Supreme Court (SC) highlighted that Union has not implemented its Commitments to tackle Trafficking

SC noted that commitments made by the Union Government in Prajwala vs. Union of India case (2015) have not been fulfilled to curb trafficking (especially sex trafficking).

Key Commitments made by the Union Government

- Establish Organised Crime Investigative Agency (OCIA)
- Constitute a Committee under Ministry of Women & Child Development to prepare a comprehensive legislation dealing with the subject of trafficking.
 - Legislation was supposed to cover prevention, pre- and post- rescue of victims and their rehabilitation.

Other key Observation of SC

- Legislative Inaction: Trafficking of Persons (Prevention, Protection, and Rehabilitation) Bill, 2018 was presented in Lok Sabha but later lapsed.
- Highlighted limitations of 2019 Amendment to NIA Act, 2008: 2019 Amendment to NIA Act empowered the National Investigation Agency (NIA) to take up cases of human trafficking for investigation.
 - Court Said that NIA can prosecute offenders but does not address victim protection or rehabilitation.

Status of Trafficking

- In India, more than 10 thousand cases have been reported from 2018 to 2022. (National Crime Records Bureau (NCRB)).
 - Sex trafficking is one of the most prevalent form of human trafficking.
- It has been identified as the third largest source of profit for organized crime, following arms and drug trafficking. (As of 2018).

Steps taken to deal with trafficking in India

- Statutory: Enacted Immoral Traffic (Prevention) Act (ITPA), 1956.
- Constitutional: Article 23 of the Constitution prohibits trafficking in human beings
- Other:
 - Ministry of Home Affairs (MHA) runs an anti-trafficking unit to guide states on improving law enforcement responses.
 - India has signed MoUs with countries like Bangladesh to combat trafficking
 - Ratified the UNCTOC (United Nations Convention against Transnational Organized Crime) to prevent trafficking, especially of women and children.
 - Bharatiya Nyaya Sanhita (BNS) addresses human trafficking, including trafficking for prostitution.

Study: India's fossil-based CO2 emissions to spike 4.6% in 2024

At the current rate of emissions, it is estimated a 50% chance that global average temperatures will exceed 1.5 degrees consistently in about six years.

• This year, possibly, will be the first time the threshold of 1.5 degrees is crossed.

The carbon budget: It's the amount of CO2 emissions that will result in limiting global warming to a given level, in this case, the Paris accord's target of 1.5 degrees C over pre-industrial levels.

Key Findings:

- Globally, fossil-based CO2 emissions are set to touch a record high of 37.4 billion tonnes this year.
- The largest contributions to global fossil CO2 emissions were China (31%), the USA (13%), India (8%), and the European Union (7%), in 2023.
 - These four regions account for 59% of global fossil CO2 emissions, while the rest of the world contributed 41%.
- Global emissions from land-use changes like deforestation have dropped 20% over ten years.
 - Reforestation and new forests offset about half of permanent deforestation emissions globally.
- The land and ocean CO2 sinks combined took around half of the total CO2 emissions, despite being negatively impacted by climate change.

Global Carbon Project (GCP)

- It was established in 2001.
- Aim: to track the trends in global carbon emissions and sinks and is act as a key measure of progress towards the goals of the Paris Agreement.
- It publishes global budgets for three dominant greenhouse gases carbon dioxide, methane, and nitrous oxide.

Report On Municipal Finances Released By Reserved Bank of India (RBI)

It analyzes budgetary data for Municipal Corporations (MCs), identifying opportunities, challenges and suggests measures to improve their financial health.

Key Findings

- Low revenue collection: MCs generate only 0.6% of GDP in revenue (2023-24), much lower than central government (9.2%) and State Governments(14.6%).
- Heavy reliance on transfers:MCs rely heavily on government transfers.Grants from Central and State governments have increased by 24.9% and 20.4%, respectively (2022-23)
- Increased municipal borrowings:It has risen from ₹2,886 crore (2019-20) to ₹13,364 crore(2023-24)
- Bonds:It totals ₹4,204 crore (0.09% of corporate bonds), with most bonds privately placed

Challenges in Municipal Finances: lower revenue compared to advanced economies, underdeveloped municipal bond market, low operational flexibility

Recommendations

- Enhancing Revenue Sources: Reform property tax (with use of GIS mapping), rationalize user charges
- Transfers from State governments: SFCS should recommend timely and predictable state transfers
- Improvement in Cost Efficiency: by digitalization, use of Public Private Partnerships in urban transport, waste management, and renewable energy
- Innovative Financing: Smaller MCs should explore options of Municipal Bonds, Green Bonds
- Financial Transparency: Adopt of practices such as National Municipal Accounting Manual

Revenue Sources of Urban Local Bodies

- Own sources
 - Tax Revenue-Property tax, water benefit tax etc.
 - Non-tax Revenue-User charges, developmental charges etc.
 - Other receipts-lease rent,sale of rubbish etc.
- Assigned(Shared) Revenue: Entertainment tax (subsumed under GST, except when levied by the local bodies), professional tax etc.
- Grants-in-aid: Central and State Finance Commission (SFC) devolution, Grants under programmes like SBM, AMRUT
- Borrowings: Loans from state and central governments, banks etc

Supreme Court (SC) issues Pan-India guidelines to halt illegal demolition of private property

Underlining the principle of 'Separation of Power', SC used extraordinary powers under Article 142 to issue these guidelines.

• However, these guidelines and protection do not extend to encroachments into public land or unauthorized structures.

