPI) 2024

The Global Multidimensional Poverty Index 2024 has recently been released, highlighting acute poverty levels worldwide.

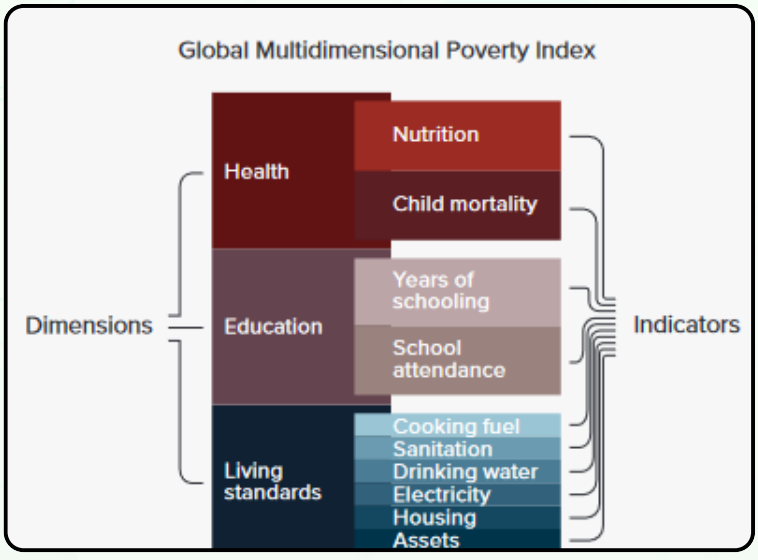
About the Global MPI

- Purpose: The Global MPI is a comprehensive measure of acute multidimensional poverty across over 100 developing countries, capturing deprivations experienced by individuals across multiple dimensions.
- Launch Year: 2010
- Published by: The Oxford Poverty and Human Development Initiative (OPHI) and the United Nations Development Programme (UNDP) Human Development Report Office.

MPI Criteria

The Global MPI assesses poverty across three main dimensions:

1. Health
   - Indicators: Nutrition, Child & Adolescent Mortality
2. Education
   - Indicators: Years of Schooling, School Attendance
3. Standard of Living
   - Indicators: Housing, Household Assets, Cooking Fuel, Sanitation, Drinking Water, Electricity



Key Findings

- Acute Poverty: Over 1.1 billion people globally live in acute poverty.
- Countries with Highest Poverty Levels:
  - India: 234 million people
  - Pakistan: 93 million people
  - Ethiopia: 86 million people
  - Nigeria: 74 million people
  - Democratic Republic of the Congo: 66 million people
  - These five countries collectively account for 48.1% of the global poor.

Child Poverty

- Children Under 18: Approximately 584 million children (27.9% of all children globally) live in extreme poverty.
- Adults: 13.5% of adults live in extreme poverty.

Regional Distribution

- Sub-Saharan Africa and South Asia: 83.2% of the world's poorest people live in these regions.
- Low-Income Countries: Home to 34.8% of all poor individuals (about 400 million).
- Middle-Income Countries: Home to 65.2% of all poor individuals (about 749 million).

Poverty in Conflict Zones

- Conflict-Related Poverty: 2023 saw the highest level of conflict since World War II, displacing over 117 million people. Around 455 million (40% of those living in poverty) are in conflict-affected countries.

NITI Aayog's National Multidimensional Poverty Index (NMPI)

- Methodology: Based on the internationally recognized Alkire-Foster methodology.
- Indicators: NMPI uses 12 indicators compared to the 10 indicators in the Global MPI.
  - Additional Indicators in NMPI: Maternal Health and Bank Account

Global Hunger Index (GHI) 2024

India ranks 105th out of 127 countries in the 2024 Global Hunger Index, indicating significant challenges in addressing hunger and malnutrition.

Key Findings of the 2024 Report (India):

Overall Score 27.3 ; **Undernourished** 13.7% ; **Stunted** 35.5% ; **Wasted** 18.7% ; **Under-Five Mortality Rate** 2.9%

Key Highlights

- India's Rank: 105th out of 127 countries, categorized as "serious" in terms of hunger levels.
- South Asia Comparison:
  - "Serious" Category: India, Pakistan, and Afghanistan.
  - "Moderate" Category: Bangladesh, Nepal, and Sri Lanka.
- Global Hunger:
  - Total Affected: 733 million people worldwide face hunger.
  - Dietary Inadequacy: 2.8 billion people globally cannot afford a healthy diet.

About the Global Hunger Index

- Established: First published in 2006 by the International Food Policy Research Institute (IFPRI), with Welthungerhilfe (Germany); Concern Worldwide (Ireland) joined in 2007.
- Purpose: The GHI is published annually to measure and monitor hunger across the globe, providing insights into multiple dimensions of hunger over time.
- Scoring System:
  - Scale: 0 to 100 points.
    - 0 represents no hunger.
    - 100 represents the highest level of hunger.

GHI Indicators

The GHI score is based on four key indicators:

1. Undernourishment: Percentage of the population with insufficient caloric intake.
2. Child Stunting: Percentage of children under five with low height for their age, reflecting chronic undernutrition.
3. Child Wasting: Percentage of children under five with low weight for their height, reflecting acute undernutrition.
4. Child Mortality: Percentage of children who die before the age of five, often due to malnutrition and poor health environments.

Stunning Aurora Borealis Lights Up the Sky

Recently, an unusually intense aurora display was visible far south of typical regions, reaching places like Germany, the UK, New England, New York City, and even New Mexico. This is due to a strong solar storm impacting Earth's magnetosphere.

Key Points

- Cause: The aurora phenomenon is driven by a particularly powerful solar storm linked to coronal mass ejections (CMEs).
- Impact: The current display is part of a series of solar storms occurring in 2024, due to heightened solar activity during the peak of the sun's 11-year cycle.

What is the Aurora Phenomenon?

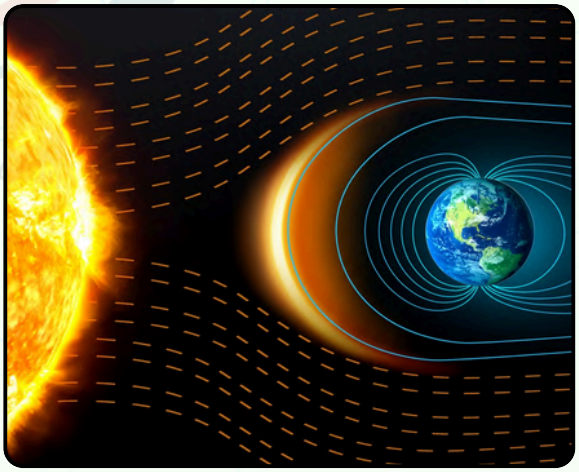
- Auroras are natural light displays in Earth's polar regions, known as aurora borealis in the Northern Hemisphere and aurora australis in the Southern Hemisphere.
- Formation:
  - Charged particles from the solar wind interact with Earth's magnetosphere, creating dazzling light displays as they funnel toward the poles and collide with atmospheric atoms.
  - Colors: The resulting colors depend on the atmospheric elements involved—green and red from oxygen, and blue and purple from nitrogen.

The Solar Cycle and Solar Storms

- 11-Year Solar Cycle: The sun's activity follows an 11-year cycle, with periods of increased solar storms and flares during the solar maximum.
- Current Phase: The sun is near this peak, resulting in more frequent geomagnetic storms. The solar maximum is anticipated to subside around 2026.
- Recent Activity: In May 2024, the sun released one of its largest solar flares in two decades, leading to ongoing intense auroral displays.

Geomagnetic Storms

- Definition: A geomagnetic storm is a disturbance in Earth's magnetic field caused by solar activity, particularly from CMEs.
- Solar Activity:
  - Nuclear fusion within the sun generates energy, part of which is released as solar flares, radiation, and CMEs.
  - CMEs release large clouds of charged plasma, and when they reach Earth, they interact with our magnetosphere, causing geomagnetic storms.



Potential Impacts of Strong Geomagnetic Storms

1. Power Grids: Solar storms can induce electric currents in power lines, potentially overloading transformers and causing power outages, as seen in Quebec in 1989.
2. Satellites: Geomagnetic storms can damage satellites, especially those in high, geosynchronous orbits.
3. Aviation: These storms disrupt GPS and radio communications, particularly affecting flights over polar regions.
4. Astronauts: While currently protected in low Earth orbit, astronauts must consider radiation exposure, especially during spacewalks.
5. Solar System Space Weather: These storms impact space weather beyond Earth, influencing the entire solar system.

Cyclone Dana

Cyclone Dana recently made landfall along Odisha's coastline, marking the second cyclone to form in the North Indian Ocean within two months, following Cyclone Asna in the Arabian Sea.

Key Details

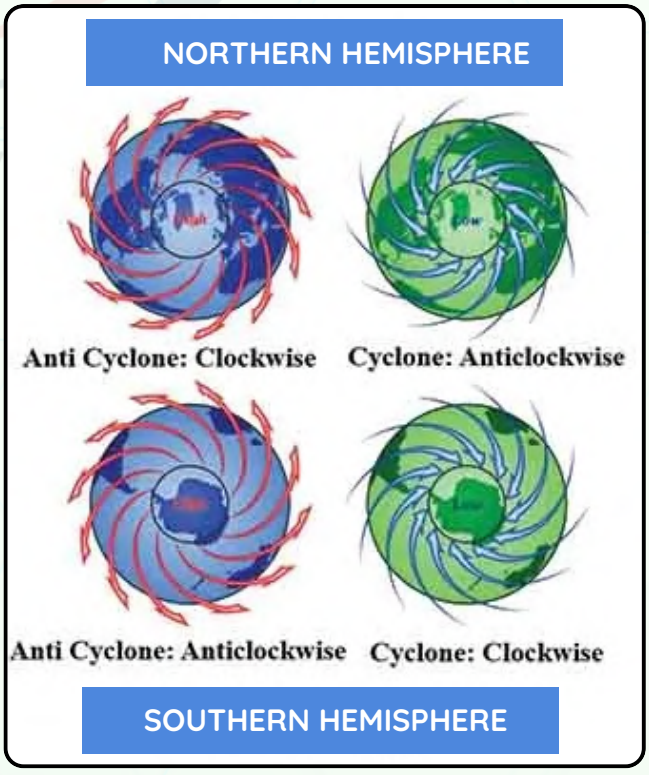
- Naming: Named "Dana" by Qatar, meaning a beautiful, precious pearl in Arabic.
- Regional Cyclone Development: Cyclones in the North Indian Ocean typically develop during two main periods:
  - Pre-monsoon (April to June)
  - Post-monsoon (October to December)

About Cyclones and Circulation Patterns

- Cyclone Basics:
  - A cyclone is a large-scale rotating air mass around a center of low atmospheric pressure.
  - Circulation Patterns:
    - Cyclonic (low-pressure system): Winds circulate counterclockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere.
    - Anticyclonic (high-pressure system): Winds circulate clockwise in the Northern Hemisphere and counterclockwise in the Southern Hemisphere.

