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# Current Affairs (CONSOLIDATION)

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**(PART – I)**

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# Polity and Governance

## Highlights

- Default Bail
- What are the Other Types of Bail in India?
- What are the Constitutional Provisions Related to Arrest?
- Harit Sagar: The Green Port Guidelines 2023
- SC on Maharashtra Governor's Call for Floor Test
- Enforcement Directorate
- Bypolls in India
- Power Distribution Between Delhi Government and Centre
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- Solid Waste Management
- Millets Experience Centre
- National Medical Device Policy 2023

## Default Bail

### Why in News?

The **Supreme Court (SC)** has instructed lower courts to consider **Default Bail** pleas in criminal cases when the charge sheet is **not filed within 60 or 90 days, allowing them** to grant default bail independently **without relying on its own** judgment of **Ritu Chhabaria versus Union of India (26<sup>th</sup> April, 2023)**.

- The observations were made by the SC while hearing an **Enforcement Directorate (ED) appeal**, seeking the recall of the **Ritu Chhabaria judgment**.
- The Ritu Chhabaria judgment held that “**the right of default bail under Section 167(2) of the Criminal Procedure Code (CrPC)** is not merely a statutory right, but a **fundamental right** that flows from **Article 21 of the Constitution**” to protect accused persons from the “unfettered and arbitrary power of the State”.

### What is Default Bail?

- **About:**
  - This is a right to bail that **accrues when the police fail to complete investigation within a specified period** in respect of a person in judicial custody.

- It is also known as Statutory Bail.

- This is enshrined in **Section 167(2) of the Code of Criminal Procedure (CrPC)**.

### ➤ Section 167(2) of the CrPC:

- If the **police are unable to complete an investigation within a specified period**, a person in judicial custody has the right to seek bail.
- When the police cannot finish the investigation within 24 hours, they present the suspect before a magistrate who decides whether the suspect should be held in police custody or judicial custody.
- According to Section 167(2) of the CrPC, the **magistrate can order the accused person to be detained in police custody for up to 15 days**. If more time is needed, the magistrate can authorize the accused person's detention in judicial custody, which means jail. However, the **accused cannot be held for more than:**
  - **Ninety days** if the investigating authority is looking into a crime that is punishable by death, life imprisonment, or imprisonment for at least ten years.

Note:



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- **Sixty days** if the investigating authority is handling any other offense.

➤ **Special Cases:**

- Some special laws like the **Narcotic Drugs and Psychotropic Substances Act**, the time period for investigation may be different, **such as 180 days**.
- In the **Unlawful Activities (Prevention) Act 1967**, the default limit is 90 days only, which can be extended to another 90 days.

- This extension can be granted only on a report by the Public Prosecutor indicating the progress made in the investigation and giving reasons to keep the accused in continued detention.
  - These provisions show that the **extension of time is not automatic but requires a judicial order**.

# SMART CITIES MISSION

## About

- **Launched:** 2015
- **Nature:** Centrally Sponsored
- **Nodal Ministry:** Ministry of Housing & Urban Affairs
- **Implemented through:** Special Purpose Vehicles (SPVs) at city level
- **Mission Deadline:** Extended to June 2023
- **Coverage:** Developing 100 selected cities as Smart Cities

## Six Fundamental Principles

- Citizen at the core
- More from Less
- Cooperative and competitive federalism
- Integration, innovation & sustainability
- Technology as means, not the goal
- Convergence

## SMART SOLUTIONS

### E-Governance and Citizen Services

- Public Information, Grievance Redressal
- Electronic Service Delivery
- Citizen Engagement
- Citizens-City's Eyes and Ears
- Video Crime Monitoring



### Energy Management

- Smart Meters & Management
- Renewable Sources of Energy
- Energy Efficient & Green Buildings



### Waste Management

- Waste to Energy & fuel
- Waste to Compost
- Waste Water Treatment
- Recycling and Reduction of Waste



### Water Management

- Smart Meters & Management
- Leakage Identification, Preventive Maintenance
- Water Quality Monitoring



### Urban Mobility

- Smart Parking
- Intelligent Traffic Management
- Integrated Multi-Modal Transport



### Others

- Tele-Medicine & Tele Education
- Incubation/Trade Facilitation Centers
- Skill Development Centers



■ 60% projects have been completed so far ■

## Challenges

- **Managing Finance:** Difficulty in mobilising funds, transferring them to SPVs, and using them efficiently
- **Urban Problems:** Like air pollution, road congestion & decline in public transport
- **Policy Issues:** Like hindrances in getting environment clearances
- **Data privacy and security**
- **Lack of Center-State Co-ordination**

## Way Ahead

- **Decentralisation:** Planning at Municipal & state level for better implementation
- **Policy Issues:** Like red-tapism, environmental clearances need to be taken care of
- **PPP Model:** For better administrative & technological capabilities
- **Integrated Approach:** For holistic development of transportation, energy, housing
- **Promote Citizen Engagement**

Note:



### What are the Previous Judgements Related to Default Bail?

- **CBI vs Anupam J. Kulkarni (1992):**
  - The SC Held that a magistrate can authorize **police custody for a maximum of 15 days** after the arrest of the accused. After this period, any further detention must be in judicial custody, except in cases where the same accused is implicated in a different case **arising from a separate incident or transaction**. In such situations, the magistrate may consider authorizing police custody again.
- **Uday Mohanlal Acharya vs. State of Maharashtra (2001):**
  - The SC while relying upon the judgment of Sanjay Dutt vs State, held that the **accused shall be said to avail of his right to default bail** when he files an application for the same and not when he is released on default bail.
  - If an order of default bail is passed in favour of the accused, but he/she fails to furnish bail and a charge sheet is filed in the meantime, then the right to default bail shall stand extinguished.

### What are the Other Types of Bail in India?

- **Regular Bail:** It is a direction given by the Court (any Court within the country) to release a **person who is already under arrest and kept in police custody**. For such Bail, a person can file an application under **Section 437 and 439 of the CrPC**.
- **Interim Bail:** Bail granted for a temporary and short period by the Court till the application seeking Anticipatory Bail or Regular Bail is pending before a Court.
- **Anticipatory Bail:** A direction issued **to release a person on Bail even before the person is arrested**. In this situation, there is apprehension of arrest and the person is not arrested before the Bail is granted.
  - For such Bail, a person can file an application under **Sec. 438 of the CrPC**. It is issued only by the Sessions Court and High Court.

### What are the Constitutional Provisions Related to Arrest?

- **Article 22 grants protection to persons who are arrested or detained.** Detention is of two types, namely, punitive and preventive.
  - Punitive detention is to punish a person for an offence committed by him after trial and conviction in a court.
  - Preventive detention, on the other hand, means detention of a person without trial and conviction by a court.
- **Article 22 has Two Parts:** The first part deals with the **cases of ordinary law** and the second part deals with the cases of **preventive detention law**.

Rights Given Under Punitive Detention	Rights Given Under Preventive Detention
Right to be informed of the grounds of arrest.	The detention of a person cannot exceed three months unless an advisory board reports sufficient cause for extended detention. The board is to consist of judges of a high court
Right to consult and be defended by a legal practitioner.	The grounds of detention should be communicated to the detenu. However, the facts considered to be against the public interest need not be disclosed.
Right to consult and be defended by a legal practitioner.	The detenu should be afforded an opportunity to make a representation against the detention order.
Right to be released after 24 hours unless the magistrate authorises further detention.	
These safeguards are not available to an enemy alien.	This protection is available to both citizens as well as aliens.

Note:



## Harit Sagar: The Green Port Guidelines 2023

### Why in News?

Recently, the **Ministry of Ports, Shipping & Waterways** has launched 'Harit Sagar' Green Port Guidelines 2023 to achieve the **Zero Carbon Emission Goal**.

- **Sagar Shreshtha Samman** awards were also conferred to major ports for their exceptional achievements in various operational parameters.

### What are Harit Sagar Guidelines 2023?

#### ➤ About:

- Harit Sagar is a Sanskrit term that means "green ocean". It reflects the vision of making **India's ports more environmentally friendly and sustainable**.
- They also cover aspects of the **National Green Hydrogen Mission** pertaining to ports, development of green hydrogen facility, LNG bunkering, and Offshore Wind Energy among others.
- These guidelines also provide the provision for adopting the global Green Reporting Initiative (GRI) standard.

#### ➤ Objectives:

- To promote the **adoption of best practices and technologies for green port development** and operations, such as **renewable energy, water conservation, biodiversity protection, and climate resilience**.
- To minimize waste through **Reduce, Reuse, Repurpose and Recycle** to attain zero waste discharge from port operations.
- To establish a **rating system for assessing and benchmarking** the environmental performance of ports based on **various indicators and parameters**.
- To **incentivize and recognize the ports** that achieve high standards of environmental excellence and sustainability.
- To facilitate the integration of green port principles into the planning, design, construction, operation, and maintenance of port infrastructure and services.

#### ➤ Significance:

- They are aligned with **India's commitments under the Paris Agreement** and the **Sustainable Development Goals**, as well as the national policies and initiatives such as the **National Action Plan on Climate Change**, and the **Swachh Bharat Mission**.
- They are expected to enhance **India's image and reputation as a responsible maritime nation** that cares for its environment and its people.
- They are expected to create new opportunities for **innovation, investment, employment, and collaboration in the port sector**.

#### ➤ Benefits:

- Enhancing the **competitiveness and attractiveness** of ports by improving their **efficiency, reliability, safety, and quality of service**.
- Reducing the **operational costs** and **increasing the revenue generation** potential of ports by optimizing the use of resources and minimizing waste.
- Improving the **environmental compliance**.
- Mitigating the environmental impacts and risks of port activities by reducing **greenhouse gas emissions, air pollution, noise pollution, water pollution, and marine litter**.
- Contributing to the national and global goals of sustainable development and climate action by supporting the transition to a **low-carbon and circular economy**.

### What are the Challenges and Barriers for Implementing?

- Lack of **awareness and capacity** among port stakeholders.
- Lack of **coordination and collaboration** among different agencies and sectors.
- Inadequate **data and information on environmental aspects of ports**.
- **Weak enforcement and monitoring mechanisms** for environmental compliance.

### What are India's Efforts for Green Port Development?

#### ➤ Initiatives:

- **Green Port Awards, Green Port Policy, and Sagarmala Programme**.

Note:



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### ➤ Setting Targets:

- Increase the share of renewable energy in ports, reduce **carbon emissions per ton of cargo handled**, and adopt **green fuels** and technologies for port operations.

### ➤ Selection as Pilot Country:

- India selected as the **first country under the IMO Green Voyage 2050** project to conduct a pilot project related to green shipping.

### What is the Sagar Shreshtha Samman Award?

- The Sagar Shreshtha Samman Award is conferred by the **Ministry of Ports, Shipping and Waterways** to major ports in India for their outstanding achievements in various operational parameters.
- The award recognizes ports that demonstrate high standards of environmental excellence and sustainability.
- The awards for FY2022-23 are:



## SC on Maharashtra Governor's Call for Floor Test

### Why in News?

Recently, the **Supreme Court (SC)** has held that the decision of the (former) **Governor of Maharashtra to call for a Floor Test**, asking the then Chief Minister to prove his majority in the house, **was not justified**. However, the SC cannot restore his government as **he did not face the floor test**.

### What is a Floor Test?

- It is a term **used for the test of the majority**. If there are doubts against the Chief Minister (CM) of a State, **he/she can be asked to prove the majority** in the House.
  - In the case of a coalition government, the **CM may be asked to move a vote of confidence** and win a majority.
- In the absence of a clear majority, when there is **more than an individual's stake to form the government**, the Governor may **call for a special session to see who has the majority** to form the government.
  - Some legislators may be absent or choose not to vote. The numbers are **then considered based only on those MLAs who were present** to vote.

### What is the Background?

- In 2022, the Uddhav Thackeray-led government was toppled and **replaced by another government**, comprising a faction of the Shiv Sena. The leader of the breakaway Sena faction, Eknath Shinde, became the new Chief Minister of Maharashtra.
- Thereafter, petitions were filed by the Thackeray group challenging the then Maharashtra **Governor's decision to call for a trust vote** before his resignation.

### What is the SC's Ruling?

- **On Floor Test:**
  - The floor test **should not be used to solve problems within a political party** and that party disagreements should be resolved **according to the party's constitution or other methods**.
- **Appointing a Whip:**
  - **The Speaker must only recognize the Whip duly authorised by the political party** with reference to the provisions of the party constitution. The appointment of both the whip and the leader of the party in the **House should only be done by the political party and not the legislature party**.
    - In parliamentary parlance, a whip may refer to both a written order to members of a party in the House to abide by a certain direction, and to a **designated official of the party who is authorised to issue such a direction**.
      - The concept of the whip was **inherited from colonial British rule**.

Note:



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- **Disqualification on the Ground of Defection:**
  - The Speaker is the **authority to adjudicate petitions for disqualification** under the **10<sup>th</sup> Schedule of the Constitution**.
  - The Court cannot ordinarily adjudicate petitions for disqualification under the 10<sup>th</sup> Schedule.
    - Notices were issued by the then Deputy Speaker of the Maharashtra Assembly, against 40 rebel MLAs under the 10<sup>th</sup> Schedule which deals with disqualification on the grounds of **Defection**.

### **What is the 10th Schedule of the Constitution?**

- **Anti Defection Law:** The 10<sup>th</sup> schedule of the Indian Constitution, also known as the **"Anti-Defection Law,"** was added by the **52<sup>nd</sup> Amendment Act of 1985**.
  - It lays down the **provisions related to the disqualification of members of Parliament (MPs)** and state legislatures on the grounds of defection.
  - It seeks to promote **political stability and discipline among political parties** by preventing elected members from changing parties after they have been elected.
  - **Disqualification:** According to it, a member of Parliament or a state legislature is **disqualified if he/she voluntarily gives up the membership of the political party** on whose ticket he/she was elected, or if he/she votes or abstains from voting in the House against the directives of the political party.
  - However, a member is not disqualified if **he/she leaves the party due to a merger of two or more political parties** or if the party itself merges with another party.
  - As per the 52<sup>nd</sup> amendment, a 'defection' by 1/3<sup>rd</sup> of the elected members of a political party was considered a 'merger'.
    - But the **91<sup>st</sup> Constitutional Amendment Act, 2003**, changed this and now at least **2/3<sup>rd</sup> of the members of a party must be in Favour of a "merger"** for it to have validity in the eyes of the law.

### **What are the Powers with the Governor to Call a Floor Test?**

- **About:**
  - **Article 174 of the Constitution** authorizes the Governor to **summon, dissolve and prorogue** the state legislative assembly.
  - **According to Article 175(2)**, the Governor can summon the House and call for a floor test to **prove whether the government** has the numbers.
    - However, the Governor **can exercise the above only as per Article 163** of the Constitution which says that the **Governor acts on the aid and advice of the Council of Ministers** headed by the Chief Minister (when the assembly is not in session).
    - However, when the House is in session, it is the **Speaker of the Assembly who can call for a floor test**.
- **Governor's Discretionary Power:**
  - According to **Article 163 (1)**, there will be a group of Ministers, led by the Chief Minister, who will assist and **advise the Governor in carrying out his functions**. However, the Governor **will have the final say in any matters where he is required to exercise his discretion** as per the constitution.
    - The Constitution makes it clear that if **any question arises whether a matter falls within the governor's discretion or not, the decision of the governor is final** and the validity of anything done by him cannot be called in question on the ground that he ought or ought not to have acted in his discretion.
  - The Governor can exercise his discretionary power under **Article 174**, when the chief minister has **lost the support of the House and his strength is debatable**.
  - Generally, when doubts are cast on the chief minister that he has lost the majority, the opposition and the **Governor would rally for a floor test**.

### **What are Previous Rulings on the Governor's Floor Test Call?**

- **Nabam Rebia and Bamang Felix vs Deputy Speaker case (2016):** The SC said that the power to summon the House is **not solely vested in the Governor and should be exercised with aid and advice of the Council of Ministers** and not at his own.

Note:

- **Shivraj Singh Chouhan & Ors vs Speaker (2020):** The SC upheld the powers of the **Speaker to call for a floor test if there is a prima facie view** that the government has lost its majority.

## Enforcement Directorate

### Why in News?

Recently, the Centre has informed the **Supreme Court (SC)** that the tenure of the **Chief of Enforcement Directorate (ED)** will not continue in office beyond November 2023.

### What is the Issue?

- In November 2021, the **President of India** issued two ordinances allowing the tenure of the **Director of the ED** to be extended from two years to up to five years, with the possibility of three annual extensions.
- This move was upheld by the SC, which allowed the extension of ED Chief but only in **rare and exceptional cases** for a short period.
  - The SC stated that there is no restriction on the Central Government's power to appoint the ED beyond a two-year period. Additionally, they clarified that the phrase "not less than two years" in **Section 25(d) of the Central Vigilance Commission Act, 2003** should not be interpreted to mean "**not more than two years.**"
  - The court said, "there is no fetter on the power of the Central Government in appointing the Director of Enforcement beyond a period of two years".
- The government's recent extension of the tenure is cited as a reason for a pending review by the **Financial Action Task Force (FATF)**
  - The Union Finance Ministry stated in an affidavit that extension in the term of the director of ED was **necessitated from the administrative standpoint wherein continuity of the head of the organisation is required for several cases which are at crucial juncture** and require historical knowledge and background for supervision of such cases.
  - A newly appointed director **would take considerable time to take stock and acclimatise to the new office** and the working of the ED and could find it difficult to operate at an optimal level of efficiency.

- This decision has been challenged in the SC again, as some are questioning the legality of **extending the tenure beyond what was previously deemed acceptable** by the court. The case is currently pending.

### What is the ED?

#### About:

- The ED is a **multi-disciplinary organization** mandated with investigation of offences of **money laundering** and violations of foreign exchange laws.
  - It functions **under the Department of Revenue of the Ministry of Finance.**
- As a premier financial investigation agency of the Government of India, the ED functions in **strict compliance with the Constitution and Laws of India.**

#### Structure:

- **Headquarters:** ED with its headquarters at New Delhi, is headed by the **Director of Enforcement.**
  - There are five regional offices at Mumbai, Chennai, Chandigarh, Kolkata and Delhi headed by Special Directors of Enforcement.
- **Recruitment:** Recruitment of the officers is done **directly and by drawing officers** from other investigation agencies.
  - It comprises officers of **IRS (Indian Revenue Services), IPS (Indian Police Services)** and **IAS (Indian Administrative Services)** such as Income Tax officer, Excise officer, Customs officer, and police.
- **Tenure:** Two years, but directors' tenure can be extended from two to five years by giving three annual extensions.
  - The **Delhi Special Police Establishment (DSPE) Act, 1946 (for ED)** and the **Central Vigilance Commission (CVC) Act, 2003** (for CV Commissioners) have been amended to give the government the power to keep the two chiefs in their posts for one year after they have completed their two-year terms.

#### Functions:

- **COFEPOSA:** Under the Conservation of Foreign Exchange and Prevention of Smuggling Activities Act, 1974 (COFEPOSA), this Directorate is empowered to **sponsor cases of preventive detention** with regard to contraventions of FEMA.

Note:



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- **Foreign Exchange Management Act, 1999 (FEMA):** It is a civil law enacted to consolidate and amend the laws relating to **facilitate external trade and payments and to promote the orderly development and maintenance** of foreign exchange market in India.
  - ED has been given the responsibility to conduct investigation into suspected contraventions of **foreign exchange laws and regulations**, to adjudicate and impose penalties on those adjudged to have contravened the law.
- **Prevention of Money Laundering Act, 2002 (PMLA):** Following the recommendations of the FATF India enacted PMLA.
  - The ED has been entrusted with the responsibility of executing the provisions of PMLA by conducting **investigation to trace the assets derived from proceeds of crime**, to provisionally attach the property and to ensure prosecution of the offenders and confiscation of the property by the Special court.
- **Fugitive Economic Offenders Act, 2018 (FEOA):** Lately, with the increase in the number of cases relating to economic offenders taking shelter in foreign countries, the Government of India introduced the **Fugitive Economic Offenders Act, 2018 (FEOA)** and ED is entrusted with its enforcement.
  - This law was enacted to deter economic offenders from evading the process of Indian law by remaining outside the jurisdiction of Indian courts.
  - Under this law, the ED is mandated to attach the properties of the fugitive economic offenders who have escaped from India warranting arrest and provide for the confiscation of their properties to the Central Government.

### **What are the Issues related to ED?**

- **Misuse of Power:**
  - The ED has a lot of power and discretion in **investigating economic crimes like money laundering**, and they don't need permission from the government to prosecute politicians or government officials.

- However, this power has been **misused, as even minor crimes have been brought under the purview** PMLA, which was originally meant to combat money laundering related to **Drug Trafficking**.

### ➤ **Lack of Transparency:**

- There is also a lack of transparency in how the ED selects cases to investigate, and they have been known to target opposition parties.
- **Convictions in cases by the ED are rare**, but media trials have already ruined the accused's reputation.
  - Between 2005 and 2013-14, there were zero convictions, and between 2014-15 and 2021-22, only 23 cases were under conviction out of 888 cases registered.

### ➤ **Political Bias:**

- There have been **allegations that political figures who have switched to the ruling party have been given favorable treatment** by the ED. In some cases, these individuals have reportedly been given "clean chits" or seen the ED slow down in their investigations into economic offenses such as money laundering.
- These allegations have raised concerns about potential political bias and lack of independence in the ED's actions.

## **Bypolls in India**

### **Why in News?**

Recently, **Bypolls** were conducted for **one Lok Sabha constituency in Punjab** and **four Assembly seats in Uttar Pradesh, Meghalaya, and Odisha**.

### **What are Bypolls?**

- **About:**
  - Bypolls, also known as **bye-elections or special elections**, refer to **elections** held to **fill vacant seats in the legislative bodies of India**.
  - It serves as a **vital component within the broader electoral cycle** and complements regular elections by **addressing unforeseen vacancies**.

Note:

### ➤ Purpose:

- The primary objective of bypolls is to ensure **the timely filing of vacant seats, enabling the representation of the affected constituency or district in the legislative body.**

### ➤ Occurrence:

- Bypolls are conducted when a seat in the legislature becomes vacant due to reasons such as the **death, resignation, disqualification, or expulsion of a sitting member.**

### ➤ Timeframe:

- Bye-elections in India are typically held within **six months from the date the vacancy occurs.**
- Section 151A of the **Representation of the People Act, 1951** mandates the Election Commission to fill the casual vacancies in the Houses of Parliament and State Legislatures through **bye elections within six months from the date of occurrence of the vacancy**, provided that the **remainder of the term of a member in relation to a vacancy is one year or more.**
  - Hence, there is **no need to hold bye elections if the remaining term of the Lok Sabha is less than one year** from the date of occurrence of vacancies.
  - However, the **Election Commission has some flexibility in deciding the specific date for the by-poll**, taking into account factors like administrative feasibility and the availability of suitable conditions for conducting elections.

### ➤ Impact:

- **Impact on Political Landscape:** Bye-elections often serve as a **litmus test for political parties and their popularity.**
  - They provide an opportunity for parties to **gauge public sentiment and assess their support base.**
- **Impact on Government Majority:** Bye-election outcomes can affect the majority of the ruling government.
  - If the **ruling party loses a significant number of by-poll seats, it may lead to a loss of majority in the legislative body**, which can impact the government's stability and decision-making.

- **Testing the Electoral Strategies:** Bye-elections provide an avenue for political parties to test their **electoral strategies and fine-tune their campaign approaches.**

- Parties may experiment with **candidate selection, campaign themes, and messaging during by-polls**, which can influence their strategies in subsequent elections.

## Power Distribution Between Delhi Government and Centre

### Why in News?

- Recently, the **Supreme Court (SC)** has ruled in favor of the Delhi government on the issue of who controls the **Bureaucracy in the National Capital** where it ruled that the **Delhi government has legislative and executive powers over services** except for public order, police and land.

### What is the Issue About?

- The issue in the case is whether the Government of **NCT (National Capital Territory)** of Delhi has legislative and executive powers in relation to 'services' under **Schedule VII, List II, and Entry 41** of the Constitution of India and whether the **officers of the various 'services' such as IAS, IPS, DANICS, and DANIPS**, who have been allocated to Delhi by the Union of India, come under the **administrative control of the Government of NCT of Delhi.**
- The Issues of distribution of Power between Delhi government and Centre first arose from a reference made by a **two-judge Bench of the SC in 2019**, which left the question of **who will have control over the administrative services** for consideration by a larger Bench.
- The Delhi government challenged the constitutional validity of the **Government of National Capital Territory of Delhi (Amendment) Act 2021**, which provided that the term "government" referred to in any law made by the Legislative Assembly of Delhi will imply the Lieutenant Governor (L-G).

Note:



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### What is the Verdict of the SC?

- Ruling in Delhi govt's favour, the SC held that the Lt. Governor **shall be bound by the decision of Delhi government over services**, apart from public order, police and land.
- Disagreeing with the Centre which argued that the Constitution is a federal Constitution with a strong unitary bias as far as UTs are concerned, the **SC said, it is not unitary**.
  - "The **principles of democracy and federalism are essential features of our Constitution** and form a part of the **basic structure**," it said.
    - Federalism "is a means to reconcile the desire of commonality along with the desire for autonomy and accommodate diverse needs in a pluralistic society".
- The SC stated that **Article 239AA establishes a legislative assembly** for NCT of Delhi. Members of the **legislative assembly are elected by the Delhi electorate**.
  - If a democratically elected government is **not given the power to control the officers**, the principle of **triple chain of accountability will be redundant**.
  - The principle of **collective responsibility extends to the responsibility of officers**, who in turn report to the ministers. If the officers stop reporting to the ministers or do not abide by their directions, the entire principle of collective responsibility is affected.
- The Delhi government, much like other States, **represents the representative form of government** and any further expansion of the Union's power will be **contrary to the Constitutional scheme**.