Concerns regarding illegal demolition of private property

- Against Principle of Natural justice, Due process of law and Rule of Law: in case of demolition of house by state based on mere accusation
- Violation of Fundamental Right: E.g. 'Right to Shelter' under Article 21

Supreme Court Guidelines

- Prior Notice: demolition should be served to house owner by registered post with details of the nature of the unauthorized construction, details of specific violations, etc.
 - In case of unauthorized construction, a 15 days' notice must be given to the residents to remove the unauthorized construction or to find another place to live in.
- Opportunity of Personal Hearing must be given to the accused by the designated authority.
- Personal Liability of Officials for violation of the Court's order.
- Videography and Due Report: Demolitions must be recorded on video and be produced as evidence in case of challenge to its legality. A report on actual demolition must also be placed before the Municipal Commissioner.

Separation of Power

- As per French Jurist Montesquieu, 'Separation of Power' means that " The three organs of the Government i.e., Legislative, Executive and Judiciary should work independently and there should be no overlap between the powers of these organs".
- USA follows strict separation of power, however it is not that strict in India as executive is derived from legislative.

State of the Cryosphere 2024-Lost Ice, Global Damage Report released

The report has been coordinated by International Cryosphere Climate Initiative (ICCI)

About Cryosphere

• It refers to areas of snow or ice on Earth, subjected to temperatures below 0°C for at least part of the year and includes regions such as continental ice sheets, ice caps, glaciers, permafrosts etc. Eg. Greenland, Antarctica, Hindu Kush Himalaya etc.

Key Findings of Report

- Accelerated loss of Ice Sheets : Greenland Ice Sheet is currently losing 30 million tons of ice per hour. Moreover, Ice shelves in northern Greenland have lost 35% of their total volume since 1978.
- Sea Level Rise : Rate of global sea-level rise has doubled in the last 30 years & and as per current trends it would increase to 6.5 mm/year by 2050.
- Melting Glaciers: Venezuela recently joined & Slovenia(1st) to lose their final glaciers in modern times.

Impact of Cryosphere affect global climate

- Weakening of Atlantic Meridional Overturning Circulation (AMOC) and Slowing of Antarctic Circumpolar Current (ACC) affecting the global ocean circulation
- Increase in Permafrost Thawing may worsen local damage and global feedbacks
 - Permafrost thawing means melting of ice inside permafrost leaving behind water and soil.
- Decreases reflective ability of sea ice leading to greater warming at both poles, greater CO2 emissions and increased depletion of ozone layer
- Risks of catastrophic floods from glacial lake outburst floods.

Initiatives to Protect Cryosphere

- United Nations General Assembly has approved 2025 to 2034 as Decade of Action for Cryospheric Sciences
- World Meteorological Organisation has adopted four high High-Level Ambitions for cryosphere.
- India has launched National Mission for Sustaining Himalayan Ecosystem (NMSHE) to assess health of the Himalayan ecosystem including those of glaciers.

Reserve Bank of India (RBI) releases 2024 list of Domestic Systemically Important Banks (D-SIBs)

State Bank of India, HDFC Bank and ICICI Bank continue to be identified as D-SIBs in the RBI's 2024 list.

About D-SIBs

- D-SIBs are systemically important due to their size, cross-jurisdictional activities, complexity and lack of substitute and interconnection.
 - It also means that the bank is too big to fail.
 - If DSBs fail, there would be significant disruption to the essential services to the banking system and the overall economy.

Declaration of D-SIBs

- Based on the D-SIBs Framework of RBI (2014).
 - Framework is based on Basel Committee on Banking Supervision's (BCBS's) framework.
 - Banks having size as a percentage of GDP equal to or more than 2% are considered for D-SIB list.
- Banks are placed in 5 buckets on the basis of Additional Common Equity Tier 1 (CET1) requirement as a percentage of Risk Weighted Assets (RWAs).
 - Bucket 1 banks have to maintain lowest CET1 and Bucket 5 banks have to maintain highest.
- In case a foreign bank having branch presence in India is a Global Systemically Important Bank (G-SIB), it has to maintain additional CET1 capital surcharge.
 - Financial Stability Board (FSB) releases the list of G-SIBs.

Key Terms

- Risk Weighted Assets (RWAs): RWAs are used to determine the minimum amount of capital a bank must hold in relation to the risk profile of its lending activities and other assets.
 - It is calculated by assigning different risk weights to different types of assets held by a bank.
- Common Equity Tier 1 (CET1): It is a component of Tier 1 capital and comprises primarily of common stock held by a bank or other financial institution.
 - It is the highest quality of regulatory capital, as it absorbs losses immediately when they occur.

Science and Technology Minister inaugurates Centenary celebrations of 'Bose-Einstein' Statistics (B–E statistics)

In 1924, Satyendra Nath Bose proposed a new approach to understand the behaviour of particles or photons, based on quantum theory.

• His collaboration with the Albert Einstein eventually led to postulation of B-E statistics.

About B–E statistics

- It describes ways in which a collection of non-interacting and indistinguishable particles may occupy a set of available discrete energy states at thermodynamic equilibrium.
 - In simple words it explains how particles distribute themselves in an available energy states.
- Particles which obey B–E statistics principle are referred as "Bosons", named after S. N Bose.
 - Bosons are fundamental articles that have integer values of spin(0, 1, 2, etc.).
 E.g. Photon, Gluon, etc.

Relevance/Significance of B-E Statistics

- Enabled first Quantum revolution in 20th century which helped in development of technologies such as lasers, the transistor, Magnetic Resonance Imaging, and semiconductors.
 - Second revolution is defined by developments in technologies like quantum computing and quantum sensing, etc.
- Discovery of the fifth state of matter i.e. Bose-Einstein condensate (BEC).
 - BEC is a state of matter created when particles are cooled to near absolute zero (-273.15 degrees Celsius/0 Kelvin).

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