.Types of Cyclones

1. Tropical Cyclones:
   - Form between the Tropics of Cancer and Capricorn.
   - Develop over warm tropical or subtropical waters.
   - Examples: Cyclones in the Bay of Bengal and Arabian Sea.
2. Extratropical Cyclones (Temperate Cyclones):
   - Generally occur in temperate or high-latitude regions, even forming in Polar Regions.



About Tropical Cyclones

- Latitudinal Range: Confined between 30° N and 30° S.
- Required Conditions for Formation:
  a. High sea surface temperature (above 27°C).
  b. Coriolis effect to support the creation of cyclonic circulation.
  c. Small variations in vertical wind speed to avoid disruption of the cyclone's structure.
  d. Latent heat to drive the storm's energy.
  e. Upper-level divergence above the sea level system.

Worldwide Terminology for Tropical Cyclones

- Typhoons: China Sea & Pacific Ocean.
- Hurricanes: Caribbean Sea & Atlantic Ocean (West Indian islands).
- Tornados: Guinea lands of West Africa and southern USA.
- Willy-willies: Northwestern Australia.

Supreme Court Upholds Section 6A of Citizenship Act

The Supreme Court of India upheld the constitutional validity of Section 6A of the Citizenship Act, 1955, by a 4:1 majority.

Key Highlights

- Enhanced Immigration Control: The Supreme Court emphasized stricter enforcement of immigration laws and called for judicial oversight on implementing immigration and citizenship laws.

About Section 6A of the Citizenship Act

- Assam Accord Framework: Introduced in 1985 to implement the Assam Accord, Section 6A sets the criteria for recognizing migrants in Assam as citizens or expelling them.
- Citizenship Eligibility:
  - Migrants who entered Assam before January 1, 1966, and have resided there continuously, are considered Indian citizens.
  - Those arriving between January 1, 1966, and March 24, 1971, can register after undergoing verification.

Challenges Against Section 6A

- Concerns of Discrimination:
  - Petitioners argued that Section 6A unfairly targets Assam, potentially altering its demographics and cultural heritage, making indigenous Assamese a minority.
- Inconsistent Cut-off Dates:
  - The petitioners also claimed that Section 6A conflicted with the original constitutional cut-off date for citizenship (July 19, 1948), asserting that Bangladesh was part of Pakistan until 1971.

Center's Defense of Section 6A

- Regulatory Power: Article 11 of the Indian Constitution empowers Parliament to regulate citizenship, and Entry 17 in the Union List supports laws regarding citizenship, naturalization, and aliens.
- Consequences of Removal: Respondents, including Citizens for Justice and Peace, argued that striking down Section 6A could render many residents stateless.

Supreme Court Judgement Highlights

- Constitutional Compliance: Section 6A does not violate Articles 6 and 7, which established the initial cut-off date for citizenship. The provision is within constitutional limits and addresses later migrants not covered by Articles 6 and 7.

- Legislative Balance: Section 6A balances humanitarian needs with Assam's economic and cultural concerns.
- State-specific Implementation: Due to Assam's unique circumstances, it is rational for Section 6A to apply exclusively to Assam.
- Valid Cut-off Date: The date of March 25, 1971, aligns with Operation Searchlight in East Pakistan, and thus, aligns historically and practically for citizenship criteria.
- Cultural Heritage Protection: The court confirmed that Section 6A does not violate Article 29 (protection of cultural rights) and does not undermine Assam's linguistic or cultural heritage.

Way Forward for Addressing Immigration in Assam

- Enhanced Enforcement: Strengthen monitoring and resources to enforce Section 6A, including expanding personnel for immigration enforcement.
- Training Programs: Provide specialized training for immigration authorities to ensure fair enforcement.
- Integration with Expulsion Act: Coordinate Section 6A with the Immigrants (Expulsion from Assam) Act, 1950, for streamlined immigrant identification and expulsion.
- Judicial Oversight: Establish continuous judicial monitoring for adherence to laws and protection of resident rights.
- Regular Reporting: Agencies involved in enforcement should submit regular updates on immigration control measures.
- Tribunal Strengthening: Increase immigration tribunals and provide additional training for tribunal staff on immigration laws.

16th BRICS Summit Overview:

16th BRICS Summit Overview:

- Location: Kazan, Russia (Capital of Tatarstan)
- Date: October 22-23, 2024
- Theme: "Strengthening Multilateralism for Just Global Development and Security"
- Key Participants: The leaders of Brazil, Russia, India, China, and South Africa, as well as new BRICS+ members Egypt, Ethiopia, Iran, and the UAE. Saudi Arabia's foreign minister attended, though formal membership is pending.

Origins: Formed in 2006 by Brazil, Russia, India, China; South Africa joined in 2010.

Key Outcomes and Initiatives

1. Expansion and New Members:

The summit marked the first meeting of BRICS+ with participation from Egypt, Ethiopia, Iran, and UAE, highlighting the group's growing global influence.

2. Kazan Declaration:
    - Global Issues: Advocated for dialogue-based solutions for the Ukraine crisis and condemned civilian casualties in Gaza and Lebanon.
    - Sanctions: Criticized Western sanctions for their adverse impact on global economies and development.
    - Financial System Reform: Emphasized restructuring the international financial architecture for more equitable global economic governance.
3. BRICS Grain Exchange:
    - Russia proposed creating a grain exchange, aiming to expand this initiative to other agricultural sectors.
4. Cross-Border Payment System:
    - Focused on cost-effective, transparent systems and the use of local currencies to facilitate trade.
5. Big Cat Conservation:
    - Supported India's proposal for an International Big Cats Alliance for the protection of endangered big cat species.

Challenges and Strategic Directions:

- Geographical Diversity: The wide dispersion of BRICS members across continents challenges cohesive regional cooperation.
- Economic Asymmetries: China's economic dominance within BRICS poses potential for economic imbalances.
- Perception as Anti-West: The presence of countries like China, Russia, and Iran may be perceived as opposing Western norms, creating a need for balance.
- Expansion Policy: A structured policy for future BRICS expansion is needed to ensure alignment in goals and values across diverse political ideologies.

Major BRICS Initiatives:

- Contingent Reserve Arrangement (CRA): Provides financial aid to members facing liquidity crises.
- New Development Bank (NDB): Focused on financing sustainable infrastructure projects in developing countries, now open to new member countries like Bangladesh, UAE, and Uruguay.
- BRICS Payments Task Force: Enhances national payment systems among members.

Way Forward:

1. Strengthen Cooperation: BRICS should reinforce macroeconomic policy coordination and work with global organizations (e.g., G20, IMF).
2. Diversification in Partnerships: Leverage BRICS' diversity for energy partnerships, tech transfer, and space research.
3. Building Institutions: Establish dedicated BRICS institutions (e.g., a Secretariat) to guide the group's expanding role.
4. People-to-People Ties: Boost cultural exchanges and tourism through initiatives like a BRICS Visa or joint educational institutions.

21st ASEAN-India Summit

The 21st ASEAN-India Summit took place in Vientiane, Laos, on October 11, 2024, where Prime Minister Modi presented a comprehensive approach to strengthening ties with ASEAN.

Key Highlights

1. **10-Point Plan: PM Modi introduced a 10-point agenda to enhance the ASEAN-India Comprehensive Partnership.**
2. **Maritime Cooperation: Agreement on enhancing collaboration between the ASEAN Outlook on the Indo-Pacific (AOIP) and India's Indo-Pacific Oceans Initiative (IPOI).**
3. **New ASEAN-India Plan of Action (2026-2030): Leaders committed to developing this new plan to maximize the ASEAN-India partnership's potential.**
4. **Counter-Terrorism Cooperation: India's role as co-chair of the ASEAN Defence Ministers' Meeting (ADMM)-Plus Experts' Working Group on Counter-Terrorism was highlighted.**
5. **Trade Agreement Review: Both sides stressed the need to expedite the ASEAN-India Trade in Goods Agreement (AITIGA) review.**

10-Points Plan

1. **Tourism Collaboration 2. Women in Science 3. Trade Agreement Review 4. health resilience 5. Green Hydrogen Workshop 6. Decade of the Act East Policy 7. Educational Scholarships 8. Disaster Resilience 9. Cyber Policy 10. Climate Resilience**

Evolution of ASEAN-India Dialogue Relations

1. **Early 1990s: India initiated the Look East policy, enhancing relations with Southeast Asia.**
2. **Strategic Partnership (2012): ASEAN and India elevated ties to a Strategic Partnership, celebrating 20 years of dialogue.**
3. **Act East Policy: This policy expands beyond ASEAN, emphasizing relations with other Indo-Pacific nations.**
4. **Comprehensive Strategic Partnership (2022): Both parties solidified their partnership, celebrating 30 years of collaboration.**

Significance of the India-ASEAN Partnership

1. **Economic: ASEAN-India trade stands at over USD 130 billion, with the FTA boosting trade ties. Singapore is a significant trade partner within ASEAN.**
2. **Strategic: ASEAN plays a critical role in India's Indo-Pacific and regional security strategy.**
3. **Defence and Security: The ASEAN-India Maritime Exercise and ADMM+ reinforce defense ties, vital to India's regional security goals.**
4. **Humanitarian Assistance: India has provided prompt disaster relief, strengthening goodwill through initiatives like Operation Sadbhav.**

Challenges

- Market Access and Tariff Barriers: High tariffs and limited mutual recognition agreements restrict Indian exports.
- Trade Imbalance: India's trade deficit with ASEAN has risen, primarily in electronics and machinery.
- Infrastructure Connectivity: Projects like the India-Myanmar-Thailand Trilateral Highway have faced delays.
- China Factor: India's strategic moves, such as the Quad Alliance, receive mixed responses from ASEAN, partly due to China's regional influence.