### What is Article 239AA of the Constitution?

- Article 239 AA was inserted in the Constitution by **The Constitution (69<sup>th</sup> Amendment) Act, 1991** to give **Special Status to Delhi** following the recommendations of the **S Balakrishnan Committee** that was set up to look into demands for statehood for Delhi.
  - It says that the NCT of Delhi will have an **Administrator and a Legislative Assembly**.
  - Subject to the provisions of the Constitution, the Legislative Assembly "shall have power to make laws for the whole or any part of the NCT with respect to any of the **matters in the State List or Concurrent List** in so far as any such matter is applicable to Union territories" except on the subject of **police, public order, and land**.

- Further, the Article 239AA also notes that **L-G has to either act on the aid and advice of the Council of Ministers**, or he is bound to implement the decision taken by the President on a reference being made by him.
- Also, **Article 239AA, empowers the L-G to refer a difference of opinion** on 'any matter' with the Council of Ministers to the President.
- Thus, this dual control between L-G and the elected government leads to a power tussle.

### How are the UTs Administered in India?

- **About:**
  - Part VIII (Articles 239 to 241) of the Constitution deals with the Union Territories.
  - UTs in India are administered by the **President through an administrator appointed** by him/her. The administrator is not elected but rather a **representative of the President**.
    - In some UTs, such as Delhi and Puducherry, the administrator holds significant powers, including the ability to make laws and regulations for the UT.
    - In other UTs, such as Lakshadweep and Dadra and Nagar Haveli, the administrator's powers are limited to providing advice to the elected government.
  - The judiciary in UTs is also governed by the Constitution and the laws made by the Parliament. However, in some **UTs, such as Delhi, the High Court has wider powers than** in other UTs, such as Lakshadweep.
- **Special Provisions for Delhi and Puducherry:**
  - The Union Territories of **Puducherry (in 1963), Delhi (in 1992) and Jammu and Kashmir in 2019** (yet to be constituted) are provided with a **legislative assembly and a Council of Ministers** headed by a Chief Minister.
    - The Legislative assembly of the UT of Puducherry may make laws with respect to matters **enumerated in List II or List III in the Seventh Schedule of the Constitution** in so far as these matters are applicable in relation to the Union Territory.
    - The legislative assembly of National Capital Territory of Delhi also has these powers with the exception that **Entries 1, 2 and 18 of the List II are not within the legislative competence** of the legislative assembly.

Note:



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## Poshan Bhi, Padhai Bhi

### Why in News?

The Union Minister for Women and Child Development introduced the government's flagship program 'Poshan Bhi, Padhai Bhi', which will focus on **Early Childhood Care and Education (ECCE)** at **anganwadis** across the country.

- ECCE is an important component of **Mission Saksham Anganwadi** and **Poshan 2.0** (Mission Poshan 2.0) and envisaged under the National Education Policy.

### What are the Major Highlights of the Program?

- The Ministry has allocated **Rs 600 crore** for the **training of Anganwadi Workers (AWW)** to effectively implement ECCE.
- The **National Institute of Public Cooperation and Child Development (NIPCCD)** will provide the training for anganwadi workers.
- The objective of the program is to **transform anganwadi centers into not just nutrition hubs but also education-imparting centers**.
  - The ECCE program **will prioritize education in the mother tongue**, aligning with the principles of the **New Education Policy**.
- Through the changes introduced by the "Poshan bhi, Padhai bhi" ECCE policy, **every child would be provided with at least two hours of high-quality pre-school instruction daily**.

### What are the Anganwadis?

- **About:**
  - **Anganwadi is a type of rural child care center** in India. It was established as part of the **Integrated Child Development Services (ICDS)** program.
  - Anganwadis play a **crucial role in providing basic health care, nutrition, and early childhood education** to children below the age of six.
    - The term "anganwadi" translates to "**courtyard shelter**".
- **Status:**
  - Close to **13.9 lakh operational Anganwadi centres across the country** are providing supplementary nutrition and early care and education to around **8 crore beneficiary children under the age of 6 years**, making it the **largest public provisioning of such services in the world**.

### ➤ Role and Responsibilities of AWW:

- To organize **non-formal pre-school activities** in the anganwadi for children in the age group **3-6 years** and to help in **designing and making of toys and play equipment of indigenous origin for use in anganwadi**.
- They serve as centers for the distribution of supplementary nutrition, such as **take-home rations or hot cooked meals, to children and pregnant/lactating women**. These provisions aim to address **malnutrition** and **improve overall health**.
- To provide **health and nutrition education, and counseling to breastfeeding/ Infant & young feeding practices to mothers**.
  - **AWW**, being close to the locals, are expected to encourage married women to **adopt family planning/birth control measures**.
- **AWWs** shall share the information relating to births that took place during the month with the **Panchayat Secretary/Gram Sabha Sewa** whoever has been notified as **Registrar/Sub Registrar of Births & Deaths** in her village.
- To guide **Accredited Social Health Activists (ASHA)** engaged under **National Rural Health Mission** in the delivery of health care services and maintenance of records under the ICDS Scheme.
- To identify the disability among children during her home visits and refer the case immediately to the nearest **PHC or District Disability Rehabilitation Centre**.
- To support in organizing **Pulse Polio Immunization (PPI)** drives.

### ➤ Issues:

- **Inadequate Infrastructure:** Many Anganwadi centers lack **proper infrastructure, including basic amenities like toilets, clean water, and sufficient space for children to learn and play**.
  - Also, there is a shortage of trained staff, including anganwadi workers and helpers, in many Anganwadi centers.
- **Low Remuneration:** Anganwadi workers and helpers are often **inadequately compensated for their work**. Low remuneration can lead to demotivation and affect the quality of services provided. **It also hampers the recruitment and retention of skilled personnel**.

Note:

- **Limited Outreach:** In some cases, Anganwadis fail to reach the most marginalized and remote communities, leaving vulnerable children without access to crucial services. Inadequate transportation facilities and lack of awareness about the benefits of Anganwadis contribute to this issue.
- **Monitoring and Evaluation:** Monitoring and evaluation mechanisms to assess the impact and effectiveness of Anganwadi services are inadequate or underutilized.
  - The lack of robust monitoring can hinder the identification of areas for improvement and the allocation of resources based on needs.

- Management of bank, savings, or securities accounts.
- Organization of contributions for the creation, operation, or management of companies.
- Creation, operation, or management of companies, limited liability partnerships, or trusts.
- Buying and selling of business entities.
- The government widened the list of **non-banking reporting entities** to allow 22 financial entities like Amazon Pay (India) Pvt. Ltd, Aditya Birla Housing Finance Ltd, and IIFL Finance Ltd. to verify the identity of their customers via **Aadhaar** under the ambit of the money laundering law.

## India Strengthens PMLA

### Why in News?

India has undertaken changes in the money laundering law, the **Prevention of Money-Laundering Act (PMLA), 2002**, as part of a series of changes to plug loopholes ahead of the country's proposed assessment later in 2023 under the **Financial Action Task Force (FATF)**.

### What are the Changes Made Under the PMLA?

- More disclosures for **non-governmental organizations** by reporting entities like financial institutions, banking companies or intermediaries.
- Defining "**politically exposed persons**" (PEPs) as individuals who have been **entrusted with prominent public functions by a foreign country**, bringing uniformity with a 2008 **Reserve Bank of India (RBI)** circular for **Know Your Customer (KYC)** norms and anti-money laundering standards for banks and financial institutions.
- Bringing in **practicing chartered accountants, company secretaries, and cost and works accountants carrying out financial transactions on behalf of their clients** into the ambit of the money laundering law.
  - **Financial Transactions Include:**
    - Buying and selling of any immovable property.
    - Managing client money, securities, or other assets.

### What are the Concerns Regarding the Changes?

- The changes require reporting entities to **maintain records of all transactions and conduct KYC before each specified transaction**. Failure to comply could result in **penalties and action from investigative agencies**.
- **Low conviction rate** under the PMLA but an **extremely difficult process to go through**.
- The **exclusion of lawyers and legal professionals** in the new definition of entities covered under the PMLA has been criticized by some professionals.
- Some also argue that these newly incorporated professionals are **already regulated by professional bodies** set up under various acts of Parliament, making these measures unnecessary.

### What is the PMLA, 2002?

- **Background:**
  - The PMLA was enacted in response to India's **global commitment (Vienna Convention)** to combat the menace of **money laundering**. These include:
    - **United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances 1988**
    - **Basle Statement of Principles, 1989**
    - **Forty Recommendations of the Financial Action Task Force on Money Laundering, 1990**

Note:



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- **Political Declaration and Global Program of Action** adopted by the **United Nations** General Assembly in 1990.

➤ **About:**

- It is a criminal law enacted **to prevent money laundering and to provide for confiscation of property derived from**, or involved in, money-laundering and related matters.
- It forms the core of the legal framework put in place by India to combat Money Laundering.
- The provisions of this act are applicable to all financial institutions, banks (**Including RBI**), **mutual funds, insurance companies**, and their financial intermediaries.

➤ **Objectives:**

- Confiscate and seize proceeds of crime that are laundered, generated or acquired through criminal activities.
- Establish a legal framework for the prevention of money laundering and terrorist financing.
- Strengthen and improve the mechanism for investigation and prosecution of money laundering offences.
- Enhance international cooperation in the fight against money laundering and related crimes.

➤ **Regulating Authorities:**

- **Directorate of Enforcement (ED):** The ED is responsible for enforcing the provisions of the PMLA and investigating money laundering cases.

## Eight Years of Jan Suraksha Schemes

### **Why in News?**

Recently, the three social security (Jan Suraksha) schemes – **Pradhan Mantri Suraksha Bima Yojana (PMSBY)**, **Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)** and **Atal Pension Yojana (APY)** – completed 8 years of providing social security net.

- **PMJJBY and PMSBY** were launched to ensure that the people from the **unorganised section** of the country are **financially secure** while **APY** was **introduced to cover the exigencies in old age**.

### **What is Pradhan Mantri Suraksha Bima Yojana (PMSBY)?**

➤ **About:**

- It is a **one-year accidental insurance scheme** renewable from year to year offering coverage for death or disability due to accident.

➤ **Administered By:**

- It is administered by **Public Sector General Insurance Companies (PSGICs)** or any other general insurance company in partnership with banks / Post offices.

➤ **Eligibility:**

- Individuals in the **age group of 18-70 years** having a savings bank or a post office account are entitled to enroll.

➤ **Benefits:**

- Accidental death cum disability cover of **Rs. 2 lakhs (Rs. 1 lakh in case of partial disability)** for death or disability due to an accident against a **premium of Rs.20/- per annum**.

➤ **Achievements:**

- As of April 2023, the cumulative enrolments under the scheme have been more than 34.18 crore and an amount of Rs. 2,302.26 crore has been paid for 1,15,951 claims.

### **What is Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)?**

➤ **About:**

- It is a one-year life insurance scheme renewable from year to year offering coverage for **death due to any reason**.

➤ **Administered By:**

- It is administered by **LIC** or any other life insurance company in partnership with banks / Post office.

➤ **Eligibility:**

- Individuals in the **age group of 18-50 years** having a savings bank or a post office account are entitled to enroll under the scheme.

➤ **Benefits:**

- Life cover of **Rs. 2 Lakhs in case of death due to any reason** against a premium of Rs. 436/- per annum.

Note:



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➤ **Achievements:**

- As of April 2023, the cumulative enrolments under the scheme have been more than 16.19 crore and an amount of Rs. 13,290.40 crore has been paid for 6,64,520 claims.

**What is Atal Pension Yojana (APY)?**➤ **About:**

- It was launched to **create a universal social security system for all Indians**, especially the poor, the under-privileged and the workers in the unorganised sector.
- It is an initiative of the Government to **provide financial security** and cover future exigencies for the **people in the unorganized sector**.

➤ **Administered By:**

- **Pension Fund Regulatory and Development Authority (PFRDA)** through the National Pension System (NPS).

➤ **Eligibility:**

- **All bank account holders in the age group of 18 to 40 years** (the contributions differ, based on the pension amount chosen).

➤ **Benefits:**

- Subscribers would receive the **guaranteed minimum monthly pension** of Rs. 1000 or Rs. 2000 or Rs. 3000 or Rs. 4000 or Rs. 5000 **at the age of 60 years**, based on the contributions made by them after joining the scheme.

➤ **Payment Frequency:**

- Subscribers can make contributions to APY on a monthly/ quarterly / half-yearly basis.

➤ **Withdrawal from the Scheme:**

- Subscribers **can voluntarily exit from APY subject to certain conditions**, on deduction of Government co-contribution and return/interest thereon.

➤ **Achievements:**

- As of April 2023, **more than 5 crore individuals** have subscribed to APY.

**What are the Significances of these Schemes?**

- These three social security schemes are **dedicated to the welfare of the citizens**, recognising the need for securing human life from unforeseen risks/losses and financial uncertainties.

- The PMJJBY and PMSBY **provide access to low-cost life/accidental insurance** cover to the people, the APY provides an **opportunity for saving** in the present for getting a regular pension in old age.
- The number of people who have enrolled and benefitted from these schemes over the last seven years is a testimony to their success.
- These low-cost insurance schemes and the guaranteed pension scheme are **ensuring that financial security**, which was available to a select few earlier, is **now reaching the last person of the society**.

**What are the Other Social Security Schemes launched by Govt of India?**

- **Pradhan Mantri Shram Yogi Maan-Dhan Yojana (PM-SYM) (Old Age Protection)**
- **National Pension Scheme for Traders and The Self-employed Persons (NPS)**
- **National Health Mission and Janani Suraksha Yojana**
- **Pradhan Mantri Matru Vandana Yojana**
- **Pradhan Mantri Vaya Vandana Yojana (PMVVY)**
- **National Social Assistance Programme (NSAP) scheme**
- **PM KISAN**

**Draft Notification on EPR on Waste Oil****Why in News?**

- *Recently, the Ministry of Environment, Forest and Climate Change (MoEFCC) introduced a draft notification on **Extended Producer Responsibility (EPR)** on waste oil.*
  - The **Union Budget 2023-24** in India emphasizes **sustainable development** and a **circular economy**, with a goal of shifting from a linear model to a circular one through the **replacement of natural resource usage with valuable waste materials**.

**What is EPR?**

- It makes **producers responsible for the environmental impacts** of their products throughout their life cycle.
- EPR aims to **promote better waste management** and **reduce the burden on municipalities**.

Note:



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- It integrates environmental costs into product prices and encourages the **design of environmentally sound products**.
- EPR is applicable to various types of waste, including **plastic waste**, **e-waste**, and **battery waste**.
- The E-Waste (Management and Handling) Rules, 2011 introduced the concept of EPR for the first time in India.

### **What is the Draft Notification on EPR on Waste Oil?**

- **About:**
  - EPR on waste oil is to improve the **circularity of waste oil management**. Waste oil is a contaminant that contains harmful substances that can **pollute freshwater and soil**.
    - Waste oil can act as a contaminant as it contains **benzene, zinc, cadmium** and other impurities that have the potential to **pollute freshwater**.
- **Aim:**
  - **Prevent pollution and bring waste oil collection and recycling** under the formal sector.
- **Recommendation:**
  - It recommends the **registration of stakeholders**, including producers, collection agents, recyclers and waste oil importers, on **Central Pollution Control Board's (CPCB) online portal**.
- **Applicability:**
  - EPR on waste oil is applicable to **producers, and bulk generators** (like industry, railways, transport companies, power transmission companies, etc.).
- **EPR Targets:**
  - Gradual increase in waste oil recycling targets, **starting from 2024-25**.
  - **Base year target set at 10%, increasing by 10% annually until 2029**.
  - Future targets based on the **quantity of lubrication oil sold or imported annually**.
- **Provisions and Responsibilities:**
  - **EPR certificate generation**, computation of eligible quantity, and transaction details.
  - Clear **demarcation of responsibilities** for producers, importers, agents, recyclers, etc.
  - **Online portal** for registration, filing returns, and tracing oil produced or generated.

- **Bureau of Indian Standards** is entrusted with setting necessary standards for re-refined oil.
- **Challenges:**
  - Need for monitoring, verification, and auditing mechanisms.
  - Overburden on **Central Pollution Control Board(CPCB)** and **State Pollution Control Boards(SPCBs)** require additional support.
  - Focus on **improving waste oil circularity and reducing fresh oil consumption**.
  - Questions on compliance, third-party audits, and monitoring oversight.
- **Expert Opinions:**
  - Positive reception by **non-profit organizations for EPR on waste oil**.
  - Concerns over **implementation, monitoring, oversight, and penalties for defaulters**.

### **What is India's Progress Towards Circular Economy?**

- Notifying various rules and policies for waste management, such as the **Plastic Waste Management Rules, 2022**, **e-Waste Management Rules 2022**, **Battery Waste Management Rules 2022** etc.
- Constituting 11 **committees led by the concerned line ministries** to prepare comprehensive **action plans for transitioning from a linear to a circular economy** in 11 focus areas, such as **agriculture, mobility, textiles, electronics**, etc.
- **NITI** also organized an international conference on '**Sustainable Growth through National Recycling**'.
- Collaborating with international partners, such as the **European Union** and the **United States**, to exchange best practices and learnings on resource efficiency and circular economy.
- Supporting **social and environmental innovators** who are developing **circular economy solutions for waste management**, such as the World Institute of Sustainable Energy.
- **Encouraging businesses and industries** to adopt circular economy principles and practices in their production systems and supply chains.
- India's progress toward a **circular economy is still in its early stages** and faces **many challenges**, such as a **lack of awareness, data gaps, regulatory barriers, infrastructural constraints, and behavioral inertia**.

Note:



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- However, with concerted efforts from all stakeholders and continuous learning and innovation, India can achieve its vision of a resilient and inclusive circular economy.

### What is A Circular Economy?

#### ➤ About:

- A Circular Economy is the one **where products are designed for durability, reuse and recyclability** and thus **almost everything gets reused, remanufactured, and recycled** into a raw material or used as a source of energy.
- It includes **6 R's - Reduce, Reuse, Recycle, Refurbishment, Recover, and Repairing of materials.**

#### ➤ Need for Circular Economy:

- CE focuses on **minimising waste while maximising utilisation** and calls for a production model aiming to retain the most value to create a system that **promotes sustainability, longevity, reuse, and recycling.**
- Though India has always had a culture of recycle and reuse, its **rapid economic growth, growing population**, impact of climate change and rising environmental pollution, the adoption of a circular economy is more imperative now.
- CE can lead to the **emergence of more sustainable production and consumption patterns**, thus providing opportunities for developed and developing countries to achieve economic growth and **inclusive and sustainable industrial development (ISID)** in line with the **2030 Agenda for Sustainable Development.**

## Curtailing Misleading Food Ads

### Why in News?

Recently, the **Food Safety and Standards Authority of India (FSSAI)** has flagged misleading claims from the Food Business Operators (FBOs) and found them to be in contravention of **the Food Safety and Standards (Advertisements & Claims) Regulations, 2018.**

- In 2022, the **Central Consumer Protection Authority (CCPA)** had issued **Guidelines to Prevent False or Misleading Advertisements.**

### What are the Concerns?

- The FSSAI has discovered that some **companies selling nutraceutical products, refined oils, pulses, flours, millet products**, and ghee have been making false claims about their products. These claims have not been **scientifically proven and could mislead consumers.**
- The FSSAI has referred these cases to the licensing authorities, who will issue notices to the companies to withdraw or modify their misleading claims.
- Failure to comply may result in penalties, suspension or cancellation of their licenses, as making false claims or advertisements is a punishable offense under **Section-53 of the Food Safety and Standards (FSS) Act, 2006.**
- The concerns related to misleading food advertisements mainly revolve around **false or unsubstantiated claims made about a product's nutrition**, benefits, and ingredient mix.
- This problem is widespread across different food categories, and there have been a significant number of violative food advertisements.
- Additionally, non-disclosure **by food influencers is also a major concern.** Misleading advertisements can lead to consumer confusion and potential harm to their **health if they make incorrect food choices based on false claims.**

### What are the Initiatives for Consumer Protection and tackling Misleading Ads?

- **Food Safety and Standards (Advertisements & Claims) Regulations, 2018:** It specifically deals with food (and related products) while **Central Consumer Protection Authority (CCPA)**'s regulations cover goods, products and services.
- **Cable Television Network Rules, 1994:** It stipulates that advertisements must not draw inferences that it has "some special or miraculous or supernatural property or quality, which is difficult to prove.
- **FSS Act 2006:** Product claims suggesting suitability for prevention, alleviation, treatment or cure of a disease, disorder or particular psychological condition is prohibited unless specifically permitted under the regulations of the FSS Act, 2006.
- **Consumer Welfare Fund:** It was set up under the Central Goods and Services Tax (CGST) Act, 2017 to **promote and protect the welfare of the consumers.**

Note:



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- **Few Examples:** Creation of Consumer Law Chairs/ Centres of Excellence in Institutions/ Universities of repute to foster research and training on consumer related issues. Projects for spreading consumer literacy and awareness.
- **Central Consumer Protection Council:** It aims to **safeguard consumer interests by monitoring and enforcing consumer protection laws**, facilitating consumer education, and providing consumer redressal mechanisms. In addition, the council also promotes consumer-friendly policies and initiatives.
- **Consumer Protection Rules, 2021:** The rules stipulate the pecuniary jurisdiction of each tier of consumer commission. The rules revised pecuniary jurisdiction for entertaining consumer complaints.
- **Consumer Protection (E-Commerce) Rules, 2020:** The rules are **mandatory and are not advisory**. Sellers cannot **refuse to take back goods or withdraw services or refuse refunds**, if such goods or services are defective, deficient, delivered late, or if they do not meet the description on the platform.

## Drug Recall

### Why in News?

Recently, a pharmaceutical company inadvertently **shipped a Mislabeled batch of Drugs to the market**, which highlights the **issue of circulating substandard drugs** in the market and need for **Drug Recall Law in India**.

- While such recalls take place regularly in the U.S., including by Indian companies, but not seen in India.

### What is a Drug Recall?

- A drug recall occurs when a prescription or over-the-counter drug is removed from the market **because of its harmful or side effects**.
- Drug recall is the process of **removing or correcting a marketed drug product** that violates the laws and regulations governing the safety, efficacy, or quality of a drug.
- Drug recalls are typically issued **when a product is found to be defective, contaminated, mislabeled, or poses a risk** to the health and safety of patients.
- The goal of a drug recall is to **protect the public from harm** by removing the affected product from the market, and to provide a remedy or refund for consumers who have already purchased the product.

### What is the Need for Drug Recall Law in India?

- It is crucial for India to have a national Drug Recall Law to guarantee that once a drug is known to be **Not of Standard Quality (NSQ)**, the entire batch is withdrawn from the market.
- Currently, **there is no such Law in India to withdraw the entire batch of substandard drugs** from the market.
- At most state **drug regulators can order a withdrawal of a particular batch** from their state but given that India is a common market, it is possible that the **same batch is dispersed across multiple states**.
- In such a case, there needs to be a central drug regulator who can execute and coordinate national recall.
- Despite flagging this as a major issue in 1976, India still lacks a **national law on recalling drugs**.
  - As a result, even after government analysts declare drugs to be NSQ, there is no system to **actually withdraw batches of drugs from across India**.

### Why does India not have Regulatory Infrastructure for Substandard Drugs?

- **Apathy and Lack of Expertise:**
  - The Drug Regulation Section of government is not up to the task of **tackling complex drug regulatory issues** due to a combination of different factors including **apathy, lack of expertise in the area**, and a greater interest in enabling the growth of the pharmaceutical industry than **protecting public health**.
- **Fragmented Regulatory Structure:**
  - India has a highly fragmented regulatory structure, with **each state having its own drug regulator**.
  - But despite the fragmentation, **drugs manufactured in one state can seamlessly cross borders** to be sold in all states around the country.
- **Opposition to Centralised Regulatory:**
  - Both the pharmaceutical industry and state drug regulators **have resisted greater centralisation** of regulatory powers.
  - The incompetence of a regulator in just one state can **lead to adverse effects for patients in other states**, whose citizens have no influence or electoral power to demand accountability of that regulator.

Note:



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➤ **No Interest within Government:**

- There appears to be no interest within the government and **no sustained demand from civil society** for reform.
- The government is more invested in the **growth of the pharmaceutical industry rather than public health**.
- There is possibly a perception that **tighter regulation could slow the growth of the pharmaceutical industry**.

**What are the Implications of Delay in Framing any such Law?**

- When substandard drugs are not promptly recalled from the market, it can have **serious consequences for consumers**, including illness and even death. However, in India, the process of drug recall is often slow and ineffective, leading to a **dangerous situation for the public**.
- If the government does not take swift action to recall substandard drugs, it could **indicate a lack of accountability and responsibility towards the health and safety of the people**.
- Furthermore, delaying the recall of these drugs could lead to a **loss of public trust in the healthcare system and the government**.

**How Drugs Are Regulated in India?**➤ **The Drugs and Cosmetics Act:**

- **The Drugs and Cosmetics Act, 1940** and Rules 1945 have entrusted various responsibilities to central and state regulators for regulation of drugs and cosmetics.
- It provides the regulatory **guidelines for issuing licenses to manufacture Ayurvedic, Siddha, Unani medicines**.

➤ **Central Drugs Standard Control Organisation (CDSCO):**

- Prescribes standards and **measures for ensuring the safety, efficacy and quality of drugs, cosmetics, diagnostics and devices in the country**.
- Regulates the **market authorization of new drugs and clinical trials standards**.

➤ **Drugs Controller General of India:**

- DCGI is the head of department of the CDSCO of the Government of India responsible for **approval of licences of specified categories of drugs** such as blood and blood products, IV fluids, vaccines and sera in India.
- DCGI also sets **standards for manufacturing, sales, import, and distribution of drugs in India**.