Measures for Improvement

- Reviewing AIFTA: Address trade imbalances and seek better market access.
- Enhanced Infrastructure: Fast-track the India-Myanmar-Thailand Highway and create a comprehensive "Connectivity Master Plan."
- Boosting Manufacturing Competitiveness: Extend the Production Linked Incentive (PLI) scheme to industries important for ASEAN trade.
- Strengthening Cultural Connections: Tourism, collaborative media projects, and language courses can help deepen cultural ties.

ASEAN - Association of Southeast Asian Nations

- Establishment: Formed on August 8, 1967, in Bangkok, Thailand, through the ASEAN Declaration (Bangkok Declaration).
- Founding Members: Indonesia, Malaysia, Philippines, Singapore, and Thailand.
- Motto: "One Vision, One Identity, One Community."
- Current Members (10 total):
  - Original founding members: Indonesia, Malaysia, Philippines, Singapore, Thailand.
  - Subsequent members: Brunei Darussalam (joined in 1984), Vietnam (1995), Lao PDR and Myanmar (1997), and Cambodia (1999).
- Chairmanship: Rotates annually among member states in alphabetical order (based on the English names).

East Asia Summit (EAS)

- Establishment: Founded in 2005 as an ASEAN-led initiative.
- Objective: To promote openness, inclusiveness, respect for international law, and uphold ASEAN centrality, with ASEAN as the central driving force.
- Members (18 total):
  - 10 ASEAN Member States: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam.
  - 8 Non-ASEAN Members: Australia, China, India, Japan, New Zealand, South Korea, Russia, and the United States.

23rd Meeting of the Council of Heads of Government of SCO

- **Held**: October 15-16, 2024, in Islamabad, Pakistan
- **Chair**: Pakistan Prime Minister Shehbaz Sharif
- **Agenda**: Enhancing regional cooperation in economy, trade, environment, culture, and regional security.

Key Highlights:

- Economic Cooperation: Emphasis on sustainable growth, green development, digital economy, MSMEs, and job creation.
- Support for BRI: Reaffirmed backing for China's Belt and Road Initiative (BRI) and integration with the Eurasian Economic Union.
  - India's Position: Opposed the One Belt, One Road initiative due to CPEC's passage through Pakistan-occupied Kashmir.
- Climate Action: Committed to climate change efforts with a Special Working Group on Climate Change.
- Food Security: Focused on cooperation in food security and promoting climate-resilient crops.
- Humanitarian and Cultural Ties: Enhanced cooperation in education, culture, sports, and youth diplomacy; planned for SCO Sports Games.
- SCO Expansion: Discussed Belarus's accession and the strengthening of SCO financial structures.
- Counterterrorism: India emphasized tackling the "Three Evils" of terrorism, separatism, and extremism.

Challenges within the SCO

1. Geopolitical Tensions: Differences among members (India, China, Pakistan) affect the organisation's cohesion.
2. Expansion Risks: New members may dilute the core mandate, bringing divergent priorities.
3. Counter-Terrorism: Limited success in addressing terrorism and drug trafficking within the region, especially in the Golden Crescent.
4. Anti-Western Stance: China and Russia's influence can complicate India's balance between the SCO and Western partnerships.
5. China-Pakistan Influence: India's opposition to BRI and CPEC limits its assertiveness in SCO matters.
6. Divergent Interests: Member states have varied agendas, challenging consensus and cooperation.

Way Forward for India in the SCO

- Strengthening Cooperation: Focus on common objectives like counterterrorism, economic cooperation, and cultural exchanges.

- Managing Expansion: Ensure new members align with SCO's mandate to prevent dilution of core objectives.
- Enhancing Counter-Terrorism Efforts: Strengthen the Regional Anti-Terrorist Structure (RATS) and ensure consistent anti-terrorism commitments among members.
- Adapting to New Challenges: Address emerging issues like cybersecurity, climate change, and inclusive economic growth.
- Balancing Relations: Maintain a balance between Western alliances and SCO engagements, leveraging SCO for strategic benefits.
- Promoting Regional Connectivity: Use the platform to push for connectivity projects like the International North-South Transport Corridor (INSTC).

India-Pakistan Renewal of Kartarpur Corridor Agreement

India and Pakistan have extended the Kartarpur Corridor agreement for another five years, ensuring continued access for Indian pilgrims to visit the Kartarpur Sahib Gurdwara in Pakistan.

About the Kartarpur Corridor

- Connection: Links Darbar Sahib Gurdwara in Kartarpur, Pakistan, with Dera Baba Nanak shrine in Punjab, India.
- Historical Significance: Guru Nanak Dev, the founder of Sikhism, spent the last 18 years of his life at Kartarpur.
- Construction: Funded by the Maharaja of Patiala in the 1920s.

Protocol on Visits to Religious Shrines:

- Governed by the 1974 Protocol between India and Pakistan, which lists shrines open for cross-border visits, requiring visas for most except the Kartarpur Corridor.

Visa-Free Access:

- Indian pilgrims can visit without a visa; a permit is all that's required for crossing into Pakistan.
- Geographic Location: Situated on the Ravi River, part of the Indus River system.

Commemoration:

- Opened on November 12, 2019, in celebration of Guru Nanak Dev's 550th birth anniversary, establishing it as a symbol of peace and cross-border cooperation.

L69, G4, and C10 Call for Urgent UNSC Reforms

The Group of Four (G4), along with other groupings like L69 and C-10, have emphasized the need for urgent reforms in the United Nations Security Council (UNSC) to make it more representative, accountable, and reflective of contemporary global realities.

About the G4 (Group of Four)

- Members: Japan, Brazil, Germany, and India.
  - All four countries aspire to become permanent members of the UNSC.
- G4 Proposal:
  - Proposes an increase in the UNSC membership from 15 to 25.
  - Suggests adding six permanent and four non-permanent members to the Council.
- Tradition: G4 members often meet on the sidelines of the UN General Assembly to discuss UNSC reform.

About L69

- Members: 42 developing nations (including India), spanning Asia, Africa, Latin America, the Caribbean, and Small Island Developing States.
- Demand:
  - L69 advocates for expanding both permanent and non-permanent membership categories to make the UNSC more accountable, transparent, and representative of the modern world.
- Nomenclature:
  - The group's name comes from document L.69, tabled in 2007-08, which led to the start of the Intergovernmental Negotiation (IGN) process on UNSC reform.

About C10 & The Ezulwini Consensus

- The Ezulwini Consensus: A common position of the African Union (AU), adopted in March 2005 in Addis Ababa, calling for Africa to have two permanent seats with veto power on the UNSC.
- C-10 (Committee of Ten):
  - A group of ten African states that advocates for the Ezulwini Consensus in international forums.
  - The members are: Algeria, Equatorial Guinea, Republic of the Congo, Kenya, Libya, Namibia, Senegal, Sierra Leone, Uganda, and Zambia.

Key Issues and Support for UNSC Reform

- Global Representation: The call for reform by these groups stems from the belief that the current UNSC structure does not reflect the geopolitical realities of the 21st century.
- Veto Power: A significant aspect of the discussions is about the veto power currently held by the five permanent members (China, France, Russia, the United Kingdom, and the United States), and whether it should be expanded or reformed to ensure fairer decision-making.
- Inclusive Decision-Making: The primary goal is to make the UNSC more inclusive and capable of addressing modern global challenges like climate change, conflict resolution, and economic inequality.

India Elected to Steering Committee of the GlobE Network

India has been elected to the 15-member steering committee of the Global Operational Network of Anti-Corruption Law Enforcement Authorities (GlobE Network). This network is a key initiative aimed at combating international corruption and financial crime.

About the GlobE Network

- Initiative: Launched under the G20 framework.
- Official Launch: The network was officially launched in 2021 during the UN General Assembly Special Session against Corruption (UNGASS).
- Objective:
  - The primary goal of the GlobE Network is to enhance cooperation and information sharing among anti-corruption law enforcement authorities globally. It works towards combating corruption and financial crime.
- Membership:
- The network currently includes 121 member countries and 219 member authorities.

- India's Representation:
  - Central Bureau of Investigation (CBI) and Enforcement Directorate (ED) represent India as member authorities.
  - The Ministry of Home Affairs (MHA) serves as the central authority for the GlobE Network in India.
- Secretariat:
  - The United Nations Office on Drugs and Crime (UNODC) manages the secretariat of the GlobE Network.
- Functions:
  - The network facilitates the exchange of best practices, criminal intelligence, and the development of strategies to tackle corruption globally.

Governance Structure

- Steering Committee:
  - The Steering Committee acts as the managing body of the GlobE Network.
  - It includes the Chair, Vice-Chair, and up to 15 country members, each serving a three-year term.
- Plenary:
  - All member authorities participate in the GlobE Plenary, which meets at least once a year in person to discuss and implement anti-corruption strategies.

India's Role-

India's election to the steering committee strengthens its position in global anti-corruption efforts and aligns with its active participation in international law enforcement cooperation. As part of the GlobE Network, India will play a crucial role in combating corruption and financial crimes through collaborative efforts and information sharing.

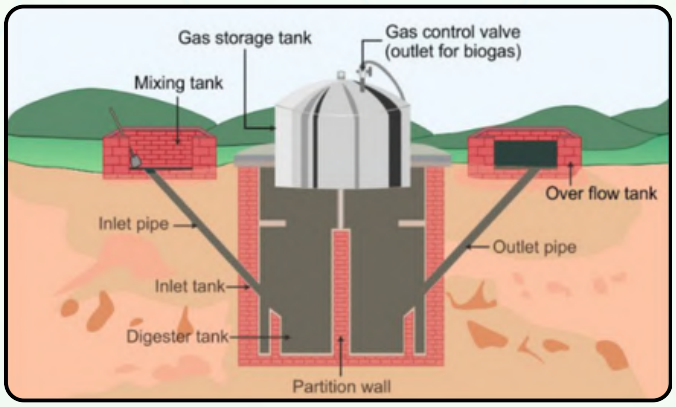
PM Inaugurates Four Compressed Bio-Gas (CBG) Plants in Assam

Prime Minister Narendra Modi has inaugurated the construction of four Compressed Bio-Gas (CBG) plants in Assam. These plants will be set up in the cities of Guwahati, Jorhat, Sivasagar, and Tinsukia.

About Biogas and CBG

Biogas:

- A renewable fuel created when animal or food waste is broken down by microorganisms in the absence of oxygen.
- Main Component: The primary gas in biogas is methane, which makes up around 45% - 75% of the volume.
- Uses: Biogas is flammable and can be used to generate heat and energy.



- Compressed Bio-Gas (CBG):
  - CBG is made from organic waste materials like agricultural residue, animal dung, food waste, and municipal solid waste.
  - The production process involves anaerobic digestion, where waste decomposes without oxygen, producing methane-rich biogas (over 90% methane).
  - Properties: CBG has properties similar to Compressed Natural Gas (CNG) and is an eco-friendly fuel suitable for vehicles, industries, and commercial applications.

Challenges of CBG Plants

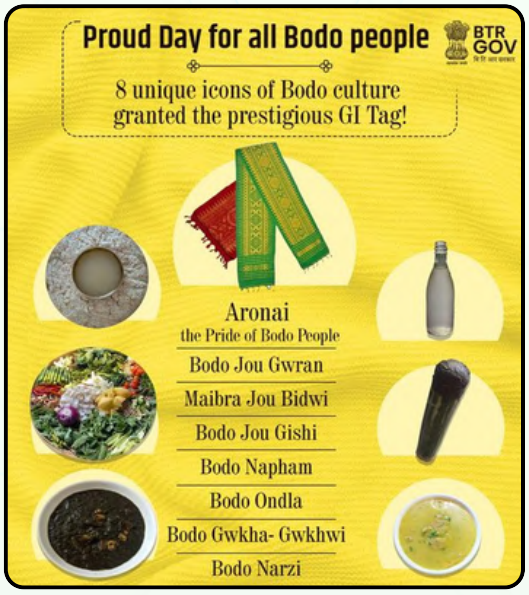
- High Costs: Setting up CBG plants requires substantial investment, which can slow down growth.
- Technical Expertise: The plants require advanced technology and specialized knowledge to function effectively.
- Waste Collection: Gathering and transporting organic waste, particularly in remote areas, can be challenging.
- Health Risks: Improper waste disposal can result in health hazards, including the spread of diseases like dengue and malaria.

Benefits of CBG Plants

- Waste to Energy: CBG plants help convert organic waste into clean energy, aiding in waste management.
- Environmental Impact: The use of CBG reduces carbon emissions, improving air quality and contributing to climate action.
- Job Creation: These plants will create local employment opportunities for both construction and operational roles.
- Eco-friendly: CBG is a sustainable alternative to conventional fuels, reducing environmental pollution.
- Energy Independence: CBG reduces dependence on imported natural gas and crude oil, supporting energy security.

GI Tag for Bodo Products from Assam

The Geographical Indications (GI) Registry in Chennai has granted GI tags to eight traditional Bodo products from Assam, recognizing the distinctiveness and cultural significance of these products. These products include rice beer varieties, traditional food items, and traditional clothing, which are integral to the heritage of the Bodo community.



Eight Bodo Products Granted GI Tags

Rice Beer Varieties:

- Bodo Jou Gwran: Known for having the highest alcohol content (16.11%) among rice beers, made by the Bodo community.
- Maibra Jou Bidwi: Also called "Maibra Jwu Bidwi" or "Maibra Zwu Bidwi," a traditional rice-based beverage.
- Bodo Jou Gishi: Another rice-based alcoholic beverage, believed to have medicinal properties and originating from Lord Shiva.

Traditional Food Items:

- Bodo Napham: A fermented fish dish, prepared anaerobically for 2-3 months, traditionally used for preservation due to the region's high rainfall and limited fish availability.
- Bodo Ondla: A curry made from rice powder, flavored with garlic, ginger, salt, and alkali.
- Bodo Gwkha: Also called "Gwka Gwkhi," prepared during the Bwisagu festival.
- Bodo Narzi: A semi-fermented dish made from jute leaves, rich in Omega-3 fatty acids, vitamins, calcium, and magnesium.

Traditional Clothing:

- Bodo Aronai: A small traditional cloth (1.5–2.5 meters long, 0.5 meter wide) that received the GI tag following an application by the Association of Traditional Bodo Weavers. It reflects Bodo traditions in dance, music, festivals, and clothing, with designs inspired by nature (trees, flowers, mountains, and birds).

What is a GI Tag?

- Definition: A Geographical Indication (GI) tag is a label for products that come from a specific region and have unique qualities or characteristics linked to that area.
- Duration: The GI registration is valid for 10 years, after which it can be renewed.
- Protection: GI tags protect the quality, reputation, and identity of a product based on its geographic origin.

Legal Framework:

- The Geographical Indications of Goods (Registration and Protection) Act, 1999 governs GI tags in India.
- GI tags are recognized internationally under agreements like the Paris Convention and the TRIPS Agreement.

Significance of GI Tags:

- GI tags help promote and protect traditional products, ensuring that only goods originating from the designated region can carry the GI label. This protection helps preserve cultural heritage, boosts local economies by enhancing product value, and prevents misuse or misrepresentation of regional products.

India's Core Sectors Slipped to a Nine-Month Low

In August 2024, India's core sectors experienced a contraction, reaching a nine-month low in output levels. The year-on-year growth in these sectors dropped by 1.8%, marking the first contraction in three and a half years.

About Index of Industrial Production (IIP)

- Purpose: The IIP measures changes in the volume of production of industrial products over a specific period, serving as an indicator of industrial performance.
- Publication: The IIP is compiled and published monthly by the National Statistical Office (NSO), which is part of the Ministry of Statistics and Programme Implementation.

Composition:

- The IIP is a composite indicator that tracks the growth rate of industry groups, classified under:
  - Broad sectors: Mining, Manufacturing, and Electricity.
  - Use-based sectors: Basic Goods, Capital Goods, and Intermediate Goods.
- Base Year: Currently, the base year for IIP is 2011-2012. However, the government plans to adopt a new base year of 2020-21 by 2026-27.

About the Eight Core Sectors-

India's core sectors are the key industries that play a pivotal role in the country's industrial output. These eight sectors contribute significantly to the overall economy and are included in the IIP.

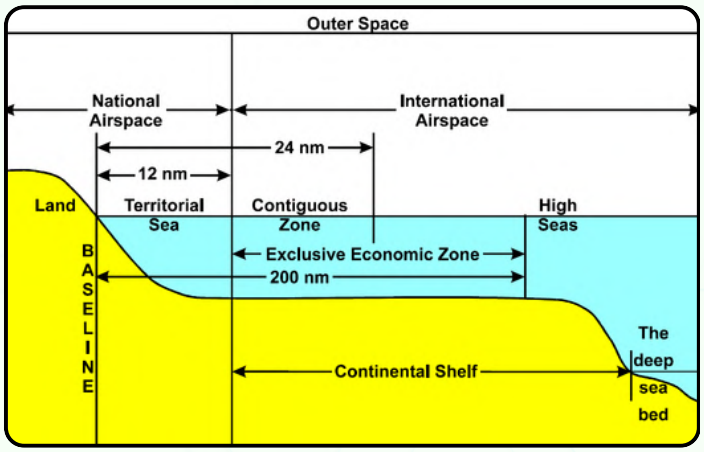
The eight core sectors and their respective weightage in the IIP are:

1. Refinery Products - 28.4%
2. Electricity - 19.85%
3. Steel - 17.92%
4. Coal - 10.33%
5. Crude Oil - 8.98%
6. Natural Gas - 6.88%
7. Cement - 5.37%
8. Fertilisers - 2.63%

These eight sectors combined account for 40.27% of the total weight in the Index of Industrial Production (IIP), highlighting their importance in the overall industrial performance of the country.

India Signs the BBNJ Agreement to Protect Marine Biodiversity

India has officially signed the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement at the United Nations General Assembly. This agreement is a significant international effort aimed at protecting marine biodiversity in areas beyond national jurisdiction, often referred to as the high seas.



About the BBNJ Agreement (High Seas Treaty)

- Development: The BBNJ Agreement was developed under the United Nations Convention on the Law of the Sea (UNCLOS), aiming to provide a framework for the conservation and sustainable use of marine biodiversity in international waters.
- Approach: The agreement is based on an ecosystem-centric approach and promotes precautionary principles, incorporating both traditional knowledge and scientific information to ensure the sustainable use of marine resources.

Timeline of Adoption and Ratification

- Adoption: The BBNJ Agreement was adopted by consensus at the 5th Intergovernmental Conference in New York on 19th June 2023.
- Open for Signature: The agreement has been open for signature by countries starting from September 2023, and will remain open for signing until September 2025.
- Entry into Force: It will become an internationally legally binding treaty once 60 countries ratify it. The treaty will enter into force 120 days after the 60th ratification.
- Current Status: As of September 2024, nearly 100 countries have signed the agreement, with eight countries having ratified it.

Aims of the BBNJ Agreement

1. Conservation and Protection: Focus on protecting marine ecosystems and biodiversity.
2. Benefit Sharing: Ensures fair and equitable sharing of benefits derived from marine genetic resources (MGR).
3. Environmental Impact Assessments (EIAs): Requires EIAs for activities that might harm marine ecosystems.
4. Capacity Building and Technology Transfer: Helps developing countries build capacity to use and conserve marine resources effectively.

Key Features of the BBNJ Agreement

- Environmental Impact Assessments (EIAs): Mandatory for activities in international waters, even those within national jurisdictions that might affect the high seas. These assessments must be made public.
- Benefit Sharing: Guidelines to ensure fair sharing of benefits from MGR collected through research.
- Biodiversity Conservation: Aims to protect 30% of the world's oceans and secure additional funding for marine conservation.
- International Cooperation: Promotes sustainable use and conservation through international collaboration, ensuring no nation can claim sovereign rights over high seas resources.

About the High Seas

- Definition: The high seas refer to areas beyond 200 nautical miles from the exclusive economic zones (EEZ) of coastal countries, as defined by the 1958 Geneva Convention.
- Extent: The high seas cover 64% of the ocean surface, which accounts for 43% of the Earth's surface.

Importance:

- Biodiversity: Home to over 270,000 species, with many more undiscovered.
- Climate Regulation: High seas play a vital role in climate regulation by absorbing carbon and storing solar radiation.
- Challenges: Despite their significance, only 1.44% of the high seas are protected, leaving them vulnerable to overexploitation, pollution, and biodiversity loss.