## Government Programme for NCD Renamed

**Why in News?**

The existing National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (**NPCDCS**) programme has been renamed National Programme for Prevention & Control of **Non-Communicable Diseases (NP-NCD)**.

- It has been renamed to subsume all types of NCDs.
- Further, the Ministry of Health and Family Welfare has renamed the **Comprehensive Primary Healthcare Non-Communicable Disease (CPHC NCD IT) system as the National NCD Portal** to cover a wider population for screening and management of non-communicable diseases.

**What is NPCDCS/NP-NCD?**➤ **About:**

- NPCDCS is being implemented under the **National Health Mission (NHM)** across the country.

➤ **Aim:**

- It was launched in 2010 with a **focus on strengthening infrastructure, human resource development, health promotion, early diagnosis, management and referral**.

➤ **Management:**

- Under NPCDCS, **NCD Cells are being established at National, State and District levels for programme management**, and NCD Clinics are being set up at District and Community Health Centres (CHC) levels, to provide services for early diagnosis, treatment and follow-up for common NCDs.

➤ **Achievement:**

- Under NPCDCS, **677 NCD district-level clinics, 187 District Cardiac Care Units, 266 District Day Care Centres and 5,392 NCD Community Health Centre-level clinics** have been set up.

**What is National Health Mission?**

- NHM was launched by the government of India in 2013 subsuming the **National Rural Health Mission** and the **National Urban Health Mission**.

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- The main programmatic components include Health System Strengthening in rural and urban areas for - **Reproductive-Maternal- Neonatal-Child and Adolescent Health (RMNCH+A)**, and **Communicable and Non-Communicable Diseases**. The NHM envisages achievement of universal access to equitable, affordable & quality health care services that are accountable and responsive to people's needs.
- The National Health Mission seeks to ensure the achievement of the following indicators:
  - Reduce **Maternal Mortality Rate (MMR)** to 1/1000 live births
  - Reduce Infant Mortality rate (IMR) to 25/1000 live births
  - Reduce Total Fertility Rate (TFR) to 2.1
  - Prevention and reduction of anaemia in women aged 15–49 years
  - Prevent and reduce mortality & morbidity from communicable, non-communicable; injuries and emerging diseases
  - Reduce household out-of-pocket expenditure on total health care expenditure
  - Reduce annual incidence and mortality from Tuberculosis by half
  - Reduce the prevalence of **Leprosy** to <1/10000 population and incidence to zero in all districts
  - **Annual Malaria** Incidence to be <1/1000
  - Less than 1 per cent microfilaria prevalence in all districts
  - **Kala-azar** Elimination by 2015, <1 case per 10000 population in all blocks

### What are Non-Communicable Diseases?

- **About:**
  - NCDs, also known as chronic diseases, **tend to be of long duration** and are the result of a **combination of genetic, physiological, environmental and behavioural factors**.
  - The main types of NCD are **cardiovascular diseases** (such as heart attacks and stroke), **cancers, chronic respiratory diseases** (such as chronic obstructive pulmonary disease and asthma) and **diabetes**.

- **Causes:**
  - Tobacco use, unhealthy diet, harmful use of alcohol, physical inactivity and air pollution are the main risk factors contributing to these conditions.
- **Indian Initiatives:**
  - The Central Government is implementing the Strengthening of Tertiary Care Cancer facilities scheme to support the setting up of **State Cancer Institutes (SCI)** and **Tertiary Care Centres (TCCC)** in different parts of the country.
  - Oncology in its various aspects has a focus in case of new AIIMS and many upgraded institutions under **Pradhan Mantri Swasthya Suraksha Yojana (PMSSY)**.
  - **Affordable Medicines and Reliable Implants for Treatment (AMRIT)** Deendayal outlets have been opened at 159 Institutions/Hospitals with an objective to **make available Cancer and Cardiovascular Diseases drugs and implants at discounted prices to the patients**.
  - **Jan Aushadhi stores** are set up by the Department of Pharmaceuticals to provide generic medicines at affordable prices.
- **Global:**
  - **Agenda for Sustainable Development:** As part of the 2030 Agenda for Sustainable Development, **heads of state and government committed to develop ambitious national responses, by 2030**, to reduce by one third premature mortality from NCDs through prevention and treatment (**SDG target 3.4**).
    - WHO plays a key leadership role in the coordination and promotion of the global fight against NCDs.
  - **Global Action Plan:** In 2019, the World Health Assembly extended the WHO Global action plan for the **prevention and control of NCDs 2013–2020 to 2030** and called for the **development of an Implementation Roadmap 2023 to 2030 to accelerate progress on preventing and controlling NCDs**.
    - It supports actions to achieve a set of nine global targets with the greatest impact towards prevention and management of NCDs.

Note:



## Demand of Meities for ST Status

### Why in News?

Recently, the **All-Tribal Students' Union of Manipur (ATSUM)** has carried out a solidarity march in order to oppose the demand of **Meitei Community** be included in the **List of State's Scheduled Tribes (ST)**.

- The march broke into **violent clashes after an order from the Manipur High Court**, directing the State to pursue a 10-year-old recommendation to grant ST status to the **non-tribal Meitei community**.

### Why does the Meitei Community want ST Status?

- The Meitei community, led by the **Scheduled Tribes Demand Committee of Manipur (STDCM)**, has been demanding ST status since 2012, asking to provide them with **constitutional safeguards to preserve their culture, language, and identity**.
- The Meiteis argue that they were **recognised as a tribe before the merger of Manipur with India in 1949 but lost their identity after the merger in India**.
- As a result of being left out of the ST list, the Meitei community **feels marginalized and victimized** without any constitutional protections.
  - The STDCM has stated that the Meitein/Meetei have been gradually marginalised in their ancestral land.
  - Their population, which was **59% of the total population of Manipur in 1951**, has now been reduced to **44% as per 2011 Census** data.
- They believe that **granting ST status would help preserve their ancestral land, tradition, culture, and language**, and safeguard them against outsiders.

### What is the Process of Inclusion under List of STs?

- The process for including a community in the **list of ST follows a set of modalities established in 1999**.
- The respective State or Union Territory government must initiate the proposal for inclusion, which then goes to the Union Tribal Affairs Ministry and subsequently to the **Office of the Registrar General of India (ORGI)**.

- If the ORGI approves the inclusion, the proposal is then sent to the **National Commission for Scheduled Tribes**, and if they concur, the proposal is forwarded to the Cabinet for amendment to the **Constitution (Scheduled Tribes) Order, 1950**.
- In September 2022, the government approved the **inclusion of certain communities in the lists of Scheduled Tribes**. These include:
  - **Binjhia** in Chhattisgarh
  - **Narikoravan and Kurivikkaran** in Tamil Nadu
  - **'Betta-Kuruba'** in Karnataka,
  - **Hattis** from Himachal Pradesh
  - **Gond Community** in Uttar Pradesh

### Why are Other Tribal Groups in Manipur opposing the Demand of Meiteis?

- **Meitei's Already in Majority:** One reason for this is that the **Meitei community is already dominant in terms of population and political representation**, as most of the Assembly constituencies are in the **valley where the Meiteis live**.
  - The ST communities fear that granting ST status to the Meiteis **would result in them losing job opportunities** and other affirmative actions meant for STs.
- **Meitei Culture has Recognition:** Meitei language is already **included in the 8<sup>th</sup> Schedule of the Constitution**, and some sections of the Meitei community are already classified under **Scheduled Castes (SC)** or **Other Backward Classes (OBC)**, which gives them access to certain opportunities.
- **More Political Influence:** They also think that the demand for ST status is a way for the dominant Meitei community from the valley area to **gain political influence and control over the hill areas of the state** by diverting attention from the political demands of other tribal groups like the **Kukis and Nagas**.
  - The Kukis are an ethnic group including multiple tribes originally inhabiting the NE states such as **Manipur, Mizoram and Assam; parts of Burma (now Myanmar), and Sylhet district and Chittagong hill tracts of Bangladesh**.
  - Wanting to dominate trade and cultural activities in these areas, **Kukis and Nagas often engaged in violent standoffs**, with villages being torched, civilians killed and so on.

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- **Eviction of Tribal Groups:** One of the other reasons for the discontent has been the state government's notices since August 2022 claiming that 38 villages in the Churachandpur-Khoupum Protected Forest area are "illegal settlements" and its residents are "encroachers".
  - Following this, the government set out on an eviction drive which resulted in clashes.
  - Kuki groups have claimed that the **survey and eviction is a violation of Article 371C**, which confers some **administrative autonomy to the tribal-dominated hill areas of Manipur**.

### What is the Ethnic Composition of Manipur?

- **About:**
  - Meiteis are the largest community in Manipur and there are **34 recognized tribes** broadly classified as 'Any Kuki Tribes' and 'Any Naga Tribes'.
  - The Imphal valley in the state, at the centre of Manipur, accounts for **about 10% of its landmass** and is home primarily to the **Meitei and Meitei Pangals** who constitute roughly **64.6% of the state's population**.
    - The remaining 90% of the state's geographical area comprises **hills surrounding the valley**, which are home to the recognized tribes, making up about **35.4% of the state's population**.
  - While a **majority of the Meiteis are Hindus followed by Muslims (8%)**, the 33 recognised tribes, broadly classified into 'Any Naga tribes' and 'Any Kuki tribes' are largely Christians.
  - Manipur, along with Dimapur district of Nagaland, was brought under the purview of the **ILP System**

in December 2019. **ILP is a special permit obligatorily required by "outsiders" from other regions** of the country to enter the notified states.

### ➤ Key Points of Meitei Community:

- The Meitei people are also known as Manipuri people.
  - Their primary language is the **Meitei language, which is also called Manipuri** and is the **only official language** of Manipur.
- They are predominantly settled in the Imphal Valley, although a significant number **reside in other Indian states, such as Assam, Tripura, Nagaland, Meghalaya, and Mizoram**.
  - There is also a notable presence of **Meitei in the neighboring countries of Myanmar and Bangladesh**.
- The Meitei people are divided into clans, and members of the **same clan do not intermarry**.

### What are the Special Provisions under Article 371?

- **Article 371** of the Constitution provides "special provisions" for 11 states, including **six states of the Northeast** (excluding Tripura and Meghalaya).
  - Articles 369-392 (including some that have been removed) appear in Part XXI of the Constitution, titled '**Temporary, Transitional and Special Provisions**'.
  - **Article 370** deals with 'Temporary Provisions with respect to the State of Jammu and Kashmir'.
- Articles **371 and 371A-371J** define special provisions with regard to another state (or states).
  - **Article 371I deals with Goa**, but it does not include any provision that can be deemed 'special'.

Article (Amendment)	For State	Provision
<b>Article 371</b>	<b>Maharashtra and Gujarat</b>	The Governor has "special responsibility" to establish " <b>separate development boards</b> " for "Vidarbha, Marathwada, and the rest of Maharashtra", and Saurashtra and Kutch in Gujarat.
<b>Article 371A</b> (13 <sup>th</sup> Amendment Act, 1962)	<b>Nagaland</b>	<b>Parliament cannot legislate in matters of Naga religion or social practices</b> , Naga customary law and procedure, administration of civil and criminal justice involving decisions according to Naga customary law, and ownership and transfer of land without concurrence of the state Assembly.
<b>Article 371B</b> (22 <sup>nd</sup> amendment Act, 1969)	<b>Assam</b>	The President may provide for the <b>constitution and functions of a committee of the Assembly</b> consisting of members elected from the state's tribal areas.

Cont..

Note:



Article (Amendment)	For State	Provision
<b>Article 371C</b> (27th Amendment Act, 1971)	<b>Manipur</b>	The President may provide for the <b>constitution of a committee of elected members</b> from the Hill areas in the Assembly and entrust “special responsibility” to the Governor to ensure its proper functioning.
<b>Article 371D</b> (32 <sup>nd</sup> Amendment Act, 1973; Substituted by The Andhra Pradesh Reorganisation Act, 2014)	<b>Andhra Pradesh and Telangana</b>	The President must ensure “ <b>equitable opportunities and facilities</b> ” in “ <b>public employment</b> and education to people from different parts of the state”. He may require the state government to organise “any class or classes of posts in a civil service of, or any class or classes of civil posts under, the State into different local cadres for different parts of the State”. <i>Article 371E is for Andhra Pradesh but not a special provision.</i>
<b>Article 371F</b> (36 <sup>th</sup> Amendment Act, 1975)	<b>Sikkim</b>	The members of the Legislative Assembly of <b>Sikkim shall elect the representative of Sikkim in the House of the People.</b> To protect the rights and interests of various sections of the population of Sikkim, Parliament may provide for the number of seats in the Assembly, which may be filled only by candidates from those sections.
<b>Article 371G</b> (53rd Amendment Act, 1986)	<b>Mizoram</b>	<b>Parliament cannot make laws on “religious or social practices of the Mizos, Mizo customary law and procedure,</b> administration of civil and criminal justice involving decisions according to Mizo customary law, ownership and transfer of land... unless the Assembly... so decide
<b>Article 371H</b> (55th Amendment Act, 1986)	<b>Arunachal Pradesh</b>	The <b>Governor has a special responsibility with regard to law and order,</b> and “he shall, after consulting the Council of Ministers, exercise his individual judgment as to the action to be taken”.
<b>Article 371J</b> (98th Amendment Act, 2012)	<b>Karnataka</b>	There is a <b>provision for a separate development board for the Hyderabad-Karnataka</b> region. There shall be “ <b>equitable allocation of funds for developmental expenditure over the said region</b> ”, and “equitable opportunities and facilities” for people of this region in government jobs and education.

## Criminalisation of Politics

### Why in News?

Recently, the **Association for Democratic Reforms (ADR)** has revealed that the number of candidates with criminal cases has increased in all major political parties in Karnataka ahead of the 2023 Assembly Elections, highlighting the Issue of **Criminalisation of Politics**.

- The ADR has **recommended the permanent disqualification of candidates** convicted of serious criminal offenses from contesting elections. However, such disqualifications have not been implemented yet.

### What is the Criminalisation of Politics?

- **About:**
  - Criminalisation of politics is defined as the **situation when criminals participate in the politics** of the government, i.e., contest elections and get elected to the Parliament and state legislatures.
  - This growing menace has become a big problem for our society, affecting the basic principles of democracy, such as fairness in elections, following the law, and being accountable.
- **Statistics:**
  - According to data from the ADR, the number of candidates with criminal charges elected to Parliament in India has been on the rise since 2004.

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- In 2004, **24% of parliamentarians had pending criminal cases**, which rose to **43% in 2019**.
- In a petition filed in Feb 2023, it was claimed that there has been an increase of **44% in the number of MPs with declared criminal cases since 2009**.
  - In the 2019 Lok Sabha elections, **159 MPs had declared serious criminal cases against them**, including those of rape, murder, attempt to murder, kidnapping, crimes against women.

### ***What are the Causes of Criminalisation of Politics?***

- **Vote Bank:**
  - Candidates and political parties **often resort to illegal means such as vote-buying** and other illegitimate practices, aided by individuals commonly referred to as “goondas”.
  - This culture of political crime is often **perpetuated by the close links between politicians and their constituencies** providing a conducive environment for the misuse of power and resources for personal gain, leading to **corruption and criminal activities**.
- **Corruption:**
  - The majority of candidates contesting elections require money, funds, and donations. It is pertinent to note that **corruption** directly gives rise to contempt of the law.
  - There is a **direct relationship between contempt of law and criminalisation of politics**. When **contempt of law** combines with the criminalisation of politics, it gives birth to flourishing corruption.
- **Vested Interests:**
  - People generally vote **through a narrow prism of community interests** and neglect the criminal background of the politicians.
  - This can lead to a situation where politicians with a criminal background are elected simply because **they align with the interests of a particular community, rather than being held accountable** for their actions.
- **Muscle Power:**
  - Politicians make promises to eliminate corruption and muscle power during elections, but rarely follow through.

- The **First Past the Post (FPTP)** system favors the candidate with the most votes. The ideology behind using muscle power is that **fear and violence can help parties win if they can't gain trust**.
  - The FPTP system is also known as the simple majority system. In this voting method, the **candidate with the highest number of votes in a constituency is declared the winner**.
- This creates a dangerous nexus between political parties and criminals.

#### ➤ **Money Power:**

- **Black money** and mafia funds contribute significantly to the criminalisation of politics. These illegal sources of money are used to buy votes and win elections, leading to a rise in criminalisation in politics.

#### ➤ **Poor Governance:**

- The poor governance of the country **also plays an important role in increasing the criminalization of politics**. There is absence of proper laws and rules for governing the procedure of the election.
  - Only the **Model Code of Conduct** is there **which is also not enforced by any statute**.

### ***What are the Implications of Criminalisation of Politics?***

- **Against the Principle of Free and Fair Elections:** It **limits the choice of voters** to elect a suitable candidate.
  - It is against the ethos of **Free and Fair Elections** which is the bedrock of a democracy.
- **Affecting Good Governance:** The major problem is that the **law-breakers become law-makers**, this affects the efficacy of the democratic process in delivering good governance.
  - These unhealthy tendencies in the democratic system reflect a poor image of the nature of India's state institutions and the quality of its elected representatives.
- **Affecting Integrity of Public Servants:** The circulation of black money makes it easier for politicians to buy votes and secure their positions, **leading to a situation where corrupt practices are normalized** and become a part of the political system.

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- This makes it difficult for honest public servants to work effectively and **can erode public trust in the government.**
- **Causes Social Disharmony:** It introduces a culture of violence in society and sets a bad precedent for the youth to follow and reduces people's faith in democracy as a system of governance.

### ***What are the Legal Aspects of Disqualification of Criminal Candidates?***

- In this regard, Indian Constitution does not specify as to what disqualifies a person from contesting elections for the Parliament, Legislative assembly or any other legislature.
- The **Representation of Peoples Act 1951** mentions the criteria for disqualifying a person for contesting an election of the legislature.
- **Section 8 of the act** provides for **disqualification on conviction for certain offences**, according to which an **individual punished with a jail term of more than two years** cannot stand in an election for six years after **the jail term has ended.**
- However, the law **does not bar individuals who have criminal cases pending against them from contesting elections** therefore the disqualification of candidates with criminal cases **depends on their conviction in these cases.**

### ***What are the Initiatives/Recommendations Against Criminalisation of Politics?***

- In 1983, **Vohra Committee on Criminalisation of Politics** was constituted with an objective to identify the extent of the political-criminal nexus and to recommend ways in which the criminalisation of politics can be effectively dealt with.
- The **244<sup>th</sup> report (2014)** submitted by the **Law Commission** dealt with the need to curb the trend of criminal politicians in **legislature posing serious consequences to democracy and secularism.**
  - The Law Commission **recommended disqualification of people against whom charges have been framed** at least one year before the date of scrutiny of nominations for an offence punishable with a sentence of five years or more.

- In 2017, the Union government started a scheme to **establish 12 special courts for a year to fast track the trial of criminal cases against MPs and MLAs.**
  - The apex court has since then issued many directions, including asking the Centre to **set up a monitoring committee to examine reasons** for delay of investigation in these cases.

### ***What are the SC Judgements Regarding Criminalization of Politics?***

- **Association for Democratic Reforms v. Union of India (2002):**
  - In 2002, the SC ruled that every **candidate contesting election has to declare his criminal and financial records** along with educational qualifications.
- **Ramesh Dalal vs. Union of India (2005):**
  - In 2005, the SC had ruled that a sitting MP or MLA will be disqualified from contesting the election if convicted and **sentenced for imprisonment for two years or more** by a court of law.
- **Lily Thomas v. Union of India (2013):**
  - The SC has declared that any member of parliament or state legislative assembly who is convicted of a crime and sentenced to a **prison term of two years or more would be disqualified** from holding office.
- **Manoj Narula v. Union of India (2014):**
  - The Delhi HC held that a person **cannot be disqualified** from contesting elections merely because they have been charged **with a criminal offense.**
  - However, the court also held that political parties **must not field candidates who have a criminal background.**
- **Public Interest Foundation v. Union of India (2019):**
  - The SC has ordered political parties to **publish the criminal records of their candidates** on their websites, social media handles, and newspapers.
  - The court also directed the **ECI** to create a framework to ensure that the **information on candidates' criminal records was disseminated effectively.**

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# Regulating Artificial Intelligence

## Why in News?

The European Parliament has reached a preliminary agreement on a new draft of the **Artificial Intelligence Act**, which aims to regulate systems like **OpenAI's ChatGPT**.

- The legislation was drafted in 2021 with the aim of bringing transparency, trust, and accountability to AI and creating a framework to **mitigate risks to the safety, health, Fundamental Rights**, and democratic values of the EU.

## What is the EU's Artificial Intelligence Act?

### ➤ About:

- It defines AI as **software that generates outputs such as content**, predictions, recommendations, or decisions.
- It prohibits the use of AI technologies in the **highest risk category**, including real-time facial and **biometric identification systems in public spaces**, social scoring of citizens, subliminal techniques to influence behavior, and technologies that exploit vulnerable people.

### ➤ Focus:

- It focuses on AI systems that have the **potential to harm people's health**, safety, or fundamental rights.
  - These include AI in healthcare, education, employment, law enforcement, and access to essential services.
- Before high-risk AI systems can be sold, they will **undergo strict reviews to ensure they are transparent**, explainable, and allow human oversight.
- AI systems with lower risks, like spam filters or video games, have **fewer requirements**.

### ➤ Objective:

- It aims to **address ethical questions and implementation challenges** in various sectors ranging from healthcare and education to finance and energy.
- The legislation seeks to strike a **balance between promoting "the uptake of AI while mitigating or preventing harms** associated with certain uses of the technology".

- Similar to how the EU's 2018 **General Data Protection Regulation (GDPR)** made it an industry leader in the global data protection regime, the AI law aims to "strengthen Europe's position as a global hub of excellence in AI from the lab to the market" and ensure that AI in Europe respects the 27-country bloc's values and rules.

## What is the Need for Regulating Artificial Intelligence?

### ➤ Uncertainty in Risks Involved:

- The use of artificial intelligence is increasing, and as technology becomes more advanced and capable of various tasks such as recommending music, driving cars, detecting cancer etc., there are also **increased risks and uncertainties associated** with it.

### ➤ Black Box:

- Some AI tools are so complicated that **they are like a "black box."** This means that even the people who create them **can't fully understand how they work** and how they come up with certain answers or decisions.
- It's like a secret box that generates an output, but nobody **knows exactly how it does it**.

### ➤ Inaccuracy and Biases:

- AI tools have already caused problems such as **mistaken arrests due to Facial Recognition Software**, unfair treatment due to biases built into AI systems, and more recently, with **Chatbots** based on large language models like GPT-3 and 4 creating content that **may be inaccurate or use copyrighted material without permission**.
- These chatbots are capable of producing high-quality content that is difficult to **distinguish from content written by humans but** may not always be accurate or legally permissible.

### ➤ Unsure of Future Behavior:

- AI poses a unique challenge because, unlike in traditional engineering systems, designers cannot be sure how AI systems will behave. When a traditional automobile was shipped out of the factory, engineers knew exactly how it would function. But with self-driving cars, the **engineers can never be sure how it will perform** in novel situations.

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### How is Global AI currently Governed?

- **India:**
  - **NITI Aayog**, has issued some guiding documents on AI Issues such as the National Strategy for Artificial Intelligence and the **Responsible AI for All report**.
  - Emphasises social and economic inclusion, innovation, and trustworthiness.
- **United Kingdom:**
  - Outlined a light-touch approach, asking regulators in different sectors to apply existing regulations to AI.
  - Published a white paper outlining five principles companies should follow: safety, security and robustness; transparency and explainability; fairness; accountability and governance; and contestability and redress.
- **US:**
  - The US released a Blueprint for an **AI Bill of Rights (AIBoR)**, outlining the harms of AI to economic and civil rights and lays down **five principles for mitigating these harms**.
  - The Blueprint, instead of a horizontal approach like the EU, endorses a **sectorally specific approach to AI governance**, with policy interventions for individual sectors such as health, labour, and education, leaving it to sectoral federal agencies to come out with their plans.
- **China:**
  - In 2022, China came out with some of the world's first nationally binding regulations targeting specific types of algorithms and AI.
  - It enacted a law to **regulate recommendation algorithms** with a focus on how they disseminate information.

## Nationwide AHDF KCC Campaign

### Why in News?

As part of the **Aazadi Ka Amrit Mahostav** celebrations, the Union Ministry for Fisheries, Animal husbandry and Dairying has launched the **Nationwide Animal Husbandry, Dairying, and Fisheries (AHDF) KCC Campaign from 1<sup>st</sup> May 2023 to 31<sup>st</sup> March 2024**.

### What is the Nationwide AHDF KCC Campaign?

- **About:**
  - The **campaign aims to expand the benefits of the Kisan Credit Card (KCC)** to all eligible **animal husbandry, dairy, and fishery farmers** in the country.
  - The campaign will **provide credit facilities to small landless farmers** engaged in animal husbandry and fisheries activities.
- **Outcome of Previous Campaigns:**
  - Since June 2020, the Ministry of Fisheries, Animal Husbandry and Dairying, in association with the Department of Financial Services, has organized various campaigns to provide Kisan Credit Card facilities to all eligible animal husbandry and fishery farmers.
    - **More than 27 lakh fresh KCCs were sanctioned** to animal husbandry and fishery farmers during these campaigns.
- **Current Campaign:**
  - During the current campaign, **District Level KCC Camps will be organized every week by the KCC Coordination Committee** coordinated by Lead District Manager (LDM) for on-the-spot scrutiny of applications sourced by the officials of the State Animal Husbandry and Fisheries department from the farmers.