State of Global Water Resources 2023

The State of Global Water Resources 2023 report, recently published by the World Meteorological Organization (WMO), provides a comprehensive overview of the global water resources situation. The report highlights several concerning trends related to water availability and climate-related extremes.

About the World Meteorological Organization (WMO)

- Establishment: The WMO was established on 23rd March 1950 by ratifying the WMO Convention.
- Mission: The organization is responsible for weather, climate, and operational hydrology and serves as the specialized agency of the United Nations for these fields.
- Membership: It has 193 member states and territories, with India being one of its members.
- Headquarters: Located in Geneva, Switzerland.

Key Findings of the Report

- Driest Year in Over Three Decades: 2023 has been recorded as the driest year for global rivers in more than 30 years, pointing to significant challenges in water availability.
- Below-Normal River Flows: For the fifth consecutive year, the report observes below-average river flows in many regions, impacting water supply for drinking, agriculture, and ecosystems.
- Reservoir Inflows: Similar to river flows, the report highlights a decline in reservoir inflows, leading to reduced water availability for communities, agriculture, and ecosystems.
- Glacier Mass Loss: The year 2023 marked the second consecutive year of global ice loss, affecting glaciers across all regions, contributing to rising sea levels and the loss of fresh water stored in ice.
- Hydrological Extremes: The hottest year on record (2023) led to prolonged droughts in some areas and significant flooding in others, demonstrating the impact of climate change on hydrological cycles.

Red Panda Program of Darjeeling's Padmaja Naidu Himalayan Zoo

The Red Panda Program at the Padmaja Naidu Himalayan Zoological Park in Darjeeling has been selected as a finalist for the World Association of Zoos and Aquariums (WAZA) Conservation Award 2024. This recognition highlights the zoo's exceptional efforts in the conservation of the endangered Red Panda.

About Padmaja Naidu Himalayan Zoological Park

- Location: Situated in Darjeeling, West Bengal, India, at an altitude of 7,000 feet.
- Established: The zoo was founded in 1958.
- Specialization: Focuses on breeding animals adapted to alpine conditions.
  - Notable Breeding Programs:
    - Red Pandas
    - Snow Leopards
    - Himalayan Wolves
- Global Affiliation: The zoo is a member of WAZA, adhering to global conservation standards.
- Legacy: The zoo is named after Padmaja Naidu, daughter of Sarojini Naidu, recognizing her contributions to Indian society.

About the Red Panda

- Scientific Name: Ailurus fulgens
- Appearance: Red pandas have dense reddish-brown fur, black belly and legs, white-lined ears, a mostly white muzzle, and a ringed tail.

- **Conservation Status**:
  - Classified as Endangered (IUCN 3.1)
  - Listed in CITES Appendix I
  - Protected under Schedule I of the Indian Wildlife (Protection) Act, 1972
- **Habitat**: Red pandas are found in India, Nepal, Bhutan, and parts of Myanmar and China.
  - In India, both Himalayan and Chinese subspecies are found.
- **State Animal**: The red panda is the state animal of Sikkim.

World Association of Zoos and Aquariums (WAZA)

- Global Alliance for Conservation: WAZA is an international organization that connects zoos, aquariums, and wildlife experts to support animal protection and habitat conservation.
- Promoting Cooperation: It fosters collaboration between zoos, aquariums, wildlife experts, and universities to improve animal care and conservation efforts.
- Focus on Conservation: WAZA plays a critical role in managing species conservation and ensuring high standards of care for animals in captivity.

PARAM Rudra Supercomputing Systems and New HPC Systems

Prime Minister virtually launched three PARAM Rudra Supercomputing Systems under the National Supercomputing Mission (NSM). These supercomputers, developed indigenously by the Centre for Development of Advanced Computing (C-DAC), represent a significant step in India's technological advancement.

Key Features of PARAM Rudra

- Exceptional Processing Power: PARAM Rudra operates thousands of times faster than conventional computers, capable of completing tasks in minutes that would otherwise take 500 years on ordinary systems.
- Massive Data Processing: It can handle vast amounts of data simultaneously, making it essential for complex simulations and scientific analysis.
- Diverse Research Applications: It supports advancements in climate modelling, environmental studies, and astrophysics.

Deployment of PARAM Rudra Supercomputers

- Giant Metre Radio Telescope (GMRT), Pune: The supercomputer will be used to study Fast Radio Bursts (FRBs) and other astronomical phenomena.
- Inter-University Accelerator Centre (IUAC), Delhi: It will assist in material science and atomic physics research.
- S.N. Bose Centre, Kolkata: It will support advanced research in physics, cosmology, and earth sciences.

HPC Systems 'Arka' and 'Arunika'

- These newly launched High-Performance Computing (HPC) systems will aid in developing high-resolution models for improved weather predictions related to:
  - Tropical cyclones
  - Heavy precipitation
  - Thunderstorms
  - Hailstorms
  - Heat waves
  - Droughts

About Supercomputers

- Definition: Supercomputers are high-performance mainframe systems capable of solving complex computations by breaking tasks into multiple parts and processing them simultaneously.
- Speed Measurement (petaFLOPs): The speed of supercomputers is measured in petaFLOPs (floating point operations per second), with 1 petaFLOP equaling 1,000 trillion operations per second.

Global Supercomputer Rankings

- China leads the world in the number of supercomputers, followed by the US, Japan, France, Germany, the Netherlands, Ireland, and the UK.

India's Supercomputing Journey

- First Supercomputer: India's first supercomputer, PARAM 8000, was developed in 1991.
- First Indigenously Assembled Supercomputer: PARAM Shivay, installed at IIT (BHU), was India's first indigenously assembled supercomputer.

National Supercomputing Mission (NSM)

- Launch Year: The National Supercomputing Mission (NSM) was launched in 2015 as a seven-year programme with a total budget of ₹4,500 Crore.
- Goal: The mission aims to enhance India's research capacity by connecting institutions into a supercomputing grid. This grid will be supported by the National Knowledge Network (NKN), which serves as the backbone to facilitate data sharing and collaboration across the country.
- National Knowledge Network (NKN): NKN is a high-speed network that links academic institutions and R&D labs throughout India, enabling seamless data sharing and fostering collaboration between research communities.

Implementing Bodies:

- The mission is jointly steered by:
  - Department of Science and Technology (DST)
  - Ministry of Electronics and Information Technology (MeitY)
- Primary Implementing Agencies:
  - Centre for Development of Advanced Computing (C-DAC), Pune
  - Indian Institute of Science (IISc), Bengaluru

BharatGen: India's Multimodal Large Language Model Initiative

BharatGen is the world's first Government-funded Multimodal Large Language Model (LLM) initiative, recently launched to create advanced generative AI systems in various Indian languages.

- **Objective**: BharatGen aims to develop Artificial Intelligence (AI) systems that can generate high-quality text and multimodal content in Indian languages, thus enhancing accessibility and AI literacy across the country.
- **Initiative Led By**: Spearheaded by IIT Bombay under the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) of the Department of Science and Technology (DST).

Key Features of BharatGen:

1. Multilingual and Multimodal Models: BharatGen will focus on creating foundation models that support multiple languages and modalities (e.g., text, audio, and visual content).
2. Bhartiya Data Set: The initiative will build and train models using Indian datasets, reflecting the diverse linguistic and cultural landscape of the country.
3. Open-Source Platform: BharatGen will be open-source, encouraging research, collaboration, and innovation within the AI community in India.
4. Ecosystem Development: BharatGen aims to foster a generative AI research ecosystem in India, advancing AI technology across various sectors.

About National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)

- Mission Objective: NM-ICPS is a comprehensive initiative to transform innovative ideas into market-ready products and foster the development of advanced technologies. It bridges the gap between physical processes and computational systems through Cyber-Physical Systems (CPS).
- Cyber-Physical System (CPS): CPS integrates physical processes with computational algorithms and networked sensors for real-time monitoring and control, facilitating interaction between the physical and virtual worlds.
- **Focus Areas:**
  - Technology Development
  - Human Resource Development (HRD) & Skill Development
  - Innovation, Entrepreneurship & Start-up Ecosystem
  - International Collaborations
- Implementing Body: Department of Science and Technology (DST).
- **Mission Components:**
  - Technology Innovation Hubs (TIH)
  - Application Innovation Hubs (AIH)
  - Technology Translation Research Parks (TTRP)
- These hubs will foster knowledge generation, development, and commercialization in a hub-and-spoke model, connecting academia, industry, and government organizations.

Large Language Model (LLM):

- Definition: LLMs are AI models that understand, generate, and interact with human language. They are trained on vast datasets and perform tasks like translation, summarization, question-answering, and text generation.
- Examples: Well-known LLMs include GPT (Generative Pre-trained Transformer) and BharatGen.

X-Band Radar in Wayanad

The Union Ministry of Earth Sciences has approved the installation of an X-band radar in Wayanad, Kerala to prevent floods and landslides, especially following the recent events in the district.

- Objective: The radar aims to enhance early warning systems by monitoring environmental changes that may lead to landslides, helping mitigate future disasters.
- Key Features of the X-Band Radar:
  - Soil Movement Detection: The radar will monitor soil particle movements, which serve as indicators of potential landslides.
  - High Temporal Sampling: The radar can detect rapid changes in environmental conditions, providing timely and accurate disaster warnings.

Doppler Radar and Its Applications in Meteorology

- Doppler Radar: It is a Radio Detection and Ranging (RADAR) system that uses electromagnetic waves in the microwave range to detect various atmospheric parameters like location, direction, intensity, and movement of objects.
- Principle: Doppler radar operates on the Doppler Effect, which involves a frequency change when the source and observer move relative to each other. For example:
  - Closer Objects: Increase in frequency.
  - Farther Objects: Decrease in frequency.
- Meteorological Applications:
  - Observes rainfall, cloud formations, and thunderstorms in real-time.
  - Tracks storm intensity and wind direction by detecting particle movement.

Types of Doppler Radars:

1. L-Band Radar:
   - Frequency: 1-2 GHz
   - Wavelength: 15-30 cm
   - Use: Detects large-scale weather patterns.
2. S-Band Radar:
   - Frequency: 2-4 GHz
   - Wavelength: 8-15 cm
   - Use: Effective for both short and long-range weather detection due to resistance to signal attenuation.

India's Radar Network

- IMD's Radar History: India's India Meteorological Department (IMD) began using radar technology in the 1950s, with its first indigenous X-band radar launched in 1970.
- Current Radar Use: Both X-band and S-band radars are used extensively across India for weather forecasting and disaster management.
- Mission Mausam: Under this ₹2,000 crore initiative, the Indian government plans to install 56 additional Doppler radars to modernize the country's meteorological infrastructure. Up to 60 radars will be set up by 2026 to enhance forecasting accuracy.

Future Projects and Developments

- NISAR Satellite: In collaboration with NASA, India is developing the NISAR (NASA-ISRO Synthetic Aperture Radar) satellite, expected to launch in 2025. This satellite will combine L-band and S-band radars to create high-resolution Earth surface maps. It will help track land deformation and monitor environmental changes.

What is RADAR?

- RADAR: Stands for Radio Detection And Ranging, a technology that uses radio waves to detect objects and measure their distance, angle, and velocity.
- How RADAR Works:
  - It emits an electromagnetic pulse in a specific direction.
  - When the pulse hits an object, some of the energy is reflected back to the radar.
  - By measuring the time it takes for the pulse to return and its strength, the radar can determine the distance, movement, and even type of object.

Electromagnetic Waves:

- Definition: Electromagnetic waves are energy waves that travel through space at the speed of light, consisting of oscillating electric and magnetic fields.
- Radar's Use of Microwaves: RADAR uses microwaves, a type of electromagnetic wave, for long-range detection and weather monitoring.

Stem Cells Offer Hope for Type 1 Diabetes

A 25-year-old woman with type 1 diabetes began producing her own insulin within three months after receiving a transplant of reprogrammed stem cells. This marks a groundbreaking step in using stem cells to treat type 1 diabetes.

Significance: This is the first successful treatment of type 1 diabetes using stem cells, offering new hope for individuals with this chronic condition.

What Are Stem Cells?

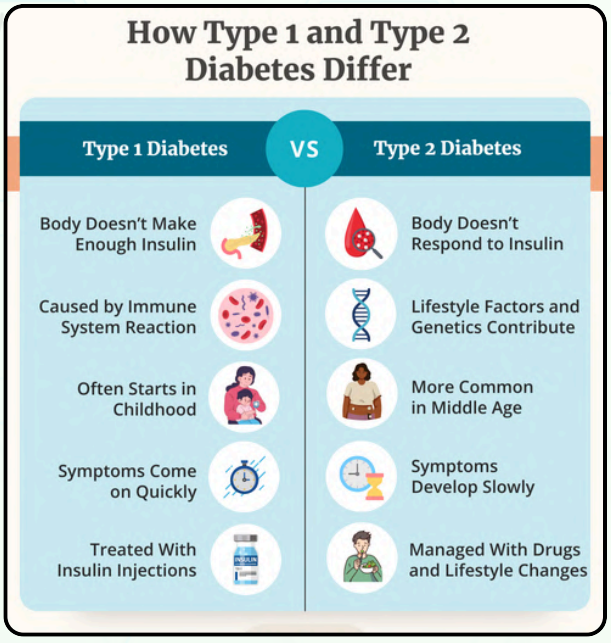
- Definition: Stem cells are specialized human cells with the extraordinary ability to develop into various types of cells, such as muscle cells, brain cells, and insulin-producing cells.
- Potential: Due to their versatility, stem cells are promising candidates for regenerative medicine, which may help treat a wide range of diseases and injuries.

Types of Stem Cells:

1. Multipotent: These stem cells can produce multiple types of cells within a specific lineage (e.g., blood cells).
2. Pluripotent: These stem cells have the ability to develop into all cell types in an adult, making them highly versatile.
3. Totipotent: These stem cells can differentiate into all cell types, including both embryonic and adult cells.

Sources of Stem Cells:

- Embryonic Stem Cells (ESCs):
  - Derived from early-stage embryos.
  - Can become any cell type in the body.
- Adult Stem Cells:
  - Found in specific tissues and organs.
  - Primarily responsible for tissue maintenance and repair.
- Induced Pluripotent Stem Cells (iPSCs):
  - Adult cells that have been reprogrammed to behave like embryonic stem cells.
  - Can be generated from the patient's own cells, reducing the risk of immune rejection.



About Diabetes:

- Definition: Diabetes is a chronic condition where the pancreas either fails to produce enough insulin or the body cannot effectively use the insulin it produces, leading to high blood sugar (hyperglycemia).

- **Types of Diabetes:**
  - Type 1 Diabetes: An autoimmune disease where the immune system attacks and destroys insulin-producing cells in the pancreas.
  - Type 2 Diabetes: A condition where the body becomes resistant to insulin or doesn't produce enough of it.
- **Statistics in India:**
  - Around 77 million people above the age of 18 are suffering from type 2 diabetes.
  - Nearly 25 million people are prediabetic, at higher risk of developing diabetes.
  - More than 50% of people are unaware of their diabetic status.

Applications of Stem Cell Therapy:

1. Regenerative Medicine:
   - Stem cells can be used to repair or replace damaged tissues and organs, such as heart muscles, cartilage, and nerve cells.
2. Chronic Diseases:
   - Potential treatments for diseases like diabetes, Parkinson's disease, Alzheimer's disease, and spinal cord injuries.
3. Immune Disorders:
   - Stem cells can be used to modify or enhance the immune system to fight cancer or autoimmune diseases.
4. Orthopaedics:
   - Treatment of orthopaedic injuries and conditions, such as osteoarthritis.
5. Cosmetic Procedures:
   - Stem cells are also being explored for cosmetic treatments, such as facial rejuvenation.

India has Eliminated Trachoma as a Public Health Problem: WHO

The World Health Organisation (WHO) has announced that the Government of India has successfully eliminated Trachoma as a public health problem, adding it to the list of diseases India has overcome.

Diseases Eliminated by India

- Smallpox - Declared globally eradicated in 1980; India's last case was in 1975.
- Polio - India was declared polio-free in 2014, with the last reported case in 2011.
- Trachoma - Declared eliminated as a public health problem in 2017.

About Trachoma

- Cause: Trachoma is an eye disease caused by the bacterium Chlamydia trachomatis. If left untreated, it can lead to irreversible blindness.

- Classification: WHO has labeled Trachoma as a neglected tropical disease (NTD).
- Geographic Distribution: Trachoma is widespread in some of the poorest and rural areas of Africa, Central and South America, Asia, Australia, and the Middle East.
- Transmission:
  - Through personal contact (such as via hands, clothes, bedding, or hard surfaces).
  - Spread by flies that have come into contact with discharge from the eyes or nose of an infected person.
- Prevention Strategy (SAFE):
  - S: Surgery to treat advanced cases.
  - A: Antibiotics to clear infections.
  - F: Facial cleanliness to reduce transmission.
  - E: Environmental improvement to prevent spread.

Neglected Tropical Diseases (NTDs)

- Definition: NTDs are a group of tropical infections common in low-income populations in developing regions like Africa, Asia, and the Americas.
- Causes: They are caused by various pathogens, including viruses, bacteria, protozoa, and parasitic worms (helminths).
- Characteristics: NTDs are often overlooked in the global health agenda, leading to limited resources and interventions.
- WHO's List of NTDs: WHO has identified 17 official NTDs, including diseases like Buruli ulcer, Chagas disease, cysticercosis, dengue, and dracunculiasis.

Ni-kshay Poshan Yojana (NPY) for Tuberculosis (TB)

The Union Health Ministry has increased the financial support for TB patients under the Ni-kshay Poshan Yojana from ₹500 to ₹1,000 per month.

More on the News

- India's TB Elimination Goal: India aims to eliminate TB by 2025, ahead of the global target of 2030.
- Beneficiaries: The initiative is expected to benefit 25 lakh TB patients and 12 lakh underweight patients.
- Funding: The program will cost the government ₹1,040 crore, with the Centre and States sharing costs in a 60:40 ratio.

About Ni-kshay Poshan Yojana

- Scheme: It is a centrally sponsored scheme under the National Health Mission (NHM).
- Launch: Initiated by the Ministry of Health and Family Welfare.
- Objective: To provide financial support for nutritional needs of TB patients via Direct Benefit Transfer (DBT), initially at ₹500, now increased to ₹1,000 per month.

- Eligibility: All notified TB patients are eligible for this assistance.
- Ni-kshay Mitras: This volunteer initiative involves individuals, NGOs, corporates, and political parties who adopt TB patients and provide nutrition, supplements, additional investigations, and vocational support.
- E-Nikshay Platform: A web-enabled system for TB patient management developed by the Central TB Division with the National Informatics Centre (NIC) and the World Health Organization (WHO).
    - Requirement: All TB patients, regardless of whether they are in the public or private sector, must be registered on this platform.

About Tuberculosis (TB)

- Cause: TB is an infectious disease caused by the bacterium Mycobacterium tuberculosis, commonly affecting the lungs (pulmonary TB).
- Types:
    - Pulmonary TB: Affects the lungs.
    - Extrapulmonary TB: Affects other body parts, such as the gastrointestinal tract, skeletal system, and liver.
- Transmission: TB spreads through airborne particles when an infected person coughs, speaks, or sneezes.
- Tests for TB: Common diagnostic tests include Xpert MTB, RIF Ultra, and Truenat assays.
- Treatment:
    - Common drugs: Isoniazid, Rifampin, and Pyrazinamide.
    - Prevention: The BCG vaccine helps in preventing TB, particularly in children.

62nd Anniversary of the Battle of Walong

The Indian Army is commemorating the 62nd anniversary of the Battle of Walong, which took place during the 1962 Sino-Indian War. The series of events began on October 17 and will continue until November 14.

About the Battle of Walong

- Location: Walong, Arunachal Pradesh, close to the McMahon Line, was one of the critical battlegrounds during the 1962 Sino-Indian War.
- Indian Defense: The 11 Infantry Brigade bravely defended against a much larger Chinese force. With 800 soldiers, the Indian troops managed to halt approximately 4,000 PLA troops, forcing China to deploy an additional division of 15,000 soldiers.
- Geographical Challenges: The battle occurred in rugged, mountainous terrain with altitudes ranging from 3,000 to 14,000 feet, posing logistical and operational challenges.
- Outcome: Despite their efforts, Indian forces eventually withdrew on November 16, 1962, after inflicting significant casualties on the Chinese and delaying their advance.