### What is Kisan Credit Card?

- **About:**
  - The Kisan Credit Card (KCC) scheme was introduced in 1998 to provide **timely credit support to farmers**.
  - It offers **credit for cultivation, purchase of agriculture inputs, and other needs**.
  - The scheme was extended to cover the investment credit requirement of farmers in 2004.
  - In **2018-19, the facility was extended to fisheries and animal husbandry farmers**.
- **Objectives:**
  - The scheme aims to meet the short-term credit requirements of farmers for crop cultivation, post-harvest expenses, produce marketing loan, consumption requirements, and working capital for maintenance of farm assets.
  - It also provides investment credit for agriculture and allied activities.

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- **Features:**
- KCC comes with an **ATM-enabled RuPay debit card and flexible/simplified procedures.**
- **Aadhaar seeding is mandatory** to avail **interest subvention.**
- The facility helps fisheries and animal husbandry farmers meet their short-term credit requirements.

➤ **Implementing Agencies:**

- Commercial Banks
- Regional Rural Banks (RRBs)
- **Small Finance Banks**
- **Cooperatives**

➤ **Recent Achievements:**

- As of February 25, 2022, **2.92 crore KCCs** have been issued with a sanctioned credit limit of Rs. 3.20 lakh crores.
- The government offers interest subvention of 2% and prompt repayment incentive of 3% to farmers on short-term crop loans up to Rs. 3 lakhs.

## Mercy Petition

### **Why in News?**

In a recent ruling, the **Supreme Court (SC)** has declined to direct the government to commute the death penalty of Balwant Singh Rajoana, instead, it has allowed the government to decide on the **Mercy Petition** when necessary.

- Balwant Singh Rajoana was convicted for the assassination of former Punjab Chief Minister Beant Singh in 1995.
- The petitioner argued that since the state and the Union of India **have not been able to decide on the mercy petition**, which is pending for more than 10 years, the death penalty **should be commuted to life imprisonment.**

### **What is Mercy Petition?**

➤ **About:**

- A mercy petition is a formal request made by someone who has been sentenced to death or imprisonment **seeking mercy from the President or the Governor**, as the case may be.

- The idea of Mercy Petition is followed in many countries like the United States of America, the United Kingdom, Canada, and India.
- Everyone has the basic right to live. It is also mentioned as a **fundamental right mentioned under Article 21** of the Indian Constitution.

➤ **Constitutional Framework:**

- As per the Constitutional framework in India, **mercy petition to the President is the last constitutional resort a convict can take** when he is sentenced by the court of law. A convict can present a mercy petition to the President of India under **Article 72** of the Constitution of India.
- Similarly, the **power to grant pardon is conferred upon the Governors** of States under **Article 161** of the Constitution of India.

➤ **Article 72:**

- The President shall have the **power to grant pardons, reprieves, respites or remissions** of punishment or to suspend, remit or commute the sentence of any person convicted of any offense:
  - In all cases where the punishment or sentence is by a Court Martial;
  - In all cases where the punishment or sentence is for an offence against any law relating to a matter to which the executive power of the Union extends;
  - In all cases where the sentence is a sentence of death.

➤ **Article 161:**

- It provides that the Governor of a State shall have the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, **remit or commute the sentence of any person convicted of any offence against any law** relating to a matter to which the executive power of the State extends.
  - The **SC in 2021** held that the **Governor of a State can pardon prisoners, including death row ones**, even before they have served a minimum 14 years of prison sentence.

➤ **Process of making a Mercy Petition:**

- There is no statutory written procedure for dealing with mercy petitions, but in practice,

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after extinguishing all the reliefs in the court of law, either the convict in person or his relative on his behalf may **submit a written petition to the President**. The petitions are received by the President's secretariat on behalf of the President, which is then forwarded to the Ministry of Home Affairs for their comments and recommendations.

➤ **Grounds for filing Mercy Petition:**

- The act of mercy is **not the right of the prisoner**. He cannot claim it.
- The mercy or clemency is **granted on the grounds based on his health, physical or mental fitness**, his family financial conditions as he is the only sole earner of bread or butter or not.

➤ **Judicial Review:**

- In the case of ***Epuru Sudhakar & Anr. v. Government of Andhra Pradesh (2006)*** the SC held that the clemency power of the President and Governor under Article 72 and Article 161 is **subject to judicial review**.
- The court laid down certain grounds on which clemency power can be claimed by **the petitioner for judicial review**:
  - If the order is passed without any application of mind.
  - If the order passed is malafide.
  - If the order passed on completely irrelevant considerations.
  - If the order suffers from arbitrariness.

**What are some of the Important Judgments Related to Mercy Petition?**

- ***Maru Ram v. Union of India (1981)***: The SC held that the power to grant pardon under Article 72 is to be exercised on **the advice of the Council of ministers**.
- ***Dhananjay Chatterjee State of West Bengal (1994)***: The SC said that "The power under Articles 72 and 161 of the Constitution can be exercised by the Central and State Governments, not by the **President or Governor on their own**."
- ***Kehar Singh v. Union of India (1989)***: The SC had examined the scope of the President's pardoning power under Article 72 in detail.
  - The SC held that the exercise of the pardoning power vested in him under Article 72, could "scrutinize the evidence on the record of the

criminal case and come to a different conclusion from that recorded by the Court in regard to guilt of and sentence imposed on the accused.

**What are some of the Keywords Related to Pardoning Power?**

- **Pardon**: The president can totally absolve/acquit the person for the offence and let him go free like a normal citizen.
- **Commute**: To reduce the type of punishment into a less harsh one. For example Rigorous imprisonment to simple imprisonment.
- **Remission**: To reduce the punishment without changing the nature of the punishment. For example 20 years rigorous imprisonment to 10 years rigorous imprisonment.
- **Reprieve**: A delay is allowed in the execution of a sentence, usually a death sentence for a guilty person to prove his innocence.
- **Respite**: Reduce the degree of punishment looking at specific grounds like pregnancy, old age etc.

**What do the Laws of other Countries Provide?**

- **USA**:
  - The Constitution of America gives the President the similar powers to grant reprieves or pardon for offences under Federal law, except in cases of impeachment. However, in cases of violation of state law, the power has been given to the concerned Governor of the state.
- **UK**:
  - In the UK, the Constitutional monarch can pardon or reprieve for offences on ministerial advice.
- **Canada**:
  - The National Parole Board under the Criminal Records Act is authorized to grant such reliefs.

## Online Gambling in India

### Why in News?

Recently, the government of India has **instructed states to take action against outdoor advertisements** promoting online **Betting and Gambling platforms**.

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- The government had earlier issued an advisory to the media in June 2022, directing them to refrain from publishing such advertisements in the larger public interest.

### What is the Government's Observation?

- The government has observed that some betting and gambling platforms are using outdoor media such as hoardings, posters, banners, and auto rickshaw branding to promote their websites/apps.
- Such advertisements were found to be misleading and not in strict conformity with the **Consumer Protection Act 2019**.
- Moreover, since **betting and gambling are illegal in most parts of the country**, they pose financial and social economic risk for the consumers, especially youth and children.
- The government has **objected to the promotion of a specific betting platform** that encouraged people to watch a sports league on its website in prima facie violation of the Copyright Act.

### What is Online Gambling?

- Online gambling involves **participating in gambling activities through the internet** by placing bets or wagers on games and events to win money or prizes. It can be played on various devices and involves **virtual chips or digital currencies instead of cash**.
- The global online gambling market was valued at **USD 63.53 billion in 2022** and is expected to grow at a **CAGR of 11.7% from 2023 to 2030**, with the Asia-Pacific region being the largest market.
- There are different types of online gambling, including **casino games like slots, blackjack, and roulette, sports betting, poker, and lottery**. It is regulated in most countries, including India, with varying degrees of restrictions and laws.

### What's the Difference Between Online Gaming and Gambling?

- Under the law, the distinction between **gaming and gambling depends on the element of skill** involved. If an online activity **does not require skill, it will be considered gambling** rather than gaming.
- Therefore, according to the law, gaming activities that are allowed require skill, while gambling activities rely on chance.

### What are the Concerns Related to Online Gambling?

- **Financial and Social Trouble:**
  - Online gambling can be highly addictive, leading to **severe financial and social problems**. As it is easily accessible, players **can spend hours playing games** without realizing the amount of time and money they are spending.
- **Unregulated:**
  - Online gambling is **often unregulated**, making it easy for fraudulent activities to take place. This can lead to players losing their **money or their personal information** being compromised.
  - Gambling has complex laws in India and is not available in most of the states. Each state has its own jurisdiction over gambling.
- **Means for Money Laundering:**
  - Online gambling can be used as a **means for money laundering**, where players can deposit **large amounts of cash into online accounts** and then withdraw the money in a legitimate form.
- **Prone to Cyber-Attacks:**
  - Online gambling sites can be vulnerable to cyber-attacks, which can lead to the **theft of sensitive personal and financial information of the players**.
- **Socially Detachment:**
  - Online gambling can lead to social isolation, **as players can spend hours playing games online, leading to a lack of social interaction** with family and friends.

### What are the Advantages of Online Gambling?

- **Convenience:** Online gambling can be accessed from the **comfort of one's own home or anywhere** with an internet connection, making it more convenient than traditional gambling methods.
- **Accessibility:** Online gambling is often more accessible for people with disabilities or those who have **difficulty leaving their homes**, allowing them to participate in gambling activities that would otherwise be difficult or impossible for them.
- **Revenue Generation:** Online gambling has the potential to generate significant revenue for the Indian government **through taxation and regulation**. Besides, the online gambling industry can create job opportunities for Indian entrepreneurs, who can develop and operate their own online gambling platforms.

Note:



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### What Does Indian Law Say About Online Gambling?

- **Public Gambling Act, 1867:**
  - At present, India has just one central law that governs gambling in all its forms. It's called the Public Gambling Act, 1867, which is an old law, ill-equipped to handle the challenges of digital casinos, online gambling and gaming.
- **7th Schedule of the Constitution:**
  - Gambling in India is largely a state subject. This means states **are expected to create their own laws to regulate gambling** in their jurisdictions.
- **Laws in Various States:**
  - States like Delhi, Madhya Pradesh, and Uttar Pradesh have adopted the Public Gambling Act with some amendments.
  - However, other regions like Goa, Sikkim, Daman, Meghalaya, and Nagaland, have drafted specific laws to regulate public gambling in their jurisdictions.

## SC Allows Divorce on Irretrievable Breakdown

### Why in News?

Recently, the **Supreme Court (SC)** ruled that under its power to do 'complete justice' granted via **Article 142**, it can **dissolve a marriage on the ground that it had broken down irretrievably**, without referring the parties to a family court where they must wait 6-18 months for a decree of divorce by mutual consent.

### What is SC's Ruling?

- **Ruling:**
  - In the case of **Shilpa Sailesh vs. Varun Sreenivasan (2023)**, the SC has ruled that **it has the power to dissolve a marriage** if it is **irretrievably broken down**.
    - The **original case was filed in 2014**, titled *Shilpa Sailesh v/s Varun Sreenivasan*, where the parties sought a **divorce under Article 142**.
  - The court can **waive the mandatory six-month waiting period** for divorce under the **Hindu**

**Marriage Act (HMA), 1955**, and allow the dissolution of the marriage on grounds of an irretrievable breakdown **even if one of the parties was not willing**.

### Conditions:

### Larger public, personal interest

**'IRRETRIEVABLE BREAKDOWN OF MARRIAGE'**

"Court should be fully convinced... the marriage is totally unworkable, emotionally dead and beyond salvation and, thus, dissolution of marriage is... the only way forward. That the marriage has irretrievably broken down is to be factually determined and firmly established."

FACTORS TO ESTABLISH BREAKDOWN	
<p><b>1</b> Time the parties lived together after marriage</p> <p><b>2</b> When the parties last cohabited</p> <p><b>3</b> Allegations made by parties against each other, their families</p>	<p><b>4</b> Orders passed in legal proceedings</p> <p><b>5</b> Attempts made to settle disputes by court intervention, mediation</p> <p><b>6</b> The separation period should be above six years</p>

### Significance of the Ruling:

- The process of obtaining a **decree of divorce** is **often time-consuming and lengthy** owing to a large number of similar cases pending before family courts.
  - The ruling allows parties to **bypass the waiting period and approach the Supreme Court directly for a divorce** on grounds of irretrievable breakdown.
- As per SC, if there is no possibility of reconciliation, it would be meaningless to prolong the agony of the parties to the marriage.
  - Dissolving such a marriage, even if one of the parties agree, would provide a **speedy solution for parties who are unable to live together** and have mutually agreed that the marriage should be dissolved.
- The judgment is significant as **irretrievable breakdown of marriage is not yet a ground for divorce** under the **Hindu Marriage Act (HMA) 1955**.
  - Till date, there is still **no codified law for irretrievable breakdown of marriage**. Though, the HMA 1955 recognizes a few grounds for dissolution of marriage in **Section 13**.

Note:

### ➤ Implication of the Judgement:

- The recent SC judgement **does not imply** that people can rush straight to the SC for a quick divorce.
  - The **grant of divorce by the SC on the ground of irretrievable breakdown** of marriage is **“not a matter of right, rather a discretion** which needs to be exercised with great care and caution”.
- The SC also clarified that a **party cannot file a writ petition under Article 32 (or Article 226)** of the Constitution of India and **seek relief of dissolution of marriage** on the ground of irretrievable breakdown of marriage directly from it.

### ➤ Need to Shift away from Fault Theory:

- The 5-judge bench **highlighted the need of the SC to move away from “fault theory”** and **“accusatorial principle of divorce”** under Section 13 (1) of HMA 1955, which prescribes divorce on grounds where one of the spouses can be held guilty of certain misdeeds such as cruelty, adultery or desertion.
- The **HMA 1955** and the **Special Marriage Act 1954** are **premised on the ‘fault’ or ‘matrimonial offence’ theory** for the purpose of divorce.
  - It allows the **innocent party to obtain a divorce if the other party has committed a matrimonial offense.**
  - Under HMA 1955, there are **7 fault grounds** for divorce: **adultery, cruelty, desertion, conversion, insanity, leprosy, venereal disease, and sanyasa.**

### ➤ There are 4 grounds on which the wife can sue alone: **rape, sodomy, bestiality, non-resumption of cohabitation after maintenance order, and decree for maintenance.**

- The innocent party must prove that they are blameless for the divorce to be granted under this theory.

#### Note:

- The **Law Commission of India**, in its reports in 1978 and 2009 recommended **adding irretrievable breakdown as an additional ground of divorce.**
  - The Law Commission in its 71<sup>st</sup> report (1978), dealt with the concept of irretrievable breakdown of marriage.

- The Report also mentions that as far back as 1920, **New Zealand was the first of the Commonwealth countries** to introduce the provision that a **three-year or more separation agreement** was grounds for filing a petition in the courts for divorce.
  - It has become a classic enunciation of the breakdown principle in matrimonial law.

### What is HMA 1955?

#### ➤ About:

- The Hindu Marriage Act 1955 (HMA) is an act of the Parliament of India that codifies and amends the law relating to marriage among Hindus and others.
- It **applies to Hindus, Buddhists, Jains, Sikhs and anyone who is not a Muslim, Christian, Parsi, or Jew by religion.**

#### ➤ Current Procedure for Divorce under the HMA:

- Section 13B of the HMA provides for **“divorce by mutual consent”** under which both parties to the marriage **must together file a petition to the district court.**
  - This will be done on the grounds that they have been living separately for a period of one year or more, **that they have not been able to live together** and have mutually agreed that the marriage should be dissolved.
- The parties must **move a second motion** before the court **at least 6 months after the date of the presentation** of the first petition and **not later than 18 months** after the said date (provided, the petition is not withdrawn in the meantime).
  - The mandatory six-month wait is intended to give the parties time to **withdraw their plea.**
- A **petition for divorce by mutual consent** can be **moved only after a year** of the marriage.
  - However, section 14 of the HMA allows a divorce petition sooner in case of **“exceptional hardship to the petitioner or of exceptional depravity on the part of the respondent”.**
  - A waiver of the six-month waiting period under Section 13 B (2) can be sought in an exemption application filed before the **family court.**

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### What are the Other Judgements Related to Divorce?

- **Amit Kumar vs Suman Beniwal (2021):** The SC said, "Where there is a chance of reconciliation, however slight, the cooling period of six months from the date of filing of the divorce petition should be enforced. However, if there is no possibility of reconciliation, it would be **meaningless to prolong the agony of the parties to the marriage.**"
- **Bhagwat Pitambar Borse vs. Anusayabai Bhagwat Borse (2018):** The Bombay HC held that **desertion** by the wife for **more than seven years** without any reasonable cause and without any intention to return is a valid ground for divorce.
- In June 2016, a **two-judge bench** referred to the **larger bench of 5 judges** the matter regarding the **court's exercise of powers under Article 142** to grant a divorce without sending the parties to a family court.
  - Citing conflicting views taken by different benches of the top court, it also sought clarity on the broad parameters for the exercise of powers under Article 142 to dissolve a marriage between the consenting parties.
  - The **smaller bench had in 2016 appointed senior advocates** Indira Jaising, Dushyant Dave, V Giri, and Meenakshi Arora as **amici curiae** (friends of court) to assist the Constitution bench.

#### What is Article 142 (1) of the Constitution?

- Subsection 1 of **Article 142** confers sweeping power on the Supreme Court to pass such decree or make such order as is necessary for doing 'complete justice' in any cause or matter.
- The decision to exercise the power under Article 142(1) must be **"based on considerations of fundamental general and specific public policy"**.
  - The fundamental general conditions of public policy refer to the **fundamental rights, secularism, federalism, and other basic features of the Constitution**; specific public policy was defined by the court to mean **"some express pre-eminent prohibition** in any substantive law, and **not stipulations and requirements** to a particular statutory scheme".

### What is the Status of Marriage Equality in India?

- **Divorce Rate and Trends in India:**
  - A 2018 survey of 160,000 households revealed that **93% married Indians had 'an arranged marriage'**, as against the **global average of about 55%**.
    - India has a **low annual divorce rate of 1.1 per 1,000 people**, with only **13 out of every 1,000 marriages** resulting in divorce, and **men are usually the initiators**.
    - Prevailing **social norms discourage women from seeking a divorce**, and when they do, they face **legal hassles and socio-economic isolation**, especially if they are financially dependent on their spouses.
- **Women's Economic Dependency:**
  - Indian **women's low labor-force participation** rate translates to **high levels of financial dependency**, forcing them to **'adjust' to bad marriages**.
- **Women's Socio-Economic Challenges after Divorce:**
  - The dissolution of a marital union disproportionately affects women, who suffer from chronic strains of divorce, including **disproportionate losses in household income**, higher risk of **losing homeownership**, **lower chances of re-partnering**, and greater responsibilities of single parenting.

## Sedition Law

### Why in News?

- Recently, the government in the **Supreme Court (SC)** has said it has initiated the **"Process of Re-examination"** of **Section 124A (sedition)** of the **Indian Penal Code (IPC)** and consultations are in its "final stage".
- In May 2022, the court, in an interim order, had suspended the use of **Section 124A**, stalling pending criminal trials and court proceedings under **Section 124A** across the country.

### What is Sedition Law?

- **Historical Background:**
  - Sedition laws were enacted in **17<sup>th</sup> century England** when lawmakers believed that only good opinions of the government should survive, as **bad opinions were detrimental to the government and monarchy**.

Note:

- The law was originally **drafted in 1837 by Thomas Macaulay**, the British historian-politician, but was inexplicably omitted when the IPC was enacted in 1860.
- **Section 124A was inserted to IPC in 1870** by an amendment introduced by Sir James Stephen when it felt the need for a specific section to deal with the offence.
- Today the Sedition is a crime under **Section 124A of the IPC**.
- **Current Scenario:**
  - **Section 124A IPC:**
    - It defines sedition as **an offence committed when** “any person by words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to **excite disaffection towards the government** established by law in India”.
- Disaffection includes **disloyalty and all feelings of enmity**. However, comments without exciting or attempting to excite hatred, contempt or disaffection, will not **constitute an offence under this section**.
- The SC in **Balwant Singh v. State of Punjab (1995)**, reiterated that the **real intent of the speech must be taken** into account before labelling it seditious.
- **Punishment:**
  - It is a **Non-Bailable Offence**. Punishment under Section 124A ranges from **imprisonment up to three years to a life term**, to which a **fine may be added**.
  - A person charged under this law is **barred from a government job**.
    - They have to live without **their passport and must produce themselves** in the court at all times as and when required.

### **What is the Significance of Sedition Law?**

- **Reasonable Restrictions:**
  - The Constitution of India guarantees the freedom of speech and expression to its citizens.
    - However, this **right is not absolute**, and the **government can restrict it under certain circumstances** to ensure that it is not abused.
  - These restrictions are considered reasonable and are **laid out in Article 19(2)** of the Constitution.

- **Maintaining Unity & Integrity:**
  - Sedition law helps the government in **combating anti-national, secessionist and terrorist elements**.
- **Maintaining Stability of State:**
  - It helps in protecting the elected government **from attempts to overthrow** the government with violence and illegal means.
  - The continued existence of the government **established by law is an essential condition of the stability** of the State.

### **What are the Issues?**

- **Reminiscence of Colonial Era:**
  - During British rule in India, sedition laws were used to imprison people who criticized British policies.
    - Many leaders of the Indian freedom movement, such as **Lokmanya Tilak, Mahatma Gandhi, Jawaharlal Nehru, Bhagat Singh**, etc were convicted and imprisoned for their speeches, writings, and activities.
- **Stand of Constituent Assembly:**
  - The Constituent Assembly did not agree to include sedition in the Constitution as the members **felt it would curtail freedom of speech and expression**.
  - They argued that the sedition law can be turned into a weapon to **suppress people's legitimate and constitutionally guaranteed right to protest**.
- **Repressing Democratic Values:**
  - Increasingly, India is being described as an elected autocracy **primarily because of the callous and calculated** use of sedition law.

### **What are the Previous SC Rulings regarding Sedition?**

- As early as 1950, the SC in **Romesh Thapar v State of Madras** held that “criticism of the government exciting disaffection or bad feelings towards it, is not to be regarded as a **justifying ground for restricting the freedom of expression** and of the press, unless it is such as to undermine the security of or tend to overthrow the state.”
- Subsequently, two high courts — the Punjab and Haryana High Court in **Tara Singh Gopi Chand v. The State (1951)**, and the Allahabad High Court in **Ram Nandan v. State of Uttar Pradesh (1959)** — declared that **Section 124A of the IPC was primarily a tool for colonial masters** to quell discontent in the country and declared the provision unconstitutional.

Note:

- In the **Kedarnath Singh v State of Bihar (1962)** ruling on sedition the SC overruled the earlier rulings of the high courts and **upheld the constitutional validity of IPC Section 124A**. However, the court attempted to restrict its scope for misuse.

#### What are Recent Developments?

- **In February 2021**, the Supreme Court protected a political leader and six senior journalists from arrest, for allegedly tweeting and sharing unverified news, in multiple sedition FIRs registered against them.
- **In June 2021**, the SC while protecting two Telugu (language) news channels from coercive action by the Andhra Pradesh government **emphasized on defining the limits of sedition**.
- **In July 2021**, a petition was filed in the SC, that sought a relook into the Sedition Law,
  - The Court ruled that a law that criminalizes speech **based on vague and unconstitutional definitions of terms like 'disaffection towards Government'** is not a reasonable restriction on the fundamental right to free expression **guaranteed under Article 19(1)(a)**.
  - Such a law creates a **chilling effect on speech**, that means people will **self-censor or refrain from expressing their opinions** out of fear of being punished by the government.

## National Health Accounts Estimates

### Why in News?

Recently, the Ministry of Health and Family Welfare has released the **7th National Health Accounts (NHA) Estimates** for India (2019-20), which was produced by the **National Health Systems Resource Centre**.

- The NHA estimates are prepared by using an accounting framework based on the internationally accepted System of Health Accounts 2011, provided by the **World Health Organization (WHO)**.

#### National Health Systems Resource Centre

- It was established in 2006-07 under the National Rural Health Mission (NRHM) of Government of India to serve as an apex body for technical assistance.
- Its mandate is to assist in policy and strategy development in the provision and mobilization of technical assistance to the states and in capacity building for the Ministry of Health and Family Welfare (MoHFW).

### What are the Key Highlights?

Health Indicators	Definitions	Data of Growth Trends
<b>Out of Pocket Expenditure (OOPE) \</b>	OOPE is the money paid directly by households, at the point of receiving health care. This occurs when services are neither provided free of cost through a government health facility, nor is the individual covered under any public or private insurance or social protection scheme.	The share of OOPE in total health expenditure has declined from <b>62.6% in 2014-15 to 47.1% in 2019-20</b> .
<b>Government Health Expenditure (GHE)</b>	GHE constitutes spending under all schemes funded and managed by Union, State, and Local Governments including quasi-Governmental organizations and donors in case funds are channeled through Government organizations. health system as a low Government.	GHE's share in the country's total GDP increased from <b>1.13% (2014-15) to 1.35% (2019-20)</b> .
<b>General Government Expenditure (GGE)</b>	This is a proportion of the share of Government expenditures towards healthcare in the General Government Expenditures and indicates Government's priority towards healthcare	In GGE the share of health sector spending has steadily increased from <b>3.94% to 5.02% between 2014-15 and 2019-20</b> .

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<b>Total Health Expenditure (THE)</b>	THE constitutes current and capital expenditures incurred by Government and Private Sources including External funds.	In the Total Health Expenditure (THE) of the country between <b>2014-15 and 2019-20</b> , the share of GHE has increased from <b>29% to 41.4%</b> .
<b>Social Security Expenditure (SSE)</b>	It includes government-funded health insurance, medical reimbursement to government employees, and social health insurance programs.	The share of SSE on health has increased from <b>5.7% in 2014-15 to 9.3% in 2019-20</b> .
<b>Private Health Insurance Expenditures (PHIE)</b>	PHIE constitute spending through health insurance companies where households or employers pay a premium to be covered under a specific health plan.	PHIE has increased from <b>3.4% in 2013-14 to 7 % in 2019-20</b> estimates out of total Health Expenditure.
<b>External/ Donor Funding for health</b>	This constitutes all funding available to the country by assistance from donors.	It has increased from <b>0.3 % in 2013-14 to 0.5 % in 2019-20</b> out of total health expenditure.

## Model Code of Conduct

### Why in News?

As the Karnataka Assembly Elections draw closer, political parties are trading accusations of **hate speech** against each other.

- The parties have approached the **Election Commission of India** regarding violations of the **Model Code of Conduct (MCC)**.

### What is MCC?

- **About:**
  - The **MCC is a set of guidelines issued by the ECI to regulate political parties and candidates prior to elections.**
  - It helps EC in keeping with the mandate it has been given under **Article 324 of the Constitution**, which gives it the **power to supervise and conduct free and fair elections** to the Parliament and State Legislatures.
  - The MCC is operational from the date on **which the election schedule is announced until the date of the result announcement.**
- **Evolution:**
  - The **origin of the MCC lies in the Assembly elections of Kerala in 1960**, when the State administration prepared a '**Code of Conduct**' for political actors.

- Subsequently, in the Lok Sabha elections in 1962, the **EC circulated the code** to all recognized political parties and State governments, and it was wholeheartedly followed.

- It was in **1991** after repeated flouting of the election norms and continued corruption, the **EC decided to enforce the MCC more strictly.**

### ➤ MCC for Political Parties and Candidates:

- **Prohibitions:**
  - Criticism of political parties must be **limited to their policies and programmes, past record, and work.**
  - Activities such as **using caste and communal feelings** to secure votes, criticizing candidates on the basis of unverified reports, bribing or intimidation of voters, etc. are prohibited.
- **Meetings:**
  - Parties must **inform the local police authorities of the venue and time** of any meeting in time to enable the police to make adequate security arrangements.
- **Processions:**
  - If **two or more candidates plan processions along the same route**, the political parties must establish contact in advance to ensure that the **processions do not clash.**
  - **Carrying and burning effigies** representing members of other political parties is **not allowed.**

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### ○ Polling Day:

- Only voters and those with a valid pass from the EC are allowed to enter polling booths.
- All authorized party workers at **polling booths should be given suitable badges or identity cards.**

➤ Identity slips supplied by them to voters **shall be on plain (white) paper and shall not contain any symbol, name of the candidate or the name of the party.**

### ○ Observers:

- The EC will appoint observers to whom any candidates may report problems regarding the conduct of the election.

### ○ Party in Power:

- The MCC incorporated certain restrictions in 1979, regulating the conduct of the party in power. **Ministers must not combine official visits with election work or use official machinery for the same.**
- The party **must avoid advertising at the cost of the public exchequer** or using official mass media for publicity on achievements to improve chances of victory in the elections.
- From the time elections are announced by Commission, the **ministers and other authorities must not announce any financial grants**, or promise any construction of roads, provision of drinking water, etc. **Other parties must be allowed to use public spaces** and rest houses, and these must not be monopolized by the party in power.

### ○ Election Manifestos:

- The ECI directs that political parties and candidates must adhere to the following guidelines while releasing election manifestos for any election (Parliament/State Legislatures):
  - The election manifesto **shall not contain anything against the ideals and principles enshrined in the Constitution.**
  - Political parties should avoid making **promises that are likely to vitiate the purity of the election process** or exert undue influence on voters.
  - Manifestos should reflect the **rationale for promises** and broadly indicate the ways and means to meet the financial requirements for it.

- Manifestos shall **not be released during the prohibitory period**, as prescribed under **Section 126 of the Representation of the People Act 1951**, for single or multi-phase elections.

### **Some Recent Additions to the MCC:**

- The regulation of **opinion polls and exit polls** during the period notified by the ECI.
- The **prohibition of advertisements in print media** on polling day and one day prior to it unless the contents are pre-certified by screening committees.
- The **restriction on government advertisements** featuring political functionaries during the election period.

### **Is the MCC Legally Enforceable?**

- Though the **MCC does not have any statutory backing**, it has come to acquire strength in the past decade because of its strict enforcement by the EC.
  - Certain provisions of the MCC may be enforced through invoking corresponding provisions in other statutes such as the **IPC 1860, CrPC 1973, and RPA 1951.**
- In 2013, the Standing Committee on Personnel, Public Grievances, Law and Justice recommended making the MCC legally binding and recommended that the MCC be made a part of the RPA 1951.
- However, the **ECI argues against making it legally binding**. According to it, elections must be completed within a relatively short time or close to 45 days and **judicial proceedings typically take longer, therefore it is not feasible to make it enforceable by law.**

### **What are the Criticisms of the MCC?**

- **Ineffectiveness in Curbing Malpractices:**
  - The MCC has failed to prevent **electoral malpractices such as hate speech, fake news, money power, booth capturing, voter intimidation, and violence.**
  - ECI is also challenged by new technologies and social media platforms that enable faster and wider **dissemination of misinformation** and propaganda.
- **Lack of Legal Enforceability:**
  - MCC is **not a legally binding document** and relies merely on **moral persuasion and public opinion for compliance.**

Note:



- **Interference with Governance:**
  - MCC imposes **limitations on policy decisions, public spending, welfare schemes, transfers, and appointments.**
  - ECI is often criticized for applying the **MCC too early or too late, affecting development activities and public interest.**
- **Lack of Awareness and Compliance:**
  - It is **not widely known or understood by voters, candidates, parties, and government officials.**

## Freedom of Religion

### *Why in News?*

Recently, the Tamil Nadu (TN) Government has stated that the **Article 25 (Freedom of Religion)** of the Indian Constitution guarantees every citizen the right to propagate his religion, while replying to a petition in the **Supreme Court (SC).**

- The petitioner complained about the **instances of forceful conversion in TN, violating the Fundamental Rights.**

### *What is the Case About?*

- The petitioner sought an **NIA (National Investigation Agency)/CBI (Central Bureau of Investigation)** investigation into the "root cause" of the death of a 17-year-old girl in Tamil Nadu amidst a **swirl of accusations that she had been forced to convert to Christianity.** The petition argued that **forcible or deceitful conversion was a violation of fundamental rights.**
- TN govt has replied that the acts of **missionaries to spread Christianity by themselves cannot be seen as illegal,** since the Constitution guarantees every citizen the right to propagate his religion under Article 25.
  - However, if their act of spreading their religion is against public order, morality and health and against other provisions of **Part III of the Constitution,** it has to **be viewed seriously.**

### *What is Understood by the Freedom of Religion?*

- **About:**
  - Every citizen is entitled with this right and liberty to **preach, practice and propagate the religion** of his choice.
    - An opportunity is also provided by this right to spread it among everyone without any fear of government intervention.

- But also, it is expected by the state to practice it amicably within the jurisdiction of the country.

#### ➤ **Need:**

- India is home to people following different religions and having different faiths. As per the Pew Research Centre 2021 data, **there are 4,641,403 people who follow other religions apart from the six major religions** which are Hinduism, Jainism, Islam, Buddhism, Sikhism, and Christianity.
- So with such a diverse population, following different religions and beliefs, it becomes necessary to **protect and secure rights regarding the faith** of each and every religion.

#### ➤ **Secularism:**

- The **42<sup>nd</sup> Constitutional amendment** in 1976 added the word '**secular**' to the **preamble of the Constitution.** India being a secular state, is a no state religion which means **that it follows no particular religion.**
  - In Ahmedabad **St. Xavier's College v. State of Gujarat (1975),** the SC held that Secularism neither means anti-god nor pro-god. It just ensures that no one is differentiated on the basis of religion eliminating the concept of God in matters of the state.

#### ➤ **Constitutional Provisions Related to Freedom of Religion:**

- **Article 25:** It imparts freedom of conscience and free profession, practice and propagation of religion. It is available to people.
- **Article 26:** It gives freedom to manage religious affairs.
- **Article 27:** It sets freedom as to **payment of taxes for promotion** of any particular religion.
- **Article 28:** It gives freedom as to attendance at religious instruction or religious **worship in certain educational institutions.**

#### **Secularism in India v/s US:**

- **India follows the concept of 'neutrality' and 'positive role' towards religion.** The State can introduce **religious reforms, protect minorities** and formulate policies on religious matters.
- **The US follows the principle of 'non-interference' in the matters of religion.** The State **cannot take any action** in religious matters.

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### What are the Major Judicial Pronouncements on Freedom of Religion

- ***Bijoe Emmanuel and Ors. v. State of Kerala (1986):***
  - In this case, three children of Jehovah's Witnesses sect were suspended from the school as they refused to sing the national anthem claiming that it is against the tenets of their faith. The court held that expulsion is violative of fundamental rights and the right to freedom of religion.
- ***Acharya Jagdishwaranand v. Commissioner of Police, Calcutta (1983):***
  - The Court held that Ananda Marga is not a separate religion but a religious denomination. And the performance of **Tandava on public streets is not an essential practice** of Ananda Marga.
- ***M. Ismail Faruqui v. Union of India (1994):***
  - The apex court held that the mosque is not an essential practice of Islam, and a Muslim can offer namaz (prayer) anywhere even in the open.
- ***Raja Birakishore v. State of Orissa (1964.):***
  - The validity of the Jagannath Temple Act, 1954 was challenged as it enacted provisions to manage the affairs of Puri temple on the grounds that it is violating Article 26. The court held that the Act only regulated the secular aspect of seva puja, therefore, it is not violative of Article 26.

#### Note:

- States like **Karnataka, Arunachal Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Odisha, Uttar Pradesh and Uttarakhand** have passed laws restricting **religious conversion**.
- In March 2022, Haryana State Assembly passed the **Haryana Prevention of Unlawful Conversion of Religion Bill, 2022**, against **religious conversion by allurement, coercion or fraudulent means**.
- In August 2022, the Himachal Pradesh government also passed the **Himachal Pradesh Freedom of Religion (Amendment) bill 2022**, seeking to criminalise mass religious conversions.

## Solid Waste Management

### Why in News?

A recent incident of stray dog attacks in Srinagar has highlighted the **linkage between street dog attacks and Poor Solid Waste Management**.

### How is Poor Waste Management Connected to Increasing Attacks by Street Dogs?

- Indian homes on average also generated 50 kg of food waste per person in 2019, serving as a **source of food for hunger-stricken, free-roaming dogs that move towards densely populated areas** in cities.
  - This food often serves as a source of food for hunger-stricken free-ranging dogs in urban areas, who **scavenge for food around exposed garbage dumping sites**, such as **Landfills or garbage dumps**.
- **While there is no evidence** to show that the municipal waste and its mis-management directly led to an increase in dog bites, tepid animal birth control programmes and insufficient rescue centres, in conjunction with poor waste management, result in a **proliferation of street animals** in India and the consequent attacks.

### What is the Issue with India's Solid Waste Management?

- **Scenario:**
  - Solid Waste includes **Solid or semi-solid domestic waste**, sanitary waste, commercial waste, institutional waste, catering and market waste and other non-residential wastes, street sweepings, silt removed or collected from the surface drains, horticulture waste, agriculture and dairy waste, treated biomedical waste excluding industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste etc.
  - India accounts for **roughly 18% the world's population** and **12% of global municipal waste generation**.
    - India generates 62 million tonnes of waste each year. About 43 million tonnes (70%) are collected, of which about **12 million tonnes are treated**, and **31 million tonnes are dumped in landfill sites**.
  - With changing consumption patterns and rapid economic growth, **it is estimated that urban municipal solid waste generation will increase to 165 million tonnes in 2030**.

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➤ **Issues:**○ **Poor Implementation of Rules:**

- Most metro cities are littered with garbage bins that are either old, damaged or insufficient in containing solid wastes, a 2020 research paper pointed out.
- Urban local bodies are struggling to implement and sustain rules under the **Solid Waste Management Rules 2016**, such as the door-to-door collection of segregated waste, studies show.
  - There are designated waste collection sites under the Rules, but the implementation of rules and awareness remains low.

○ **Dumping Sites's Proximity with Slums:**

- Most landfills and dumping sites are located on the **peripheries of cities**, next to slums and settlement colonies.
  - In Mumbai, some of the cheapest housing can be found near Deonar, which is on the verge of **256 slums and 13 resettlement colonies**.
  - The disproportionate burden of dog bites may also thus fall on people in urban slums. In 2021, 300 people living in Pune's Shivneri Nagar slum complained of stray dog bites in the area, as per reports.

○ **Lack of Data Collection Mechanism:**

- India lacks time series data or panel data in **connection with solid or liquid waste**, making it difficult for private entities to understand the relationship between cost and benefits of the waste management policies and enter into the market.

***What are the Initiatives Related to Waste Management?***➤ **Solid Waste Management Rules 2016:**

- These rules replaced the **Municipal Solid Wastes (Management and Handling) Rules, 2000** and focus on segregation of waste at source, responsibility on the manufacturer to dispose of sanitary and packaging wastes, user fees for collection, disposal and processing from the bulk generator.

➤ **Waste to Wealth Portal:**

- It aims to identify, develop, and deploy technologies to treat waste to generate energy, recycle materials, and extract resources of value.

**Waste to Energy:**

- A waste-to-energy or energy-from-waste plant converts municipal and industrial solid waste into electricity and/or heat for industrial processing.

➤ **Plastic Waste Management (PWM) Rules, 2016:**

- It mandates the generators of plastic waste to take steps to minimize generation of plastic waste, prevent littering of plastic waste, and ensure segregated storage of waste at source among other measures.

- In Feb 2022, **Plastic Waste Management (Amendment) Rules, 2022** were notified.

**Project REPLAN:**

- It aims to make carry bags by mixing processed and treated plastic waste with cotton fibre rags in the ratio 20:80.

➤ **Plastic Waste Management (Amendment) Rules, 2022:**

- The rules specify the responsibilities of **various stakeholders such as manufacturers, importers, retailers**, and consumers. All these stakeholders have a role to play in ensuring that plastic waste is managed properly and does not end up polluting the environment.

## **Millet Experience Centre**

### **Why in News?**

The Indian government has launched a first of its kind **Millet Experience Centre (MEC)** in collaboration with the **National Agricultural Cooperative Marketing Federation of India (NAFED)**.

- This initiative comes in light of the **UNGA's** declaration of 2023 as the **International Year of Millets (IYM 2023)**.
- Millet has been referred to as 'Shree Anna' in **Union Budget 2023-24**.

### **What is the Millets Experience Centre (MEC)?**

➤ **About:**

- The MEC is a unique concept that will promote millets as a versatile, healthy grain by showcasing

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its dietary benefits and offering customers a unique dining experience.

- Visitors to the center can purchase a **variety of ready-to-eat and ready-to-cook products** from local millet start-ups.
- The MEC will help widen the horizon for consumers who are actively looking for healthier alternatives.

## Millets

### About

- Small-grained cereals also known as **coarse grains**
- Often referred to as **'Superfood'**
- Among the **first crops to be domesticated** - evidence of millet consumption dates back to the **Indus Valley Civilisation (3,000 BC)**

### Climatic Conditions

- **Mainly a Kharif crop in India**
- **Temperature:** 27°C - 32°C
- **Rainfall:** Around 50-100 cm
- **Soil Type:** Inferior alluvial or loamy soil

### India and Millets

- **Global Largest Millet Producer:**
  - 20% of global production, 80% of Asia's production
- **Common Millets:**
  - **Ragi** (Finger millet), **Jowar** (Sorghum), **Sama** (Little millet), **Bajra** (Pearl millet), and **Variga** (Proso millet)
  - **Indigenous varieties** (small millets) - **Kodo, Kutki, Chenna and Sanwa**
- **Top Millets Producing States:**
  - Rajasthan (largest), Karnataka, Maharashtra, Madhya Pradesh and Uttar Pradesh
- **Govt. Initiatives:**
  - Initiative for Nutritional Security through Intensive Millet Promotion (INSIMP)
  - 'India's Wealth, Millets for Health'
  - Millet Startup Innovation Challenge
  - **Hiked MSP** for Millets
  - Agriculture Ministry declared millets as **"Nutri Cereals"** in 2018

### Significance

- Less expensive, **nutritionally superior**
- High protein, fibre, minerals, iron, calcium and a **low glycemic index**

- Help tackle **lifestyle problems and health** (obesity, diabetes etc.)
- Photo-insensitive, **resilient to climate change & water efficient**

### International Year of Millets - Year 2023

Proposed by India, declared by UNGA

#### ➤ Significance:

- The establishment of the MEC is a step in the direction of India's goal to become a **"Global Hub"** for millet.
- The MEC will not only promote the dietary benefits of the ancient grain but also popularize millet as a **nutritional powerhouse fit for cooking a variety of dishes** such as millet dosa and millet pasta.

- This initiative will bring visibility to India's robust millet-based start-up community and will help in the recognition of the immense potential of millets as a versatile and healthy grain.

#### What is IYM 2023?

##### ➤ About:

- India's proposal to observe an International Year of Millets in 2023 was approved by the **Food and Agriculture Organisation (FAO)** in 2018 and the **UNGA** has declared the year 2023 as the International Year of Millets.
- This was adopted by a **UN Resolution for which India took the lead** and was supported by over 70 nations.

##### ➤ Objectives:

- Awareness of the **contribution of millet to Food Security** and nutrition.
- Inspire stakeholders to improve sustainable production and quality of millets.
- Focus on **enhanced investment in research and development** and extension services to achieve the other two aims.

#### What are the Other Government-led Initiatives for Mainstreaming Millets?

- **Initiative for Nutritional Security through Intensive Millet Promotion (INSIMP)**
- **National Millets Mission (NMM)**
- **Price Support Scheme (PSS)**
- **Promoting Millets in PDS**
- **Hiked MSP** of Millets
- **Promotion of Organic Farming** of millets
- **Development of Value-Added Millet-based Products**

## National Medical Device Policy 2023

#### Why in News?

Recently, the Union Cabinet has approved the **National Medical Devices (NMD) Policy, 2023**.

- Policy lays down a **roadmap for accelerated growth of the medical devices sector** to achieve the following missions viz, **Access & Universality**,

Note:



Affordability, Quality, **Patient Centred & Quality Care**, Preventive & Promotive Health, Security, Research and Innovation and Skilled manpower.



### What are the Key Features of NMD Policy 2023?

- **Regulatory Streamlining:** To make it easier to do research and business while balancing patient safety and product innovation, a **“Single Window Clearance System”** for licensing medical devices will be created.
  - This system will involve all relevant departments and organizations, such as MeitY (Ministry of Electronics and Information Technology), and DAHD (Department of Animal Husbandry & Dairying).
- **Enabling Infrastructure:** Large medical device parks with world-class infrastructure facilities will be established, near economic zones.
  - It will be done as envisioned under the **National Industrial Corridor Program** and the proposed **National Logistics Policy 2021** under the ambit of **PM Gati Shakti**, and in collaboration with state governments and the industry, to improve convergence and integration with the medical device industry.
- **Facilitating R&D and Innovation:** The policy aims to promote Research & Development in India, complementing the proposed **National Policy on R&D and Innovation in the Pharma-MedTech sector**.
  - It also aims at establishing Centres of Excellence in academic and research institutions, innovation hubs, ‘plug and play’ infrastructures and support to start-ups.
- **Attracting Investments:** The policy encourages private investment and **Public-Private Partnerships (PPP)** to complement existing schemes such as **Make in India**, **Ayushman Bharat program**, **Heal-in-India**, and **Start-up mission**.

- This includes funding from **venture capitalists** to support the growth of the medical device industry.
- **Human Resources Development:** The policy aims to ensure a **skilled workforce in the medical device sector** by providing skilling, reskilling and upskilling programs through the Ministry of Skill Development and Entrepreneurship.
  - It will also support dedicated courses for medical devices in existing institutions to produce skilled manpower for futuristic technologies, manufacturing and research.
- **Brand Positioning and Awareness Creation:** The policy envisages the creation of a **dedicated Export Promotion Council** for the sector which will be an enabler to deal with various market access issues.

### What is the Significance of the Policy?

- The policy is expected to provide the required support and directions to strengthen the **medical devices industry into a competitive, self-reliant, resilient and innovative industry** that caters to the healthcare needs of not only India but also of the world.
- It can place India’s medical devices sector on an accelerated path of growth with a patient-centric approach to **meet the evolving healthcare needs of patients**.
- It envisions an accelerated growth path with a patient-centric approach and to emerge as the global leader in the manufacturing and innovation of medical devices by achieving 10-12% share in the expanding global market over the next 25 years.
  - With the new policy in place, the Centre aims to **reduce India’s import dependence to nearly 30%** in the next couple of years; and become **one of the top five global manufacturing hubs**.
- Policy is expected to help the **Medical Devices Sector grow from present USD 11 Bn to USD 50 Bn by 2030**.

### What is the Scenario of the Indian Medical Device Sector?

- **About:**
  - The medical devices sector in India is a sunrise sector, growing at a fast pace and essential component of the healthcare industry.

Note:



- Its importance was highlighted during the Covid-19 pandemic when India produced **medical devices and diagnostic kits like ventilators, RT-PCR kits, and PPE kits** on a large scale.

- It is a multi-product sector, **with the following broad classifications:**

- Electronics Equipment
- Implants
- Consumables and Disposables
- In Vitro Diagnostics (IVDs) reagents
- Surgical Instruments

- The Sector has remained largely unregulated till 2017 when Medical Device Rules, 2017 were framed by the **Central Drugs Standard Control Organisation (CDSCO)**.

➤ **Status:**

- India is the **4<sup>th</sup> largest Asian medical devices market** after Japan, China, and South Korea, and among the **top 20 medical devices markets globally**.
- India's current market share in the medical device category is **1.5% of the global space** or \$11 billion (that is ₹90,000 crore) in 2020.
- **US dominates** the global market with a 40% market share, followed by **Europe and Japan at 25% and 15% respectively**.

➤ **Government Initiatives:**

- The **Production Linked Incentive (PLI) scheme** for promoting domestic manufacturing of Medical Devices. NMDP 2023 will be in addition to the existing PLI schemes.
- The GoI India has already initiated implementation of PLI Scheme for medical devices and support for **setting up of four medical devices parks** – one each in **Himachal Pradesh, MP, TN and UP**.

- Promotion of Medical Devices Parks intends to encourage the domestic manufacturing of Medical Devices.

- In June 2021, the **Quality Council of India (QCI)** and the Association of Indian Manufacturers of Medical Devices (AiMeD) launched the **Indian Certification of Medical Devices (ICMED) 13485 Plus** scheme to undertake verification of the quality, safety and efficacy of medical devices.

### ***What are the Issues with the Medical Device Sector in India?***

➤ **Inconsistent Regulations:**

- The **complex regulatory environment** is one of the most significant challenges faced by the medical device industry.
- **Manufacturers have to navigate inconsistent regulations** that use **varying standards and wordings**, making it difficult to understand and comply with the requirements.

➤ **Research and Development Struggles:**

- The adoption of cutting-edge technologies such as **artificial intelligence, cloud computing, and robotics** is still **limited in the Indian medical device sector**.
- Embracing these technologies could help companies overcome challenges related to R&D, production, and distribution.

➤ **Import Dependency:**

- India relies heavily on imports for medical devices, which leads to a high import **bill and adds to the cost of healthcare**. To reduce import dependency, India needs to increase domestic manufacturing of medical devices and encourage innovation in the sector.

➤ **Limited Access to Capital:**

- Access to funding is a critical challenge for medical device startups in India, as **investors are often reluctant to invest in a sector with a long gestation period** and regulatory uncertainties.



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# Economic Scenario

## Highlights

- E-Invoicing and Curbing Tax Evasion
- India's Power Sector in 2030: Shift to Renewables and Coal's Decline
- Sugarcane Production in India
- Carbon Border Adjustment Mechanism
- Advisory Committee Suggests Ban on Diesel 4-Wheelers
- India's Latest Farm Exports Data
- Multimodal Logistics Park in Assam
- US Fed Rate Hike
- Anti-Competitive Practices by Big Tech Companies
- Report on Currency and Finance 2022-23
- Central Counterparties

## E-Invoicing and Curbing Tax Evasion

### Why in News?

Recently, the Government has lowered the threshold for businesses to generate **e-Invoice for Business-to-Business (B2B) transactions**, from Rs 10 crore to Rs 5 crore with the aim to curb **Tax Evasion** and increase compliance under the **Goods and Services Tax (GST) Regime**.

- The government has also rolled out the **Automated Return Scrutiny Module (ARSM)** for GST returns in a backend application for central tax officers.

### What is the Automated Return Scrutiny Module?

- The ARSM is a part of the ACES (Automation of Central Excise and Service Tax)-GST backend application **that uses data analytics to identify risks and discrepancies in GST returns**.
- This helps tax officers to scrutinize the GST returns of Centre Administered Taxpayers who are **selected based on the risks identified by the system**.
- The module also generates alerts if any non-compliance is detected.
  - The automated return scrutiny module has already commenced with the scrutiny of GST returns for **FY 2019-20**, with the requisite data already with the tax officers.

### What is e-Invoicing Under GST?

#### ➤ About:

- e-Invoicing is a system where B2B (Business to Business) invoices and some other documents are **electronically authenticated by the GSTN (Goods and Service Tax Network)** for further use on the GST portal.
- e-Invoicing involves submitting **already generated standard invoices on a common e-invoice portal**, automating reporting with a one-time input of invoice details.
- An identification number is issued **against every invoice by the Invoice Registration Portal (IRP)**, which transfers the invoice information in real-time to the GST portal and the **e-Way Bill** portal.
  - **E-Way Bill** is a **compliance mechanism wherein by way of a digital interface** the person causing the movement of goods uploads the relevant information prior to the **commencement of movement of goods and generates an e-way bill** on the GST portal, and therefore facilitating faster movement of Goods.
- This eliminates manual data entry **while filing returns and generating e-way bills**.