- Significance: The Battle of Walong stands as a symbol of valor and determination. In 1963, Time Magazine honored the bravery of the Indian soldiers, commending them for their “guts” and resilience.

SARTHIE 1.0 Initiative

The Department of Social Justice and Empowerment (DoSJE), in collaboration with the National Legal Services Authority (NALSA), recently launched the SARTHIE 1.0 initiative.

About SARTHIE 1.0

- Objective: SARTHIE 1.0 aims to empower disadvantaged communities such as Scheduled Castes, Transgenders, Denotified and Nomadic Tribes by:
- Raising awareness about their rights.
- Providing legal support to promote effective access to welfare schemes.

Key Features:

- Collaborative Approach: SARTHIE 1.0 creates a synergy between the executive and judiciary to enhance social justice.
- Alignment with UN SDGs: The initiative focuses on advancing the UN Sustainable Development Goals (SDGs), especially those targeting the end of poverty, reducing inequality, and improving social protection programs.

About NALSA:

- The National Legal Services Authority (NALSA) was established under the Legal Services Authorities Act, 1987 with the purpose of:
- Providing free legal services to the weaker sections of society.
- Organizing Lok Adalats for the amicable settlement of disputes.

Chenchus Tribe

The Chenchus are a small, migratory tribal community primarily located in Andhra Pradesh and Odisha. They are one of the 12 Particularly Vulnerable Tribal Groups (PVTGs) in Andhra Pradesh.

Lifestyle and Occupation

- Traditional Livelihood: The Chenchus have historically relied on hunting and gathering for their sustenance rather than agricultural activities.
- Agriculture: They cultivate tobacco, maize, and millet; however, their diet and survival are largely dependent on natural resources.

Demographics and Language

- Population: As of the early 21st century, the Chenchus numbered around 59,000.
- Language: They primarily speak Telugu, a Dravidian language, with distinct dialects such as Chenchucoolam and Chenswar.

Current Challenges

The Chenchus of Penukumadugu, Andhra Pradesh are currently facing reduced employment opportunities under MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act), which has affected their access to stable income and resources.

New Statue of Lady Justice at the Supreme Court

The Supreme Court of India recently unveiled a redesigned Lady Justice statue under the direction of the Chief Justice of India.

Notable Changes in the New Statue

- No Blindfold: Unlike traditional depictions, the new Lady Justice statue does not wear a blindfold. This represents an approach to justice in India that emphasizes awareness and knowledge rather than impartiality through blindness.
- Holding the Constitution: Instead of a sword, she holds the Constitution of India, symbolizing that Indian justice is based on knowledge, fairness, and constitutional principles rather than retribution.
- Retained Scales: The statue still features scales in her right hand, symbolizing the balance of justice, fairness, and the weighing of both sides in legal disputes.

Significance of These Changes

- Breaking from Colonial Tradition: The redesign reflects India's broader movement to move away from British-era traditions as India transitions into a new legal era with the Bharatiya Nyay Sanhita.
- Emphasis on Fairness and Equality: By holding the Constitution, the statue emphasizes a shift in focus from punishment to ensuring fairness and equality rooted in Indian constitutional values.

Origin of Lady Justice

- The concept of Lady Justice has its roots in ancient Greek and Roman iconography:
  - In ancient Greece, Themis was a Titaness associated with divine law and moral justice, often depicted with scales and a sword.
  - In Roman mythology, Justitia (or Iustitia), the goddess of justice, is seen as the inspiration for the modern Lady Justice figure.

Symbolism in the Traditional Statue

The traditional attributes of Lady Justice symbolize the core principles of law:

- Blindfold: Represents impartiality.
- Scales: Symbolizes fairness and the weighing of evidence.
- Sword: Represents enforcement and authority.

India Joins the International Energy Efficiency Hub

The Union Cabinet has approved India's membership in the International Energy Efficiency Hub, with the Bureau of Energy Efficiency (BEE) responsible for implementing India's participation and aligning it with the country's energy goals.

About the International Energy Efficiency Hub

- Established: 2020, as a successor to the International Partnership for Energy Efficiency Cooperation (IPEEC), of which India was a member.
- Member Countries: Currently includes 16 countries like the U.S., China, and Germany (as of July 2024).

Objectives of the Hub

- Promote Global Cooperation: Fosters international collaboration to improve energy efficiency.
- Best Practice Sharing: Encourages the exchange of best practices among nations, organizations, and the private sector.
- Awareness Building: Raises global awareness of energy efficiency and its importance in achieving sustainable development.

United Nations Interim Force in Lebanon (UNIFIL)

Recently, Israeli Defense Forces (IDF) tanks destroyed the main gate of a UNIFIL facility in Ramyah, southern Lebanon.

About UNIFIL

- Established: March 1978, under UN Security Council Resolutions.
- Objective:
  - Confirm the withdrawal of Israeli forces from southern Lebanon.
  - Restore international peace and security in the region.
  - Assist the Lebanese government in re-establishing effective authority in the area.
- Composition: Around 10,500 peacekeepers from 48 contributing countries.
- Largest Contributors: Indonesia, Italy, India, Nepal, and China.
- Funding: Supported through a separate account, which the UN General Assembly approves annually as part of the broader UN Peacekeeping Force budget.
- Rules of Engagement: Peacekeepers are permitted to use force only in self-defense or to fulfill their mandated duties.

World Economic Outlook

-by International Monetary Fund (IMF)

Global Growth:

- Projected at 3.2% for both 2024 and 2025.

Inflation:

- Peaked at 9.4% in Q3 2022.
- Expected to decline to 3.5% by 2025.

Geopolitical Risks:

- Could reduce global output by 1.6% by 2026.

Key Economic Recommendations:

- Urgent need for fiscal stability in both the US and China.
- Suggested Triple Policy Pivot:
  - Neutral monetary policy to stabilize economies.
  - Fiscal consolidation to reduce debt and ensure sustainability.
  - Structural reforms to promote growth and resilience.

India's Economic Outlook:

- Growth Rate: India's growth at 7% remains well above the global average.
- Future Projections: For FY 2025-26, India's growth rate is anticipated to be 6.5%.

World Energy Outlook 2024

-by International Energy Agency (IEA)

India's Economic Growth:

- India was the fastest-growing major economy in 2023 with a growth rate of 7.8%.

- Coal in the Energy Mix:
  - In 2023, coal accounted for 40% of the energy used by industries.
  - By 2035, coal use in industries is projected to increase by 50%, maintaining a significant role in India's energy mix.
- Electric Vehicle (EV) Growth:
  - Over the next decade, India is expected to add:
    - 37 million cars.
    - 75 million two/three-wheelers.
  - Oil Demand:
    - Demand from road transport is anticipated to increase by 40% by 2035, likely increasing India's dependence on oil imports due to the growing number of vehicles.

The Economics of Water: Valuing the Hydrological Cycle as a Global Common Good

- by Global Commission on The Economics of Water

Global Water Crisis:

- The report underscores an escalating global water crisis, emphasizing the urgent need to view and manage water as a shared global resource.

Impact on India:

- Projected GDP Impact: The water crisis is expected to reduce India's GDP by 14.34% by 2050, indicating significant economic vulnerability due to water scarcity and mismanagement.

Impact on Lower-Income Countries:

- Lower-income nations are predicted to face even more severe impacts, with potential GDP losses of up to 15% by 2050.

Global Innovation Index 2024

- by World Intellectual Property Organization (WIPO)

India's Global Rank:

- India stands 39th globally in 2024, marking a significant rise from 81st in 2015.

Regional Performance:

- Ranked 1st among 10 economies in Central and Southern Asia, reflecting strong regional leadership in innovation.

Science & Technology Cluster:

- 4th place in WIPO's Science & Technology Cluster Ranking.
- Major Indian cities like Mumbai, Delhi, Bengaluru, and Chennai are in the top 100 global S&T clusters.

Intangible Asset Intensity:

- India is 7th globally in intangible asset intensity, which encompasses crucial innovation drivers like patents and trademarks.

Academic Freedom Index

- by "Free to Think 2024" Report by Scholars at Risk (SAR)

India's Score:

- India's Academic Freedom Index score has decreased significantly, from 0.6 in 2013 to 0.2 in 2023—its lowest since the mid-1940s.
- Current Ranking: India is now classified as "completely restricted" in terms of academic freedom.

Factors Affecting Academic Freedom:

- Student Protests: Increased restrictions on student protests, notably at universities like Jawaharlal Nehru University (JNU) and South Asian University (SAU).
- Government Conflicts: Ongoing disputes between the Union government and State governments regarding control and policy in higher education.

Economic Freedom of the World Report
-by Fraser Institute (Canada)

Top Economically Free Jurisdictions:

1. Hong Kong
2. Singapore
3. Switzerland
4. New Zealand
5. United States
6. Denmark and Ireland (tied)
7. Canada
8. Australia and Luxembourg (tied)

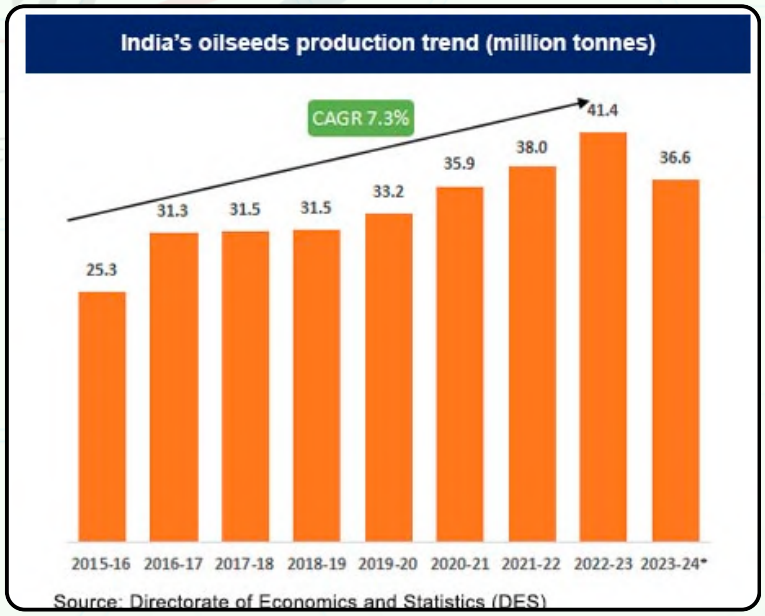
South Asia Rankings:

- India: Ranked 84th
- Bangladesh: Ranked 127th
- Pakistan: Ranked 134th

National Mission on Edible Oils – Oilseeds (NMEO-Oilseeds)

The Union Cabinet has approved the National Mission on Edible Oils – Oilseeds (NMEO-Oilseeds) to boost domestic oilseed production.