#### ➤ Objectives:

- The **GST Council** in its 37<sup>th</sup> meeting in September 2019 had approved the **standard of e-invoice with the primary objective to enable interoperability** across the entire GST ecosystem.

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➤ **Significance:**

- With a uniform invoicing system, the tax authorities are able to pre-populate the return and reduce the reconciliation issues.
- With a high number of cases involving fake invoices and fraud availing of input tax credit, **GST authorities have pushed for implementation of this e-invoicing system** which is expected to help to curb the actions of tax evaders and reduce the number of frauds as the tax authorities will have access to data in real-time.

***What is the Significance of******Lowering Thresholds for e-Invoice?***

- Lowering the threshold for e-invoicing is significant because **it expands the compliance mandate for more businesses**, especially small and medium-sized enterprises, and helps boost **GST revenue collections**.
- It is also expected to curb tax evasion, **broaden the GST tax base, and provide more data to tax authorities** for better compliance.
- By requiring more businesses to adopt e-invoicing, the government aims to **reduce mismatch errors and fraudulent activities associated** with the generation of fake invoices.

***What are the Concerns related to the Decision?***

- Lowering the threshold for e-invoicing has raised some concerns for businesses, especially small and medium enterprises (SMEs), as they **may face challenges in adapting to the new requirements and investing in the necessary technology** to comply with e-invoicing norms. This could increase their compliance costs and pose a burden on their cash flows.
- Additionally, there may be challenges in terms of the capacity and preparedness of the GST Network (GSTN) to handle the increased load of e-invoices generated by a larger number of taxpayers. This could lead to **technical glitches and delays in invoice generation**, which could impact the smooth functioning of businesses.
- The maximum amount of fraud happens in B2C (Business to Consumer) invoices as **no ITC (Input Tax Credit)** is involved. As of now, **e-invoicing is not applicable to B2C transactions**.

***What are the other Measures to Curb Tax Evasion?***

- **The Fugitive Economic Offenders Act, 2018**
- **The Black Money (Undisclosed Foreign Income and Assets) and Imposition of Tax Act, 2015**
- **Prevention of Money Laundering Act, 2002.**

***India's Power Sector in 2030: Shift to Renewables and Coal's Decline******Why in News?***

Recently, the **Central Electricity Authority (CEA)** (Ministry of Power) released a new publication titled **Report on Optimal Generation Mix 2030 Version 2.0**.

- This is an **updated version of the report published in 2020** titled **Report on Optimal Generation Capacity Mix for 2029-30**.
- The report highlights the changes expected in India's energy mix, with a **decline in coal's share** and a **rise in renewable energy (RE) sources**.
- Earlier, the **CEA released the latest draft of the National Electricity Plan (NEP) 2022-27**.

***What are the Key Highlights?***➤ **Coal Share in Power Mix:**

- Coal's share in the power mix is projected to **decline from 73% in 2022-23 to 55% in 2030**.
- **Impact on Coal Usage:**
  - Although the share of coal in power generation is set to reduce, in absolute terms, **coal power capacity and generation will increase between 2023 and 2030**.
  - Coal capacity is projected to **rise by 19%**, and generation is expected to **increase by 13%** during this period.

➤ **Solar Energy Contribution:**

- **Solar energy** is expected to play a significant role in the power mix, lifting the overall load.
  - Projections indicate a **quadrupling of solar capacity** from 109 GW to 392 GW by 2030.
  - Solar generation is expected to increase from 173 BU to 761 BU in the same period.

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**Note:**

- **Power capacity differs from generation.** Capacity is the maximum power a plant can produce and is expressed in watts (or gigawatts or megawatts).
- Generation is the actual amount of power produced in one hour, expressed in **watt-hours or billion units (BU)**.

➤ **Contribution of Other RE Sources:**

- Projections for large **hydropower** and **wind energy** remain **modest in the future power mix**.
  - Large hydro generation is expected to **increase from 8% to 9%** by 2030.
  - **Wind generation**, on the other hand, is **projected to decrease to 9%** in the updated version (from **12% in the previous report**).
- Renewable sources, including small hydro, pumped hydro, solar, wind, and biomass, are expected to account for **31% of the power mix in 2030, compared to the current 12%**.

➤ **Role of Natural Gas in the Power Generation Mix:**

- Despite aspirations to increase the share of **natural gas**, its contribution to power generation remains small.
- The report estimates the likely retirement of 2,121.5 MW of coal plants by 2030, with 304 MW set to be retired during 2022-23.

➤ **Greenhouse Gas Emissions:**

- The **power sector contributes approximately 40%** of India's total **greenhouse gas emissions**.
- Power sector emissions are projected to **rise by 11%, reaching 1.114 Gt CO<sub>2</sub> in 2030**, accounting for 10% of global power sector emissions.

**Climate Commitments**

- In terms of **climate commitments**, CEA's projections indicate that India is likely to **over-achieve on its pledge to the Paris Agreement** - to have 50% of installed power capacity from non-fossil sources by 2030.
- As per the report, India's share of capacity from non-fossil sources will be 62% by 2030. The share will be 64% if **nuclear power** is considered.

**What are India's Targets of Renewable Energy Power Generation?**➤ **India's Renewable Energy Targets:**

- **175 GW Renewable Energy Capacity by 2022:**

- 100 GW of Solar Power.
- 60 GW of Wind Power.
- 10 GW of Biomass Power.
- 5 GW of Small Hydro Power.

○ **500 GW Non-Fossil Fuel Based Energy by 2030:**

- Announced by Prime Minister Narendra Modi at **COP26** summit.

○ **50% Electricity from Non-Fossil Fuel Sources by 2030:**

- Pledged in India's **Nationally Determined Contributions (NDCs)** under the **Paris Agreement**.

➤ **India's Global Ranking:**

- The **4<sup>th</sup> largest installed capacity of solar and wind power** in the world.
- The **4<sup>th</sup> most attractive renewable energy market** in the world.

**What is CEA?**➤ **About:**

- The **CEA is a statutory organization** that advises the government of India on policy matters and formulates plans for the development of **electricity systems in the country**.
- It was established in 1951 under the Electricity Supply Act 1948, which has been now superseded by the **Electricity Act 2003**.

➤ **Functions:**○ **Policymaking:**

- Preparing the **national electricity plan and tariff policy**.
- **Advising** the central government on matters relating to the **national electricity policy, rural electrification, hydropower development, etc.**

○ **Technical Standards:**

- Specifying the technical standards for construction, operation, and maintenance of electrical plants and electric lines.
- Specifying the **grid standards and safety requirements** for operation and maintenance of transmission lines.

○ **Data Collection and Research:**

- Collecting and recording data on generation, transmission, distribution, and utilization of electricity and promoting r&d in the field of electricity.

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- **Implementation Monitoring and Coordination:**
  - Monitoring the implementation of power projects and schemes.
  - Coordinating with state governments, state electricity boards, regional power committees, etc. on matters relating to electricity.

### ***What are India's Initiatives for Power Generation from RE Sources?***

- **Solar Power:**
  - **National Solar Mission**
  - **International Solar Alliance**
  - **PM Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM)**
- **Wind Power:**
  - **National Wind-Solar Hybrid Policy**
  - **National Offshore Wind Energy Policy**
- **Hydropower:**
  - **National Hydroelectricity Policy**
  - **Renewable Energy Status:** The government has declared large hydropower projects (>25 MW) as renewable energy sources, which will enable them to avail the benefits of renewable energy such as waiver of inter-state transmission charges, renewable purchase obligation, green energy certificates, etc.
- **Hydrogen:**
  - **National Hydrogen Energy Mission**
  - **National Green Hydrogen Mission**

### ***What are the Challenges in Adopting Renewable Energy?***

- **Intermittency and Variability:**
  - RE sources are intermittent and variable due to **weather conditions**.
  - **Matching energy supply** with demand and **maintaining grid stability** becomes challenging.
- **Grid Integration:**
  - Integrating large-scale renewable energy into existing power grids can be complex.
  - Upgrading grid infrastructure and balancing mechanisms is necessary for reliable power supply.
- **Land and Resource Availability:**
  - Scaling up renewable energy installations requires significant land and resource availability.

- Identifying suitable locations, acquiring land, and addressing environmental concerns can be challenging.

### ➤ **Transition from Coal-dependent Economy:**

- Coal still dominates the power sector in India, as it accounts for about **70% of the electricity generation**.
- Also, coal sector in India is estimated to provide about **1.2 million** direct jobs and up to **20 million** indirect and dependent jobs.
  - Transition from it can lead to job losses in the coal sector and ensuring a smooth transition for affected communities needs to be addressed.

## **Sugarcane Production in India**

### ***Why in News?***

Recently, Madras High court in its judgment observed that **Fair and Remunerative Price (FRP)** of Sugarcane is not the fair market price and that Marginal farmers can survive only if the State governments paid them the much higher **State Advised Price (SAP)**.

### ***How are the Prices of Sugarcane Determined?***

- The Prices of Sugarcane are Determined by the **Central Government and the State Governments**.
- **Central Government:** Fair and Remunerative Price (FRP)
  - The Central Government announces FRP which are determined on the recommendation of the **Commission for Agricultural Costs and Prices (CACP)** and announced by the Cabinet Committee on Economic Affairs (CCEA).
    - CCEA is chaired by the Prime Minister of India.
  - The FRP is based on the **Rangarajan Committee** report on reorganising the **sugarcane industry**.
- **State Government:** State Advised Prices (SAP)
  - The SAP is announced by the Governments of key sugarcane producing states.
  - SAP is generally higher than FRP.
    - The price is calculated by the experts, who calculate the **entire economics of the crop by taking input cost** and then suggest to the government, which may agree or not.

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### What are the Advantages of Increasing Sugar Production?

- Sugar production generates several by-products, such as molasses, bagasse, and press mud, which can be used for the production of **other products such as ethanol, paper, and Bio-Fertilizers.**
- Sugar mills can divert excess sugarcane to ethanol, which is blended with petrol, which not only serves as a **green fuel but also saves foreign exchange on account of crude oil import.**
  - The government of India has fixed a target of 10% blending of fuel grade ethanol with petrol by 2022 & 20% blending by 2025.
    - India achieved **its target of an average of 10% blending across the country** five months ahead of the targeted timelines of November 2022.
- Cultivating **sugarcane provides farmers with an opportunity to diversify** their agricultural activities and increase their income.
- Sugarcane cultivation can be integrated with other crops such as vegetables, fruits, and spices to promote crop diversification. This can lead to better **soil health, reduced pest and disease pressure, and improved crop yields.**

### What are the Challenges Associated with Growing Sugarcane?

- **Longer Duration to Harvest:**
  - Sugarcane takes a long time to grow and be ready for harvest (around 10 to 12 months). Growing sugarcane is not an easy task as it requires the **farmer to plant and harvest two more crops before they can finally harvest** sugarcane.
  - This means that growing sugarcane demands a lot of hard work over a period of about three years.
- **Higher Investment:**
  - Growing sugarcane requires farmers to invest **more money because they have to prepare the fields properly** before planting. This involves **tilling the soil to a greater depth**, followed by harrowing and leveling it to make it suitable for sugarcane.
  - Moreover, buying sugarcane **seedlings is expensive, and before planting, farmers need to add manure and fertilizers** to the soil, which also comes at a high cost.

### ➤ High Labor Cost:

- The labour for cutting sugarcane costs huge and if **the cutting season is dry without rains**, it gravely affects the **total weight of the cane** and if it rains, there will be **slush on the path resulting in lorries/trucks** not being able to come near the field.
- Farmers have to spend a lot to transport the sugarcane from their fields to the main road by employing labour.

### ➤ Unviability Sugar Exports:

- India is finding it difficult to export sugar **as the cost of producing it is higher compared to the international market price**, mainly due to the high cost of sugarcane.
- To help bridge this gap, the government has been providing export subsidies, but other countries **have raised objections with the World Trade Organization (WTO).**
- Although India is currently allowed to continue with these subsidies until December 2023, there is **uncertainty about what will happen after that.**

### ➤ Problem with India's Ethanol Programme:

- Blending ethanol with petrol to use as auto fuel was first announced in 2003, but this initiative **has not been very successful due to several challenges.** One of the key challenges is the **poor pricing of ethanol supplied for blending.**
- Since the price of ethanol is often higher than the price of petrol, **blending ethanol with petrol becomes less economically viable.** This can discourage ethanol producers from supplying ethanol for blending.

### What is the Status of India's Sugarcane Sector?

#### ➤ About:

- Sugar industry is an important agro-based industry that impacts the rural livelihood of about 50 million sugarcane farmers and around 5 lakh workers directly employed in sugar mills.
  - The sugar industry is the second largest agro-based industry in India after cotton.

#### ➤ Geographical Conditions for the Growth of Sugar:

- **Temperature:** Between 21-27°C with hot and humid climate.
- **Rainfall:** Around 75-100 cm.
- **Soil Type:** Deep rich loamy soil.
- **Top Sugarcane Producing States:** Maharashtra > Uttar Pradesh > Karnataka

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➤ **Status of Sugarcane Sector:**

- India is the world's top **Producer, User, and Second-largest Exporter** of sugar.
- According to the **Indian Sugar Mills Association (ISMA)**, the sugar production of India rose by 3.69% to 12.07 million tonnes during the October-December quarter of 2022.
  - In the same period last year, it stood at 11.64 million tonnes.
- Total sugar production, after diversion for ethanol manufacturing, has increased to **193.5 lakh tonnes till January 2023** from 187.1 lakh tonnes in the year-ago period.

➤ **Schemes:**

- Scheme for Extending Financial Assistance to Sugar Undertakings (SEFASU)
- **National Policy on Biofuels**
- **Ethanol Blending with Petrol (EBP) Programme**

## Carbon Border Adjustment Mechanism

### Why in News?

The **European Union (EU)** has announced that its **Carbon Border Adjustment Mechanism (CBAM)** will be introduced in its transitional phase from October 2023, which will levy a carbon tax on imports of products made from the **processes which are not Environmentally sustainable or non-Green**.

- CBAM will translate into a 20-35 % tax on select imports into the EU starting 1<sup>st</sup> January 2026.

### What is CBAM?

➤ **About:**

- CBAM is part of the **"Fit for 55 in 2030 package"**, which is the EU's plan to reduce greenhouse gas emissions **by at least 55% by 2030** compared to 1990 levels in line with the **European Climate Law**.
- The CBAM is a policy tool aimed at reducing **Carbon Emissions** by ensuring that imported goods are subject to the same carbon costs as products produced within the EU.

➤ **Implementation:**

- The CBAM will be implemented by **requiring importers to declare the quantity of goods imported into the EU** and their embedded Greenhouse Gas (GHG) emissions on an annual basis.
- To offset these emissions, importers **will need to surrender a corresponding number of CBAM certificates**, the price of which will be based on the weekly average auction price of **EU Emission Trading System (ETS)** allowances in **€/tonne of CO2 emitted**.

➤ **Objectives:**

- CBAM will ensure its **climate objectives are not undermined by carbon-intensive imports** and spur cleaner production in the rest of the world.

➤ **Significance:**

- It can encourage **non-EU countries to adopt more stringent environmental regulations**, which would reduce global carbon emissions.
- It can prevent carbon leakage by discouraging companies from relocating to countries with weaker environmental regulations.
- The revenue generated from CBAM will be **used to support EU climate policies, which** can be learned by other countries to support **Green Energy**.

### How can it Impact India?

➤ **Impact India's Export:**

- It will have an adverse impact on India's exports of metals such as **Iron, Steel and aluminum products to the EU**, because these will face extra scrutiny under the mechanism.
- India's major exports to the EU, such as iron ore and steel, face a significant threat due to the **carbon levies ranging from 19.8% to 52.7%**.
  - From 1<sup>st</sup> January 2026, the EU will start collecting the carbon tax on each consignment of steel, aluminum, cement, fertilizer, hydrogen and electricity.

➤ **Carbon Intensity and Higher Tariffs:**

- The carbon intensity of Indian products is **significantly higher than that of the EU and many other countries** because coal dominates the overall energy consumption.

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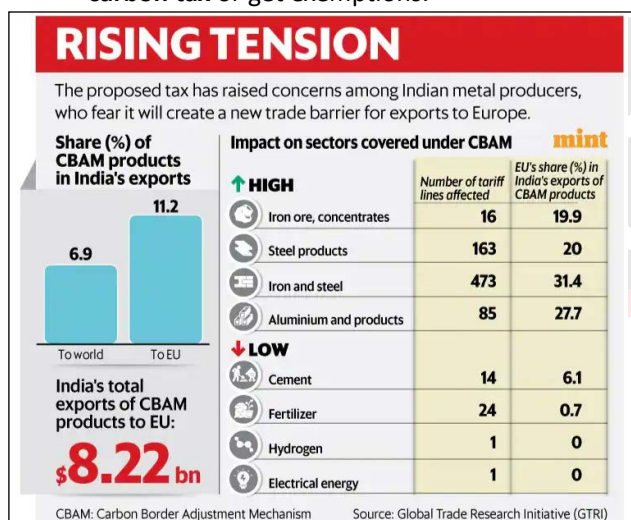


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- The proportion of coal-fired power in **India is close to 75%**, which is much higher than the EU (15%) and the global average (36%).
- Therefore, direct and indirect emissions **from iron and steel and aluminium are a major concern for India as higher emissions** would translate to higher carbon tariffs to be paid to the EU.

#### ➤ Risk to Export Competitiveness:

- It will initially affect a few sectors but may expand **to other sectors in the future**, such as refined petroleum products, organic chemicals, pharma medicaments, and textiles, which are **among the top 20 goods imported from India by the EU**.
- Since India has no domestic carbon pricing scheme in place, **this poses a greater risk to export competitiveness**, as other countries with a carbon pricing system in place might **have to pay less carbon tax** or get exemptions.



### What Measures can India Take to Mitigate the Impact of CBAM?

#### ➤ Decarbonization Principle:

- On the domestic front, the government has schemes like **National Steel Policy**, and the **Production Linked Incentive (PLI)** scheme aims to increase India's production capacity, but carbon efficiency has been out of the objectives of such schemes.
- The government can **complement these schemes with a Decarbonization Principle**.
  - **Decarbonization** refers to the process of reducing or eliminating greenhouse gas emissions, especially carbon dioxide (CO<sub>2</sub>), from human activities such as transportation, power generation, manufacturing, and agriculture.

#### ➤ Negotiation with EU for Tax Reduction:

- India could negotiate with the EU to recognize **its energy taxes as equivalent to a carbon price**, which would make its exports **less susceptible to CBAM**.
- For example, India could argue that its **tax on coal is a measure to internalize the costs of carbon emissions**, and therefore equivalent to a carbon tax.

#### ➤ Transfer of Clean Technologies:

- India should negotiate with the **EU to transfer clean technologies and financing mechanisms** to aid in making India's production sector more carbon efficient.
  - One way to finance this is to propose to the EU to set aside a portion of their CBAM revenue for supporting India's climate commitments.
  - Besides, India should also begin preparing for the new system just as China and Russia are doing by establishing a **Carbon Trading System**.

#### Incentivizing Greener Production:

- India can **begin preparations** and in fact, seize the opportunity to make production greener and sustainable **by incentivizing cleaner production which will benefit India** in both remaining competitive in a more carbon-conscious future.
- International economic system and achieving its **2070 Net Zero Targets** without compromising on its developmental goals and economic aspirations.

#### Take on EU's Tax Framework:

- India, as the leader of the **G-20 2023**, should use its position to advocate for other countries and urge them to **oppose the EU's carbon tax framework**.
- India should not only focus on its own interests but also consider the negative impact that the CBAM will have on **poorer countries that heavily rely on mineral resources**.

## Advisory Committee Suggests Ban on Diesel 4-Wheelers

### Why in News?

Recently, the **Energy Transition Advisory Committee** formed by **Union Ministry of Petroleum and Natural Gas** has recommended that India should **ban diesel-powered 4-wheeler vehicles by 2027** and switch to electric and

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gas-fuelled vehicles in **cities with more than a million people** and polluted towns **to reduce emissions**.

- The Committee, headed by former petroleum secretary **Tarun Kapoor**, also suggested **phasing out motorcycles, scooters, and three-wheelers with internal combustion engines by 2035**.

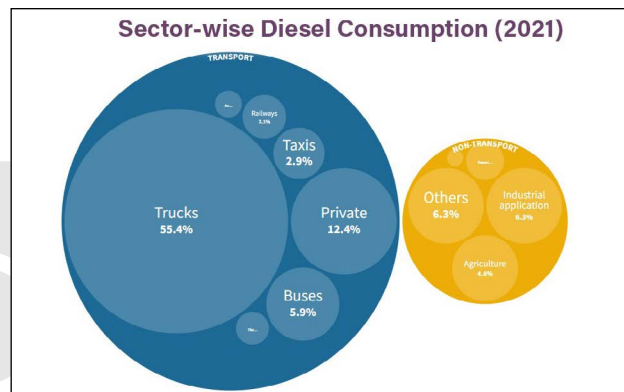
### **What are the Recommendations of the Committee?**

- **Move Towards Renewable Energy:**
  - India is **one of the largest emitters of greenhouse gases globally**, and to achieve its **net-zero goal for 2070**, it wants to produce **40% of its electricity from renewables**.
    - In line with this, the panel report suggests that **no city buses should be added that are not electric by 2030**, with **diesel buses for city transport not to be added from 2024 onwards**.
  - It called to **partially shift to electric and partially to ethanol-blended petrol** with almost **50% share in each category**.
- **Incentives to Boost EV Use:**
  - To boost **electric vehicle (EV)** use in the country, the report calls for the targeted extension of incentives under the **Faster Adoption and Manufacturing of Electric and Hybrid Vehicles scheme (FAME)**.
- **Transition to Gas-Powered Trucks and Railways:**
  - The panels also recommended that **new registrations of only electric-powered city delivery vehicles should be allowed from 2024**, with higher use of railways and gas-powered trucks for the movement of cargo.
  - The **railway network** is anticipated to be **fully electric in two to three years**. The panel recommended that long-distance buses in India be powered by electricity in the long term, with gas used as a transition fuel for 10-15 years.
- **Increase in Share of Gas in its Energy Mix:**
  - India aims to raise the **share of gas in its energy mix to 15% by 2030** from the **current 6.2%**.
    - To achieve this goal, the panel suggests building **underground gas storage equivalent to two months' demand**.

- The panel also recommends the use of **depleted oil and gas fields, salt caverns, and aquifers for building gas storage** with the participation of foreign gas-producing companies.

### **What about Diesel Consumption in India?**

- **Consumption Trends:**
  - **Diesel currently accounts for about 40% of India's petroleum products consumption** with 80% of that being used in the transport sector.
  - **Petrol and diesel demand in India is expected to peak in 2040** and decline post that due to **electrification of vehicles**.



- **Reasons for High Preference of Diesel:**
  - The **higher fuel economy of diesel engines over petrol powertrains** is one factor. This stems from the **greater energy content per litre of diesel**, and the inherent efficiency of the diesel engine.
  - **Diesel engines do not use high-voltage spark ignition** (spark plugs), and thus **use less fuel per kilometre**, as they have higher compression ratios, making it the **fuel of choice for heavy vehicles**.
  - Also, diesel engines **offer more torque** (rotational or turning force) and **are less likely to stall** as they are controlled by a mechanical or electronic governor, thereby proving to be **better for haulage**.
- **Impact of Diesel-Powered Vehicle:**
  - **Air Pollution:**
    - Diesel engines emit **higher levels of particulate matter and nitrogen oxides**, which contribute to air pollution and can have negative health impacts on **humans and wildlife**.
  - **Greenhouse Gas Emissions:**
    - While diesel engines are **more fuel-efficient**, they also **emit higher levels of carbon dioxide**, which contributes to **climate change**.

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- **Noise Pollution:**
  - Diesel engines are **typically louder than gasoline engines**, which can contribute to noise pollution and negatively impact quality of life in urban areas.
- **Environmental Damage:**
  - **Diesel spills** can cause significant environmental damage, especially if they occur near **water sources or sensitive ecosystems**.

### ***Why is Implementing a Diesel Ban for Commercial Vehicles Challenging?***

- **Practicality and Implementation:**
  - Uncertainty about **the practicality of the proposed ban vis-a-vis medium and heavy commercial vehicles**.
  - It may result in **disruption in the transport of goods and public transportation services**.
- Dominance of Diesel in Transport Segment:**
  - High dependency on diesel for long-haul transportation and city bus services.
  - **Diesel sales account for around 87% in the transport sector**; trucks and buses contribute to **approximately 68% of diesel fuel sales**.
- **Conversion Challenges:**
  - Transitioning diesel trucks to **compressed natural gas (CNG)** poses limitations.
    - **CNG** usage is primarily suited for shorter distances and **has lower tonnage carrying capacity**.
- **Compliance with Current Emission Norms:**
  - Automakers argue that diesel vehicles comply with existing emission norms.
  - Significant investments made by car manufacturers to **transition diesel fleets to BS-VI emission norms**; diesel ban might imply that all the time, money and efforts were in vain.

### ***What are India's Initiatives for a Renewable Energy based Transport Sector?***

- **FAME Scheme:**
  - Provides fiscal incentives for **EV manufacturing and adoption**.
  - Aims to achieve **30% EV penetration by 2030**.

- Supports **deployment of charging technologies and stations in urban centers**.
- **National Mission on Transformative Mobility and Battery Storage:**
  - Aims to **improve air quality**, reduce **oil import dependence**, and enhance uptake of renewable energy and storage solutions.
  - Drives strategies for transformative mobility and phased manufacturing programs for EVs, EV components and batteries.
- **Customs Duty Exemption for Lithium-ion Cell Batteries:**
  - The government has **exempted the import of lithium-ion cell batteries** from **customs duties** to bring down their cost and scale up their production in India.
- National Green Hydrogen Mission:**
  - This mission aims to develop **green hydrogen as a clean and affordable energy source** for various sectors such as industry, transport, and power.
    - It envisages setting up of green hydrogen production plants, storage and distribution infrastructure, and end-use applications.
- **Ethanol blending**
  - It involves **mixing ethanol with petrol to reduce reliance on fossil fuels and decrease greenhouse gas emissions**.
  - The level of **ethanol blending in petrol in India has reached 9.99%**. The target for **20% ethanol blending** in petrol (also called **E20**) has been advanced to 2025 from 2030.
- **Incentives under PLI Scheme:**
  - It has been rolled out for **various industries** including the **automobile and auto-component industry**.
  - Around Rs.18,000 crore was approved for development of **advanced cell chemistry battery storage manufacturing**.
  - These incentives further aim to **encourage indigenous development of Electric Vehicles (EVs)** so as to bring down their upfront cost.
- **SATAT Scheme:**
  - Sustainable Alternative Towards Affordable Transportation (SATAT) **initiative aims to promote Compressed Bio-Gas (CBG)** as an alternative, green transport fuel.

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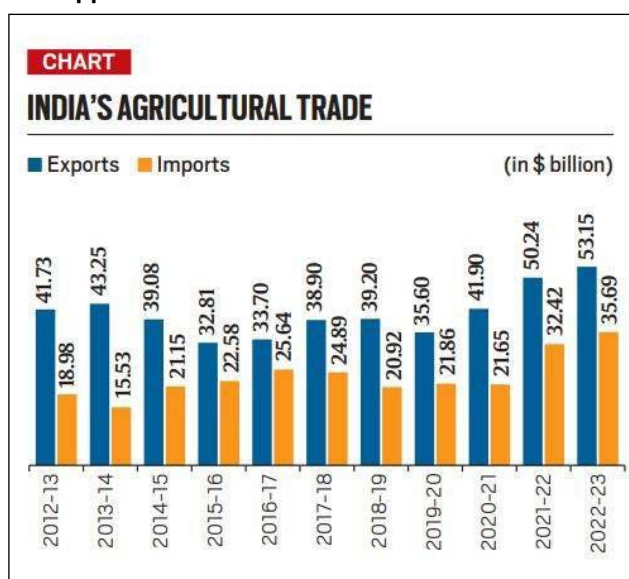


## India's Latest Farm Exports Data

### Why in News?

Provisional data released recently by the Department of Commerce has shown that **both agricultural exports from and imports into India have scaled new highs** in the fiscal year that ended March 31, 2023.

- The data shows that **total farm exports were at USD 53.15 billion and imports at USD 35.69 billion during 2022-23**, surpassing their previous year's records.
- The resultant **agricultural trade surplus has marginally dipped** from USD 17.82 billion to USD 17.46 billion.



### What are the Key Drivers behind this Increase in Exports?

- Between 2013-14 and 2015-16, **India's agricultural exports sharply fell** from USD 43.25 billion to USD 32.81 billion, **primarily due to the crash in global prices, as reflected the UN Food and Agriculture Organization's Food Price Index (FFPI).**
  - However, imports continued to rise, leading to a decline in the farm trade surplus.
  - In recent years, **the FFPI has recovered, making India's agricultural commodities more globally price competitive**, resulting in a surge in exports during 2020-2023.

### What is FAO's Food Price Index?

- The **FFPI** is a measure of the monthly change in international prices of a basket of food commodities. It measures changes for a basket of cereals, oilseeds, dairy products, meat and sugar.
- **Base Period: 2014-16.**
- FFPI increases when international food prices rise.

### What are the Major Exports Contributors?

- In recent times, **marine products, rice, and sugar have been the driving forces** behind India's agricultural exports.
  - **Marine Products:** Marine product exports have grown steadily from USD 5.02 billion in 2013-14 to USD 8.08 billion in 2022-23.
  - **Rice:** Rice exports have also gone up during this period, from USD 7.79 billion to USD 11.14 billion.
    - It's been **driven by non-basmati rice, which has more than doubled.** On the other hand, premium priced basmati rice has witnessed a decline.
    - **Basmati exports are mainly to the Persian Gulf countries** and, to some extent, the US and UK. Non-basmati shipments are more diversified.
    - It's **non-basmati that has made India the biggest rice exporter**, ahead of Thailand.
  - **Sugar:** The recent boom in sugar exports has been the third largest contributor – from a mere USD 810.90 mn in 2017-18 to USD 5.77 bn in 2022-23 – the sugar exports have grown many folds during these years.
    - India has, in the process, **emerged as the world's No. 2 exporter after Brazil.**

### What are the other Laggards and Losers in the Export Basket?

- **Spices:** Spices exports, which saw a jump during 2013-2021, **have stagnated** since then.
- **Buffalo:** Buffalo meat exports, too, **have gone down and never regained their peak** of USD 4.78 billion reached in 2014-15.
- **Raw Cotton, Guar-Gum and Oil Meals:** The **drop has been even more** for raw cotton, guar-gum and oil meals. Exports of the three in 2022-23 were a pale shadow of their highs of 2011-12.
  - Cultivation of **genetically modified Bt cotton** and high global prices had enabled **India to become the world's top producer (ahead of China) and No. 2 exporter (after the US) of the natural fibre.**

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- But with the yield gains from Bt tapering off and the regulatory regime not permitting new gene technologies, **the country has turned from a net exporter to an importer of cotton.**
- **Guar-gum** (a thickening agent used in extraction of shale oil and gas) and oil meal exports rode the global commodity price boom from 2003-04 to 2013-14.
- They haven't shown the same buoyancy in the more recent post-Covid boom, partly due to domestic crop shortages – especially in **cotton and soyabean** – not generating adequate surpluses for exports.

**India's top Agri Export items in \$ million**

	2020-21	2021-22	2022-23
Marine products	5962.39	7772.36	8077.97
Non-basmati rice	4810.8	6133.63	6355.75
Sugar	2789.91	4602.65	5770.64
Basmati rice	4018.41	3537.49	4787.5
Spices	3983.98	3896.03	3787.08
Buffalo meat	3171.13	3303.78	3193.69
Raw cotton	1897.21	2816.24	781.43
Fruits & vegetables	1492.51	1692.48	1788.65
Oilmeals	1585.04	1031.94	1600.9
Wheat	567.93	2122.13	1519.69
Processed F&V	1120.26	1190.59	1417.08
Oilseeds	1235.67	1113.65	1337.95
Castor oil	917.24	1175.5	1265.64
Tobacco	876.71	923.57	1213.37
Other cereals	705.38	1087.39	1193.47
Coffee	719.66	1020.74	1146.17

### What have been the Major Contributors to the Import basket?

- India's **basket of imported farm produce is less dominated by agricultural products** compared to its exports.
  - Among these imports, the **most significant is vegetable oils, whose imports have more than doubled** in value terms between 2019-20 and 2022-23.
- **Imports meet roughly 60% of India's vegetable oil requirements** while the dependence on pulses imports is hardly 10% now.
  - The **value of pulses imports has also come down** – halved - from USD4.2 billion in 2016-17 to USD1.9 in 2022-23.
- **Imports of spices, cashew, and cotton** – commodities where India has traditionally been a net exporter – **have shown a rising trend.**
  - **Spice imports going up are a reflection of reduced-price competitiveness**, while cotton imports have risen as an outcome of stagnant or falling domestic production.

### What are the Risks Ahead for Trade?

- **International Prices:** The latest FFPI reading for April 2023 is down from March 2022 and the 2022-23 average. A **decrease in food prices could lead to a reduction in export earnings**, particularly for those products that are more price sensitive.
- **Domestic Inflation:** More specifically **food inflation fears ahead of the 2024 national elections could negatively affect the trade because of export-import parity.**
  - The government's measures to tame domestic inflation like banning wheat and **broken rice exports** and the slapping of a 20% duty on all non-parboiled non-basmati shipments could further have adverse impacts on agricultural trade.
  - If the situation doesn't normalize more curbs on exports are expected with further liberalization of imports if the **monsoon** season delivers subnormal rainfall.

### What are some Measures taken by the Government to Promote Agri Export?

- **Agriculture Export Policy (2018):** It aims to harness export potential of Indian agriculture to make India a global power in agriculture and raise farmers' income.
- **'District as Export Hub' Initiative:** The initiative's goal is to identify export products and services across all districts and establish systems to promote them. Its aim is to assist small businesses, farmers, and MSMEs in accessing foreign export markets.
- **Transport and Marketing Assistance for Specified Agriculture Products:** It is a Central Sector Scheme to mitigate the freight disadvantage for the export of agriculture products.
- **Trade Infrastructure for Export Scheme (TIES):** It aims at enhancing the country's export competitiveness by bridging gaps in export infrastructure.
- **Market Access Initiatives (MAI) Scheme:** The scheme aims to promote India's exports by supporting market development activities for Indian exporters. The scheme provides financial assistance for export promotion activities.
- **The Export Promotion Schemes of APEDA:** APEDA has launched several schemes like financial assistance, market accessibility schemes etc. to promote the export of agricultural products.

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## Multimodal Logistics Park in Assam

### Why in News?

Recently, the **Union Minister of Ports, Shipping & Waterways and Ayush**, visited the construction site of **India's first International Multi-Modal Logistics park (MMLP) in Jogighopa, Assam**, to review the progress made so far.

- Multi Modal Logistics Park is likely to **Boost Connectivity** in the **Northeast**.

### What is the Scope of this Project?

- The park is being developed under the ambitious **Bharatmala Pariyojana** of the Government.
- This park is **being made by National Highways & Infrastructure Development Corporation Limited (NHIDCL)**.
- The park will be **connected to road, rail, air, and waterways**.
- It is being developed in 317-acre land along the **Brahmaputra**.
- Project is likely to unlock huge potential for the region along with neighboring countries like **Bhutan and Bangladesh**.

### What is MMLP?

- **About:**
  - A **MMLP is a transportation hub** that **combines different modes of transport** in one location to enable efficient movement of goods.
  - These logistics parks are typically located **near major transportation nodes, such as ports, airports, and highways**.
  - They are designed to handle a large volume of goods, with facilities for **warehousing, distribution, and value-added services such as packaging and labeling**.
- **Benefits:**
  - **Improved Supply Chain Efficiency:**
    - By bringing together multiple modes of transportation, MMLPs can reduce the **time moving goods between different locations**. This helps to streamline the supply chain and improve overall efficiency.

### ○ Reduced Logistics Costs:

- MMLPs can **reduce logistics costs by providing shared facilities and infrastructure, such as warehousing and transportation**, which can be used by multiple companies. This helps to **lower operational costs and improve profitability**.

### ○ Enhanced Safety and Security:

- MMLPs often have advanced security systems and protocols in place to ensure the **safety of goods and people**. This helps to **prevent theft, damage, and other security issues that can impact the supply chain**.

### ○ Environmental Benefits:

- By **reducing the number of trips required to transport goods, MMLPs can help to reduce carbon emissions** and other environmental impacts associated with transportation.

### ➤ Status of MMLP in India:

- The Cabinet Committee on Economic Affairs (CCEA) authorized the Ministry of Road Transport and Highways (MoRTH) to develop 35 MMLP under the Bharatmala Pariyojana.
  - Bangalore, Chennai, Guwahati, and Nagpur MMLPs under implementation.
- The MMLPs are to be developed under **Public Private Partnership (PPP)** on **Design, Build, Finance, Operate and Transfer (DBFOT)** mode.
- The **National Highways and Logistics Management (NHLML)**, a **special purpose vehicle (SPV)** fully owned by the National Highways Authority of India (NHAI), plans to construct the majority of the proposed MMLPs in PPP mode.

## US Fed Rate Hike

### Why in News?

After raising interest rates aggressively to tame **inflation**, the US Federal Reserve has **once again raised its benchmark overnight interest rate** by a quarter of a percentage point **to the 5.00%-5.25% range**.

- Overnight rates are the rates at which banks lend funds to each other at the end of the day in the overnight market.
- In many countries, the overnight rate is the interest rate the central bank sets to target **monetary policy** (Repo Rate in India).

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### **What could be the Possible Impact of this Hike on India?**

- The economists have expected that the latest **Fed hike may not have a material impact on India** as the **RBI** has paused hikes and there is weakness in the crude oil prices as well.
- **Domestic markets are likely to remain resilient** and if there is volatility, it would have a limited impact on the economy.
- It is also expected that the strength of the rupee and the continued buying by foreign institutional investors (FIIs) will strengthen the market.
  - **FIIs have already started investing in India**, with inflows in April 2023 rising to Rs 13,545 crore and Rs 8,243 crore in May so far.
- Moreover, this hike is being viewed as last one for this year, 2023 and the Fed will start cutting rates from the second half of 2023.
- If the Fed opts for a cut later in the year, **capital inflows are expected to pick up**.
  - If the **Fed starts cutting rates** from July 2023, **markets are expected to rise sharply**.

### **Why do Central Banks resort to a Rate Hike?**

- The central bank may increase interest rates to **control inflation**.
- This is being done to **reduce the amount of money available for borrowing, which can help to cool down the economy** and prevent prices from rising too quickly.
- **With higher borrowing costs, people and companies may be less willing to borrow**, which can slow down economic activity and growth.
  - Businesses may take fewer loans, hire fewer people, and reduce production in response to the increased costs of borrowing.

### **What are the Impacts of US Fed Rate Hike on Indian Economy?**

- **Capital Flows:** A US Fed rate hike can lead to a rise in interest rates in the US, which can attract capital flows from other countries. This can **lead to a reduction in foreign investment in India**, which can affect economic growth.

- **Depreciation of rupee:** It can also lead to a **depreciation of rupee**, which can have an impact on India's trade balance and current account deficit.
  - Depreciation of Indian rupee may result in costlier imports such as crude oil and other goods. This **may bring the imported inflation** in Indian Economy.
- **Domestic Borrowing Costs:** It can lead to an **increase in borrowing costs in India**, as investors may choose to invest in US securities instead of Indian securities. This can lead to a reduction in domestic investment and higher borrowing costs for businesses and individuals.
- **Stock Market:** It can also impact the stock market in India. Higher US interest rates can lead to a reduction in demand for risky assets such as equities, which can **lead to a decline in stock prices in India**.
- **External Debt:** India's external debt is mostly denominated in US Dollars, a US Fed rate hike **can increase the cost of servicing that debt**, as the value of the rupee may fall against the dollar. This can lead to an **increase in India's external debt burden** and a negative impact on the economy.
- **Banks:** The banking industry gets benefited by the **interest rates rise**, as banks re-price their loan portfolio much quicker than their deposit rates, which helps them to increase their net interest margin.

### **What Options are Available with India to Counter Fed Hikes?**

- **Adjusting Domestic Interest Rates:** The RBI, could **raise interest rates in response to the Fed hikes to attract foreign investors to invest in Indian markets**, which would increase demand for Indian currency and help maintain its value. However, this could also slow down domestic economic growth.
- **Diversifying Reserves:** India could **diversify its foreign exchange reserves to reduce its dependence on the U.S. dollar** and mitigate the impact of Fed rate hikes. For instance, India could increase its holdings of other major currencies such as the Euro, Yen, and Chinese Yuan.
- **Enhancing Trade Relations with Other Countries:** India could **focus on expanding trade ties with other countries to boost its economic growth and reduce the impact of the Fed rate hikes**. This could include exploring new export markets, attracting foreign investment, and increasing bilateral trade agreements.

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- **Encouraging Domestic Consumption:** If the Fed rate hikes lead to a slowdown in the Indian economy, **the government could boost domestic consumption through measures such as tax cuts, subsidies, or public works programs** to stimulate economic activity.
- **Reduce Dependence on Crude Oil:** One of the major effects of a stronger US dollar is the increase in crude oil prices, which in turn contributes to the overall rise in commodity prices. To address this, it is important to promote the use of alternative sources of energy such as **renewable energy** and **ethanol**.

## Anti-Competitive Practices by Big Tech Companies

### Why in News?

Some start-ups have accused the **IAMAI (Internet and Mobile Association of India)** of favoring Big Tech companies over smaller ones, which highlights the Issue of **Anti-Competitive Practices by Big Tech Companies**.

- IAMAI is a not-for-profit industry body registered under the **Societies Act, 1896**. Its mandate is to expand and enhance the online and mobile value-added services sector.

### What is Big Tech?

- The term '**Big Tech**' is used to refer to a **handful of large, globally significant technology** companies, such as Google, Facebook, Amazon, Apple and Microsoft.
- Big Tech is better understood as a concept, rather than a static set of companies. New companies **may enter this category just as existing ones** may drop out of it.

### What is the Background?

- The **Parliamentary Standing Committee** on Finance proposed **new regulations to prevent anti-competitive practices** by big tech companies.
  - These included ex-ante regulations that require companies to follow certain standards of behavior **before engaging in certain practices** and designating big tech companies as **Systemically Important Digital Intermediaries (SIDIs)**.

- The SIDIs would be the leading **entities with the potential to negatively impact competition** in the digital ecosystem based on their revenue, market capitalization, and number of active users.
- However, the IAMAI argued that these **regulations could stifle innovation and competition**.
  - Other big tech companies like Meta, Apple, Amazon, Twitter, and Google among its members, **submitted similar comments**.
- This move has drawn criticism from some Indian startups, who accuse IAMAI of promoting views that favor foreign big tech companies and influencing the **Competitive Conduct in the Digital Ecosystem**.

### What is the Role of Big Techs India's Digital Space?

- **Revenue Source:** They play a prominent role in the **fintech market**, an attractive revenue source particularly because of **low per user ad revenues in India**.
- **Overcoming Literacy Barriers:** Voice-based and **regional language** interfaces are offered by Big Tech companies to reach new users and overcome literacy barriers.
- **Bridging Infrastructural and Employment Gaps:** New business verticals that bridge existing infrastructural and employment gaps by providing warehousing, delivery facilities and job opportunities are **helping India to serve Indian markets better**.
- **Social and Political Progress:** Most Indian internet users rely on one or more Big Tech platforms to access information, communicate, **and participate in political and social life**.
  - This is also democratising the exercise of the **constitutional right of free speech**.

### How does Big techs Influence the Competitive Conduct in the Digital Ecosystem?

- **Acquisitions and Mergers:**
  - Large firms buying highly **valued start-ups without being subject to merge control rules** is a problem in digital markets.
  - The Committee noted that **CCI (Competition Commission of India)** is not able to capture certain

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mergers and acquisitions because **they do not meet the thresholds of assets and turnover required** for combinations.

➤ **Self-Preferencing:**

- Self-preferencing happens when a **company promotes its own services** or those of its subsidiaries on its platform, while also competing with other service providers on the same platform.
  - For example, a company may give **priority in rankings to its own applications** in an app store. This lack of neutrality can harm other businesses and reduce their profits.

➤ **Data Usage:**

- Digital companies collect a lot of customer data **which can give them an advantage and make it hard for new companies** to compete.
- This data can also be misused to **track and profile customers**.

➤ **Restricting Third-Party Applications:**

- Some companies **restrict the use of third-party applications** on their platforms, which can limit user choice.
  - For instance, an operating system **may prevent users from utilizing services** of an application other than its own, such as Apple not allowing any third-party applications to be installed on the I-phone.

➤ **Adjacency:**

- Digital firms sometimes force customers to **buy additional services linked to their main product**, which reduces competition and creates pricing asymmetry.

➤ **Anti-Steering:**

- Anti-steering provisions are used by entities to **prevent business users from using other alternatives**, thereby reducing competition.
  - For example, application stores mandating the use of their own payment systems. These practices result in anti-competitive exclusionary practices.

### ***What is India's Current Approach to Regulate Big Tech?***

- **Competition Act, 2002:** In India, antitrust issues are governed by the **Competition Act, 2002**, and the CCI checks upon **monopolistic practices**.

- In 2022, the CCI imposed a penalty of Rs 1,337.76 crore on Google for abusing its dominant position in multiple markets for 'anti-competitive practices'.

- **Competition Amendment Bill, 2022:** The government has proposed amendments to the competition law in the **Competition Amendment Bill, 2022**. The Bill receives Presidential Assent in April 2023.

- The CCI shall frame regulations to prescribe the requirements for assessing whether an enterprise has substantial business operations in India.
- It will strengthen the **Commission's review mechanism, particularly in the digital and infrastructure space**, a majority of which were not reported earlier, as the asset or turnover values did not meet the jurisdictional thresholds.

## **Report on Currency and Finance 2022–23**

### ***Why in News?***

The cumulative total expenditure for India's adaptation to climate change could reach 85.6 lakh crore by 2030, according to an estimate made by **Reserve Bank of India(RBI)** in its **Report on Currency and Finance 2022–23**.

### ***What is Report on Currency and Finance?***

➤ **About:**

- It is an **annual publication of the RBI**.
- The report covers various aspects of the **Indian economy and financial system**.

➤ **Theme:**

- The theme of Report on Currency and Finance 2022–23 is '**Towards a Greener Cleaner India**'.
- It focuses on the **challenges and opportunities of climate change** for India and the **role of the financial sector in achieving a low-carbon and climate-resilient development path**.

➤ **Aim:**

- It aims to **provide analytical insights into the macroeconomic and financial developments in India and their policy implications**.

➤ **Dimensions:**

- The report covers **four major dimensions of climate change** to assess future challenges to sustainable high growth in India, the **unprecedented scale**

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and **pace of climate change**; its **macroeconomic effects**; **implications for financial stability**; and **policy options to mitigate climate risks**.

### What are the Key Highlights of the Report?

- **Renewable Energy Target:**
    - India needs to significantly increase its use of renewable energy to achieve its goal of **net zero emissions by 2070**. The report suggests that India should aim for renewables to account for 80% of its energy mix by 2070-71.
    - This would require an accelerated reduction in the energy intensity of **GDP by about 5% annually**.
  - **Green Financing Requirement:**
    - India's green financing requirement is estimated to be **at least 2.5% of GDP annually till 2030** to address the **infrastructure gap caused by climate events**.
      - The financial system may need to **mobilize adequate resources** and **reallocate current resources** to contribute effectively to India's net-zero target.
  - **Policy Intervention:**
    - The report also highlights the need for a **balanced policy intervention** to ensure progress across all policy levers, which would enable India to achieve its **green transition targets by 2030** and make the net-zero goal by 2070 attainable.
  - **Financial Risks due to Climate Change:**
    - The **public sector banks (PSBs)** in India may be **more vulnerable to climate-related financial risks** than **private sector banks**.
- Policy Instruments:**
- Central banks have several policy instruments at their disposal to influence investment decisions and the allocation of resources and credit to achieve sustainability targets.
    - This includes mandating banks and other financial institutions to consider climate and environmental risks through various regulations.

## Central Counterparties

### Why in News?

The **European Securities and Markets Authority (ESMA)**, the **European Union's** financial markets regulator,

has **derecognized six Indian Central Counterparties (CCPs)** from April 30, 2023, in accordance with the **European Market Infrastructure Regulation (EMIR)**.

- These **six CCPs** are the Clearing Corporation of India (CCIL), Indian Clearing Corporation Ltd (ICCL), NSE Clearing Ltd (NSCCL), Multi Commodity Exchange Clearing (MCXCCL), India International Clearing Corporation (IFSC) Ltd (IICC) and NSE IFSC Clearing Corporation Ltd (NICCL).

### What is CCP?

- **About:**
  - CCP is a financial institution that acts as an **intermediary between buyers and sellers in various derivatives and equities markets**. CCPs are structures that help facilitate the **clearing and settlement process** in financial markets.
  - The primary goal of CCPs is to increase efficiency and stability in financial markets.
  - CCPs reduce risks associated with **counterparty, operational, settlement, market, legal, and default issues**
  - CCPs act as a counterparty to both buyers and sellers in a trade, collecting money from each party involved and guaranteeing the terms of the trade
- **Functions:**
  - **Clearing and settlement** are the two main functions of a CCP.
    - Clearing involves **validating the details of the trade** and ensuring that both **parties have sufficient funds to complete the transaction**.
    - Settlement involves the **transfer of ownership of the asset** or security being traded from the seller to the buyer.
- **Regulators in India:**
  - The **Reserve Bank of India (RBI)** for CCPs clearing money market instruments and foreign exchange derivatives.
    - A CCP is authorized by the RBI to operate in India under the **Payment and Settlement Systems Act, 2007**.
  - The **Securities and Exchange Board of India (SEBI)** for CCPs clearing securities and commodity derivatives.

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### Why has ESMA Derecognized Indian CCPs?

➤ Reason:

- The ESMA derecognized Indian CCPs due to their failure to meet all EMIR requirements.
- The decision came due to 'no cooperation arrangements' between ESMA and Indian regulators – the RBI, the SEBI and the **International Financial Services Centres Authority (IFSCA)**.
  - While ESMA wants to supervise these six CCPs, Indian regulators are of the view that **since these domestic CCPs operate in India and not in the EU, these entities cannot be subjected to the ESMA regulations**. They feel that these six CCPs have robust risk management and there is no need for a foreign regulator to inspect them.

➤ Impact:

- As of the date of application of the withdrawal decisions, these CCPs **will no longer be able to provide services to clearing members** and trading venues established in the EU.
- The decision will **impact European banks in India** as they will either need as much as 50 times higher

capital to carry out trades involving the Indian central counterparties or will have to unwind positions with the central counterparties over the next 6 to 9 months.