- Implementation Period: 2024-25 to 2030-31
- Total Outlay: ₹10,103 crore



Key Focus Areas:

1. Primary Oilseeds:
   - Rapeseed-Mustard
   - Groundnut
   - Soybean
   - Sunflower
   - Sesamum
2. Secondary Sources:
   - Cottonseed
   - Rice Bran
   - Tree Borne Oils (TBO)

Production Targets:

- Primary Oilseed Production: Increase from 39 million tonnes (2022-23) to 69.7 million tonnes by 2030-31.
- Domestic Edible Oil Production: Increase to 25.45 million tonnes by 2030-31.

Strategies for Increased Production:

- Adoption of High-Yielding Varieties: Focusing on seeds with higher oil content.

- Expansion into Rice Fallow Areas: Promoting intercropping and better land utilization.
- Technological Innovations: Use of genome editing and global technologies for better seed quality.

Key Features:

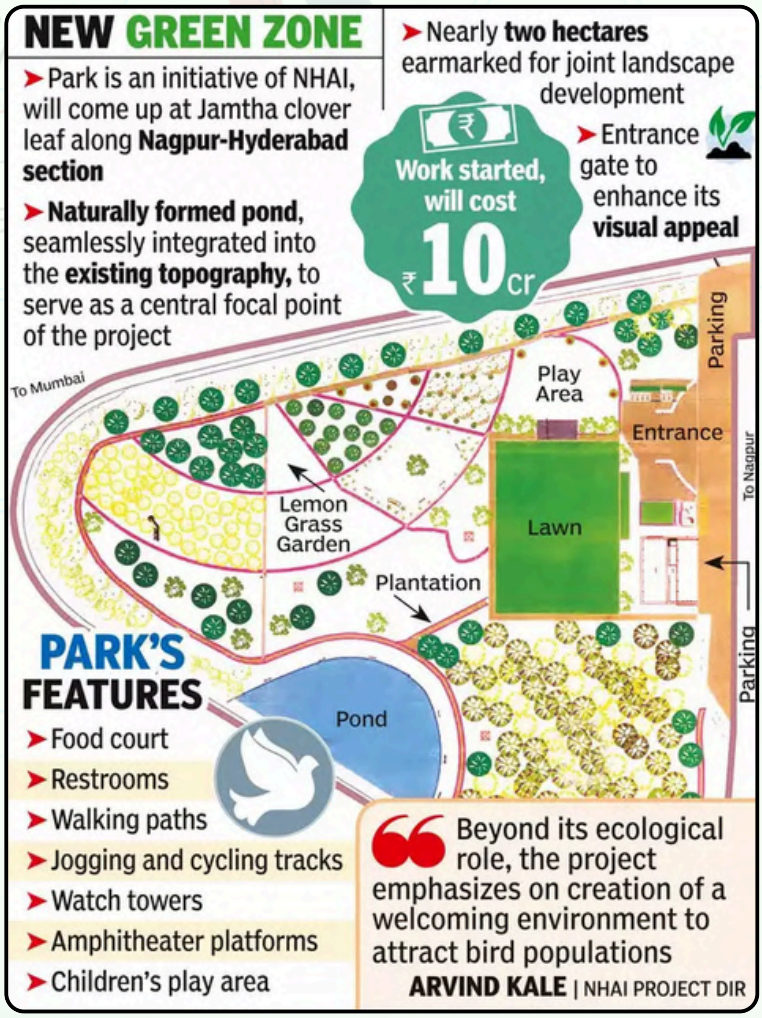
- 600 Value Chain Clusters: Spread across 347 districts, covering over 10 lakh hectares annually.
- 65 Seed Hubs and 50 Storage Units: Improving seed infrastructure.
- SATHI Portal: A new portal to enable states to form advance tie-ups with seed-producing agencies like cooperatives, FPOs, and seed corporations, and manage a 5-year rolling seed plan.

Oxygen Bird Park – Nagpur

The Oxygen Bird Park, also known as Amrit Mahotsav Park, was recently inaugurated by the Union Minister of Road Transport and Highways along the Nagpur-Hyderabad National Highway-44 in Nagpur, Maharashtra.

Overview of the Park:

- Eco-Initiative: Developed by the National Highways Authority of India (NHAI) as part of environmental and sustainability efforts.
- Purpose:
  - Provides a natural habitat for birds.
  - Serves as a recreational space for both locals and tourists.



Vision:

- Observation and Recreation: To offer a space where people can observe various bird species while enjoying recreational activities.
- Bird Habitat: Designed to create a safe and welcoming environment for both local and migratory birds, replicating natural ecosystems.

Major Atmospheric Cherenkov Experiment (MACE) Observatory – Hanle, Ladakh

The MACE Observatory was recently inaugurated in Hanle, Ladakh, by the Secretary of the Department of Atomic Energy (DAE) and Chairman of the Atomic Energy Commission.

About MACE:

- World's Highest Imaging Cherenkov Telescope: MACE holds the distinction of being the highest such telescope in the world.
- Purpose: Designed to detect Cherenkov radiation produced by high-energy particles like gamma rays and cosmic rays.
- Scientific Focus: The telescope will study high-energy gamma rays, offering insights into some of the most energetic and mysterious phenomena in the universe, such as supernovae, black holes, and gamma-ray bursts.

Indigenous Development:

- Built by the Bhabha Atomic Research Centre (BARC) with support from the Electronics Corporation of India Limited (ECIL) and other industry partners in India.

Significance of MACE:

1. Scientific Breakthroughs:
   - MACE will contribute significantly to global research on high-energy cosmic phenomena, enhancing our understanding of the universe's most extreme events.
2. International Collaboration:
   - The observatory is intended to foster international cooperation in the field of astronomy and astrophysics, positioning India as a key player in global scientific efforts.
3. Technological Advancement:
   - The project highlights India's growing capabilities in astronomy and astrophysics, showcasing the country's technological prowess in cutting-edge scientific research.

Marburg Viral Disease Outbreak in Rwanda

An outbreak of Marburg Virus Disease (MVD) has recently resulted in the death of six people in Rwanda.

About Marburg Viral Disease (MVD):

- Family: Marburg Virus belongs to the Filovirus family, which also includes the Ebola virus.
- First Case: The virus was first identified in 1967 in the German city of Marburg, where lab workers were infected after coming into contact with green monkeys imported from Uganda.
- Endemic: The disease is primarily found in sub-Saharan Africa, particularly in the arid woodlands of equatorial Africa. All recorded outbreaks have occurred in Africa.

Symptoms:
  - Hemorrhagic fever (similar to Ebola), characterized by bleeding, organ failure, and other severe health issues.

Carrier Agents:
  - African fruit bats and African green monkeys are the primary carriers of the virus.

Transmission:
  - The virus can be transmitted from bats to primates and humans.
  - Human-to-human transmission occurs through direct contact with blood or other body fluids from infected individuals.

Mortality Rates:
  - The mortality rate for confirmed cases has ranged from 24% to 88%, depending on the outbreak.

Treatment:
  - Currently, there are no vaccines or antiviral treatments available for Marburg viral disease. Treatment is supportive, aimed at managing symptoms and improving the chances of survival.

Nobel Prize 2024 Overview

An outbreak of Marburg Virus Disease (MVD) has recently resulted in the death of six people in Rwanda.

About the Nobel Prize

- **Categories**: The Nobel Prize is awarded annually in five primary fields: Physics, Chemistry, Physiology or Medicine, Literature, and Peace.
- **Origin**: Established by Alfred Nobel, the inventor of dynamite, the Nobel Prizes were first awarded in 1901 to honor Nobel's legacy and promote progress in these areas.
- **Additional Prize**: In 1968, the Sveriges Riksbank Prize in Economic Sciences was introduced but is not officially part of the Nobel Prizes.
- **Venue**:
  - Most prizes are awarded in Stockholm, Sweden.
  - The Peace Prize is awarded in Oslo, Norway.

Nobel Prize and India

- Rabindranath Tagore: First non-European and Indian to receive a Nobel Prize in 1913 (Literature).
- C.V. Raman: Awarded the Nobel Prize in Physics in 1930 for the Raman Effect in the scattering of light.


2024 Nobel Prize Laureates

1. Literature

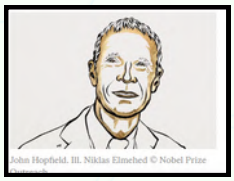
- Recipient: Han Kang (South Korea)
- Achievement: Awarded for her "intense poetic prose" that explores themes of historical trauma and human fragility.
- Notable Works: The Vegetarian, Human Acts.

2. Economic Sciences

- Recipients: Daron Acemoglu, Simon Johnson, James A. Robinson (U.S.)
- Achievement: Research on how institutions influence national prosperity, distinguishing between inclusive (e.g., democracy, rule of law) and extractive institutions that impact growth.

3. Chemistry

- Recipients: David Baker (U.S.), Demis Hassabis (U.K.), John Jumper (U.K.)
- Achievements:
  - David Baker: Developed Rosetta software for computational protein design.
  - Demis Hassabis & John Jumper: Created AlphaFold 2, an AI model that predicts millions of protein structures, enhancing our understanding of proteins.

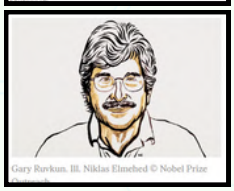


4. Physics

- Recipients: John Hopfield (U.S.), Geoffrey Hinton (U.K./Canada)
- Achievements:
  - Hopfield: Developed early neural networks for memory and learning in computers.
  - Hinton: Pioneered backpropagation in neural networks, crucial for tasks like voice and image recognition.

5. Physiology/Medicine

- Recipients: Victor Ambros (U.S.), Gary Ruvkun (U.S.)
- Achievement: Discovered microRNA's role in post-transcriptional gene regulation, influencing areas like immune response, cholesterol metabolism, and cancer treatment.



6. Peace

- Recipient: Nihon Hidankyo (Japan)
- Achievement: Represents the Hibakusha (survivors of Hiroshima and Nagasaki bombings), advocating for nuclear disarmament and raising awareness since 1945.