#### What is ESMA?

- ESMA is an independent EU authority.
- ESMA enhances the **protection of investors and promotes stable** and orderly financial markets.
- ESMA is the direct supervisor of specific financial entities such as credit rating agencies, securitization repositories, and trade repositories

#### What is EMIR?

- EMIR is an EU regulation adopted in August 2012
- It aims to **reduce systemic, counterparty, and operational risk in the OTC derivatives market**
- **It sets higher prudential standards for CCPs and trade repositories**
- EMIR enhances risk mitigation techniques for non-cleared derivatives
- It establishes a framework for the recognition and supervision of third-country CCPs

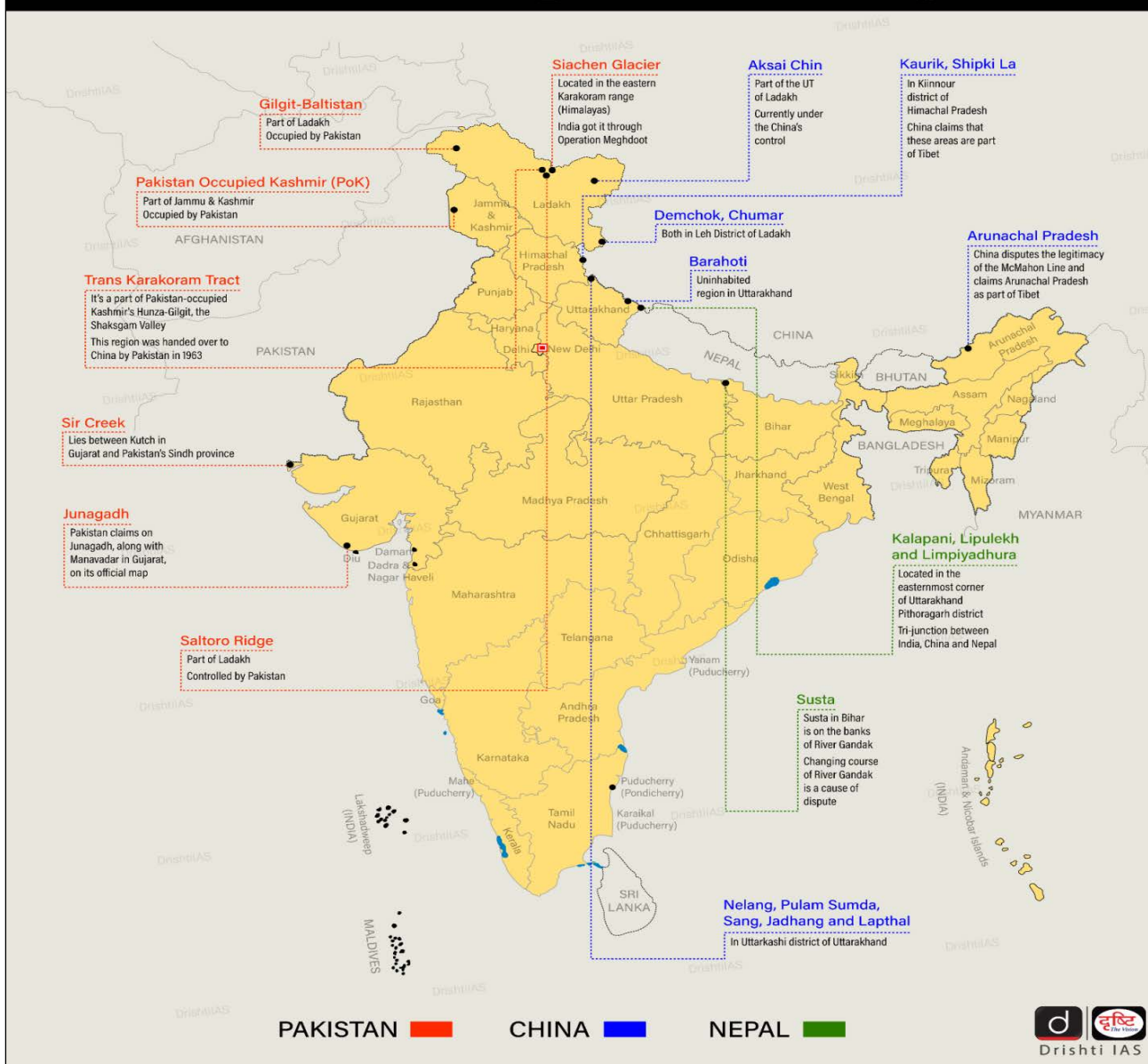
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# International Relations

## Highlights

- 6<sup>th</sup> India-Canada Ministerial Dialogue on Trade and Investment
- India, US, UAE and Saudi Arabia Discuss Infrastructure Initiatives
- Arab League
- CPEC's Extension to Afghanistan
- India-Israel Relations
- International Religious Freedom Report 2023
- WTO Needs to Relook at Farm Subsidies
- One Year of India- UAE CEPA

## India's Border Dispute With Neighbors



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# WTO AGREEMENT ON AGRICULTURE (AoA)

A WTO treaty negotiated during the Uruguay Round of the General Agreement on Tariffs and Trade (GATT); formally ratified in 1994 at Marrakesh, Morocco; Came into effect in 1995

## FEATURES

- Market access (Promote market access for agricultural products by reducing trade barriers)
- Domestic support (Subsidy Boxes are included in this)
- Export subsidies (Reduce the use of export subsidies, which can distort trade)

## SUBSIDY BOXES

### Amber Box Subsidies:

- Can distort international trade by making a country's products cheaper in comparison to those of other countries
- Examples: Subsidies for inputs such as fertilisers, seeds, electricity, irrigation, and Minimum Support Price (MSP)
- Amber box is used for all domestic support measures that are deemed to distort production and trade
  - As a result, the signatories are required to commit to reducing domestic supports that fall into the amber box
- Members who do not make these commitments must keep their amber box support within 5-10% of their value of production. (*De Minimis Clause*)
  - 10% for developing countries
  - 5% for developed countries
- India's MSP program remains under scrutiny, as it exceeds 10% ceiling

### Blue box Subsidies:

- "Amber box with conditions" — designed to reduce distortion
- Any support that would normally be in the amber box is placed in the blue box if it requires farmers to limit production
  - These subsidies aim to limit production by imposing production quotas or requiring farmers to set aside part of their land
- At present there are no limits on spending on blue box subsidies

### Green Box Subsidies:

- Domestic support measures that don't cause trade distortion or at most cause minimal distortion
- These subsidies are government funded without any price support to crops
  - Also include environmental protection and regional development programmes
- Allowed without limits (except in certain circumstances)



## 6<sup>th</sup> India-Canada Ministerial Dialogue on Trade and Investment

### Why in News?

Recently, the 6th India-Canada Ministerial Dialogue on Trade and Investment (MDTI) was held in Ottawa, Canada.

### What are the Major Outcomes of the MDTI?

- Support for India as G20 Chair:
  - The Canadian Minister expressed her support for India as the **G20 Chair** and its priorities in the **G20 Trade and Investment Working Group**.
    - She expressed her intention to participate in the upcoming **G-20 Trade and Investment**

Ministerial meeting in India scheduled for August 2023.

### Enhanced Cooperation:

- The Ministers highlighted the importance of cooperation in sectors such as **clean technologies for infrastructure development, critical minerals, electric vehicles and batteries, renewable energy/hydrogen, and artificial intelligence (AI)**.

### Critical Mineral Supply Chain Resiliency:

- The Ministers emphasised the importance of **government-to-government coordination** to promote critical mineral supply chain resiliency.
  - They committed to an annual dialogue at the official level during the **Prospectors and Developers Association Conference (PDAC)** in Toronto to discuss mutual interests.

### Canada-India CEO Forum:

- The Ministers agreed to **rework and relaunch the Canada-India CEO Forum** with renewed focus and priorities.

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- The CEO Forum would serve as a **platform to enhance business-to-business engagement** and could be announced at an agreed-upon early date.

➤ **Trade Mission and Delegation:**

- The Canadian Minister announced her leadership of a **Team Canada trade mission to India in October 2023**.
- This mission aims to strengthen trade and investment ties, with a significant business delegation.



### ***What are the Areas of Cooperation Between India and Canada?***

➤ **About:**

- India established **diplomatic relations with Canada in 1947**. India and Canada have a long-standing bilateral relationship based on shared democratic values, the **multi-cultural, multi-ethnic and multi religious nature of two societies** and strong people-to-people contacts.

➤ **Political:**

- India and Canada share **commonalities in Parliamentary structure and procedures**.
- In India, Canada is represented by the **High Commission of Canada** in New Delhi.
  - Canada also has **Consulates General in Bengaluru, Chandigarh and Mumbai**, as well as trade offices in **Ahmedabad, Chennai, Hyderabad and Kolkata**.

➤ **Commerce:**

- India-Canada bilateral trade in goods reached approximately **USD 8.2 billion in 2022**, showing a **25% growth compared to 2021**.

- The services sector was emphasised as a significant contributor to the bilateral relationship, with bilateral services trade valued at around **USD 6.6 billion in 2022**.

- **Canadian Pension Funds** have cumulatively invested around **USD 55 billion in India** and are increasingly viewing India as a favourable destination for investments.

- More than **600 Canadian companies have a presence in India and more than 1,000 companies are actively pursuing business in the Indian market**.

- Indian companies in Canada are active in the field such as **Information Technology, software, steel, natural resources and banking sectors**.

- The **India-Canada Free Trade Agreement** is also under negotiation.

- An **Early Progress Trade Agreement (EPTA)** is expected to be signed in **2023 between India and Canada**.

- The agreement will cover a wide range of areas including **goods, services, investment, rules of origin, sanitary and phytosanitary measures, technical barriers to trade, and dispute settlement**.

➤ **Science and Technology:**

- India's **Atomic Energy Regulatory Board (AERB)** signed an Arrangement with the **Canadian Nuclear Safety Commission (CNSC)** on September 16, 2015 to exchange experiences in **nuclear safety and regulatory issues**.

- Indo-Canadian S&T cooperation has been primarily focussed on promoting Industrial R&D which has potential for application through development of **new IP, processes, prototypes or products**.

- Canada was a **partner country for the Technology Summit** held in New Delhi in November 2017.

- The **Department of Earth Science and Polar Canada** have started a programme for exchange of knowledge and scientific research on **Cold Climate (Arctic) Studies**.

- Under the "Mission Innovation" program, India is collaborating with Canada in various activities in the areas of **Sustainable Biofuels (IC4)**.

- **ANTRIX, the Commercial arm of ISRO**, has launched several nanosatellites from Canada.

- ISRO in its 100th Satellite PSLV launched on January 12, 2018, also flew **Canadian first LEO satellite**, from Indian spaceport Sriharikota, Andhra Pradesh.

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### ➤ Education and Culture:

- The **Shastri Indo-Canadian Institute (SICI)** is a unique bi-national organisation fostering, since 1968, **education and cultural cooperation and collaboration between India and Canada**.
- Canada was the **Country of Focus at the 48th International Film Festival of India** held in Goa in November 2017.
- **Canada Post and India Post** joined hands to issue a commemorative stamp on Diwali in 2017.
  - Canada Post issued Diwali Stamps again in 2020 and 2021.
- In October 2020, **Canada announced the voluntary repatriation of the ancient Annapurna statue** which was illegally acquired by a Canadian collector and had been kept at **University of Regina**.
  - The statue has since been handed over to India and has been placed inside **Kashi Vishwanath temple** in Varanasi in November 2021.

## India, US, UAE and Saudi Arabia Discuss Infrastructure Initiatives

### Why in News?

Recently, the Kingdom of Saudi Arabia hosted a special meeting of the **National Security Advisers (NSAs) of India, the US, and the UAE**.

### What are the Key Highlights of the Meeting?

- The discussions **aimed to strengthen relations and ties between the countries** in a way that **enhances growth and stability in the region**.
- The meeting **focused on regional initiatives on infrastructure**.
- The meeting sought to advance their shared vision of a more secure and prosperous **Middle East region interconnected with India and the world**.
- Among the projects discussed, a plan to **connect Gulf countries via a railway network and connect to India via shipping lanes from "two ports" in the region** is highlighted.
  - This is meant to provide a **counter to China's Belt and Road initiative** and other inroads in the region.

- The idea for the initiative came up during talks held over the past 18 months by the I2U2.
  - The **I2U2 Quad**, works on connecting **"South Asia to the Middle East to the United States in ways that advance economic technology and diplomacy"**.

### What is the I2U2 Quad?

#### ➤ About:

- I2U2 is a new grouping formed by **India, Israel, the UAE, and the US**.
- It is also referred to as the **West Asian Quad**.

#### ➤ Objectives:

- It is focused on **expanding economic and political cooperation in the Middle East and Asia**.
- The framework aims to **foster support and cooperation in infrastructure, technology and maritime security**.

#### ➤ Formation of I2U2:

- I2U2 was initially formed in **October 2021** following the **Abraham Accords**.
  - The Abraham Accords normalized relations between **Israel and a number of Arab Gulf countries**.

#### ➤ First Summit of I2U2:

- The first virtual summit of I2U2 took place on July 14, 2022.
- The summit focused heavily on the **global food and energy crisis resulting from the conflict in Ukraine**.

### What will be the Significance of I2U2 for India?

#### ➤ Advantage from Abraham Accords:

- India will get **advantage of the Abraham Accords** to deepen engagement with Israel without risking its ties with the UAE and the other Arab states.

#### ➤ Benefit Market:

- India is a **massive consumer market**. It's a massive producer of high-tech and highly sought-after goods as well. India will benefit from this grouping.

#### ➤ Alliances:

- It will help India in building alliances — **political alliances, social alliances**.

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## Arab League

### Why in News?

Recently, the Arab League has re-admitted **Syria into the organization**, after a suspension over a decade.

### Why has Syria Readmitted to the Arab League?

#### ➤ Suspension:

- Syria was **suspended from the Arab League in 2011** after it violently cracked down on anti-government protests.
- The Arab League accused Syria of not **complying with a peace plan that called for a withdrawal of military forces**, the release of political prisoners, and the start of a dialogue with opposition groups.
- Despite attempts at peace negotiations and ceasefire agreements, the violence continued, leading to Syria's suspension.
- This had economic and diplomatic consequences for Syria.

#### ➤ Readmission:

- The move signifies softness in relations between Syria and other Arab governments and is seen as the **start of a gradual process to resolve the crisis in Syria**.
  - The **Crisis in Syria** has resulted in the **displacement of roughly half of the pre-war population of 21 million** and the deaths of over 300,000 civilians.
- A committee involving Egypt, Saudi Arabia, Lebanon, Jordan, and Iraq will be established to help **Syria achieve these goals**.
  - But the decision does not mean a resumption of relationships between Arab states and Syria as it is up to each country to decide this individually.
- It calls for a resolution of the crisis **resulting from Syria's civil war**, including the flight of refugees to neighboring countries and drug smuggling across the region.

### What is the Arab League?

#### ➤ About:

- Arab League, also called **League of Arab States (LAS)**, is an intergovernmental pan-Arab organisation of all Arab states in the **Middle East** and North Africa.

- It was formed in Cairo, Egypt on 22<sup>nd</sup> March 1945, following the adoption of the **Alexandria Protocol in 1944**.

#### ➤ Members:

- **Currently, there are 22 Arab countries:** Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, the United Arab Emirates, and Yemen.



#### ➤ Objective:

- It aims to strengthen and coordinate the **political, cultural, economic, and social programs of its members** and to **mediate disputes** among them or between them and third parties.
  - The signing on 13<sup>th</sup> April 1950, of an agreement on joint defense and economic cooperation also **committed the signatories to coordination of military defense measures**.

#### ➤ Concerns:

- The Arab League has been criticized for its **inability to effectively address the issues it was created to handle**. Many question the relevance of the institution, with its slogan of **"one Arab nation with an eternal mission"** being seen as outdated.
  - This has led to instances where important events, like the annual leaders' summit, have been postponed or canceled.
- The League has also been criticized for its **lack of effectiveness in enforcing decisions and resolving conflicts among its members**. It has been accused of disunity, poor governance, and being more **representative of autocratic regimes than of the Arab people**.

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### What is the Significance of the Middle East/North Africa (MENA) for India?

#### ➤ Middle East:

- India has enjoyed **centuries of good relations with countries like Iran**, while smaller gas-rich nation **Qatar** is one of India's closest allies in the region.
- India shares good **relations with most of the countries in the Gulf**.
- The two most important reasons for the relationship are **Oil and gas, and trade**.
- Two additional reasons are the **huge number of Indians who work in the Gulf countries**, and the **Remittance** they send back home.

#### ➤ North Africa:

- North African nations like **Morocco and Algeria are important** as they serve as gateways to other parts of Africa, which is relevant for India, given its desire to **penetrate Francophone Africa (French Speaking African Nations)**.
- North Africa is significant for India because of its potential as a source of clean energy. The region has **abundant solar and wind resources**, which can be harnessed to generate electricity.
  - India has set ambitious renewable energy targets, and **North Africa could provide an opportunity for India to meet its renewable energy goals**.
- North Africa is also **strategically located, making it an important region for trade and commerce**.
  - The **Suez Canal** puts North Africa at the crossroads of global trade. With more than 22000 ship transits in 2022, the canal is one of the world's most important maritime routes.

## CPEC's Extension to Afghanistan

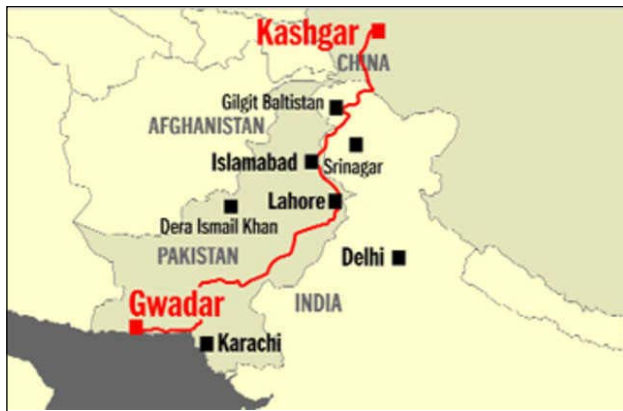
### Why in News?

Recently, China and Pakistan have held the 4<sup>th</sup> round of the **Foreign Minister-level Pakistan-China Strategic Dialogue** Islamabad, Pakistan, where they agreed to extend the **China-Pakistan Economic Corridor (CPEC)** into Afghanistan.

- Alongside, the **5<sup>th</sup> China-Pakistan-Afghanistan Trilateral Foreign Ministers Dialogue** was also held where they agreed to combat terrorism and enhance cooperation in different economic fields.
- In 2021, China proposed construction of the **Peshawar-Kabul motorway** as an extension of CPEC in Afghanistan.

### What is the China-Pakistan Economic Corridor?

- CPEC is a **3,000-km long route of infrastructure projects connecting China's northwest Xinjiang Uygur Autonomous Region and the Gwadar Port** in the western province of Balochistan in Pakistan.
- It is a bilateral project between Pakistan and China, intended to **promote connectivity across Pakistan with a network of highways, railways, and pipelines** accompanied by energy, industrial, and other infrastructure development projects.
- It will pave the way for **China to access the Middle East and Africa from Gwadar Port**, enabling China to access the **Indian Ocean** and in return China will support development projects in Pakistan to overcome the latter's energy crises and stabilizing its faltering economy.
- CPEC is a part of the **Belt and Road Initiative**.
  - The BRI, launched in 2013, aims to link **Southeast Asia, Central Asia, the Gulf region, Africa and Europe** with a network of land and sea routes.



### Why does Afghanistan seem Significant for Both Pakistan and China?

- **Access to Rare Minerals:** Afghanistan has a **large amount of Rare Earth Minerals (1.4 million tonnes)** that are important for **making electronics and military equipment**. However, since the Taliban took over, the country has been **facing economic difficulties because foreign aid has been withdrawn**.

Note:



- **Energy and Other Resources:** Afghan participation in CPEC will allow **Islamabad and Beijing to harness energy and other resources**, as well as gain access to Afghanistan's **vast wealth of untapped natural resources**, ranging from copper, gold, uranium, and lithium, which are critical components for a variety of advanced electronic technologies and high-tech missile guidance systems.

### ***What can be the Implications for India on CPEC's Extension to Afghanistan?***

- **Reduces India's Scope in Central Asia:**
  - Afghanistan's involvement in CPEC can reduce the scope of **India's investment in Iran's Chabahar port**. India intends to project the port as a **gateway to lucrative prospects for commerce between India, Iran, and Afghanistan** with Central Asian countries.
    - Pakistan is also hoping to undermine India's influence in Central Asia and CPEC might provide the perfect platform for this.
- **China can take Lead from India in Development Aid:**
  - In terms of development aid, **India has been the largest regional lender to Afghanistan**, investing more than USD 3 Billion for projects such as
    - Road construction, power plant construction, dam construction, parliament building, rural development, education, infrastructure, and much more.
  - With the extension of CPEC, China is projected to **displace India and take the lead in Afghanistan's development sphere**.
- **Security Concerns:**
  - China may control Afghanistan's **Bagram air force base**.
  - The Bagram airport is the biggest airport and technically well-equipped as the Americans kept it for their use till the end, instead of the Kabul airport.
- **Undermining India's Sovereignty:**
  - The CPEC passes through PoK, which **undermines India's sovereignty**. India has repeatedly raised concerns over this issue as a violation of its sovereignty and territorial integrity.
  - By extending the CPEC to Afghanistan, China and Pakistan are further consolidating their economic and strategic ties, which India sees as a **threat to its security and regional interests**.

### **Terrorism and Strategic Concerns:**

- If Afghanistan becomes a part of the CPEC, it will boost economic development but **may also give Pakistan a strategic advantage in the region**, which could be a threat to India's interests.
- It may lead to an **increase in terrorism from Pakistan against India**, as it seeks to gain the upper hand in the region.

### **Exploitation of Rare Earth Minerals:**

- With the extension of CPEC, China is also looking to exploit Afghanistan's rich minerals and **highly lucrative rare-earth mines**.
- Rare-earth metals, which are key components for a host of advanced electronic technologies and hi-tech missile guidance systems.

## **India-Israel Relations**

### **Why in News?**

Recently, India's **Council of Scientific and Industrial Research (CSIR)** and Israel's Defense Research and Development (DDR&D) have signed a Memorandum of Understanding (MoU) on **Industrial Research and Development Cooperation**.



Note:



### What are the Key Highlights of the MoU?

- It aims to work together on **research and development projects in various fields** such as **Artificial Intelligence (AI), Quantum and semiconductors, synthetic biology, Sustainable Energy, Healthcare, and Agriculture**. They will focus on implementing specific projects in mutually agreeable areas.
- The collaboration will include important industrial sectors such as **aerospace, chemicals, and infrastructure**.
- The MoU will be monitored by a **Joint Steering Committee** led by the heads of the CSIR and DDR&D for taking forward mutually benefiting Industrial and technology cooperation.

### How has the India-Israel Relations been So Far?

- **Diplomatic:**
  - Though India officially **recognized Israel in 1950**, both countries established full diplomatic ties only on **29<sup>th</sup> January 1992**.
  - As of December 2020, India was among **164 United Nations (UN) member states** to have diplomatic ties with Israel.
- **Economic and Commercial:**
  - Trade between India and Israel has increased from USD 5 billion before the **Covid-19 pandemic** to about USD 7.5 billion till 2023 January.
    - Trade in diamonds constitutes about 50% of bilateral trade.
  - India is Israel's **third-largest trade partner** in Asia and **seventh largest globally**.
    - Israeli companies have invested in India in energy, renewable energy, telecom, real estate, water technologies, and are focusing on setting up R&D centers or production units in India.
  - India is also in dialogue with Israel for concluding a **Free Trade Agreement (FTA)**.
- **Defence:**
  - India is one of the **largest importers of weapons from Israel**, contributing to about 40% of its annual arms exports.
  - The Indian armed forces have inducted a **wide array of Israeli weapon systems over the years**, which range from Phalcon **AWACS (Airborne Warning And Control Systems)** and Heron, Searcher-II and Harop drones to Barak anti-missile defence systems and Spyder quick-reaction anti-aircraft missile systems.

- At the **15th Joint Working Group (JWG 2021)** meeting on Bilateral Defence Cooperation, countries agreed to form a Task Force to formulate a comprehensive Ten-Year Roadmap to identify new areas of cooperation.

#### ➤ Agriculture:

- In May 2021, **"a three-year work program agreement"** for development in agriculture cooperation, was signed.
- The programme aims to grow existing Centres of Excellence (CoE), establish new centers, increase CoE's value chain, bring the Centres of Excellence into the self-sufficient mode, and encourage private sector companies and collaboration.

#### ➤ Science & Technology:

- In recent years, multiple MoUs have been signed between Israel's Start-Up National Central and Indian entrepreneurship centres like **iCreate and TiE (Technology Business Incubators)**.
- In 2022, the two countries recently widened the scope of the **India-Israel Industrial R&D and Innovation Fund (I4F)** to include sectors like renewable energy and **ICT (Information and Communication Technology)** through increased participation of academia and business entities.
  - I4F is a cooperation between the two countries to promote, **facilitate and support joint industrial R&D projects** between companies from India and Israel to address the challenges in the agreed 'Focus Sectors'.

#### ➤ Others:

- Israel is also joining the India-led **International Solar Alliance (ISA)**, which aligns very well with the objectives of both countries to scale up their cooperation in **renewable energy** and partner in clean energy.

## International Religious Freedom Report 2023

### Why in News?

The government of India **rejected the recommendations of the US Commission on International Religious Freedom's (USCIRF) 2023 report**, calling it biased and motivated.

Note:



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### What is USCIRF?

- USCIRF is an **independent, bipartisan US federal government commission**, dedicated to defending the universal right to freedom of religion or belief abroad.
- It is an **advisory body to the US Congress**.
- It is **Headquartered in Washington DC**.
- **Established by the US government after the inaction of the International Religious Freedom Act (IRFA), 1998** the recommendations of USCIRF are non-binding on the state department. IRFA provides that US policy includes condemning violations of religious freedom and assisting other governments in the promotion of this right.
  - Traditionally, **India does not recognize the view of USCIRF**.

### What are the Concerns Raised About India?

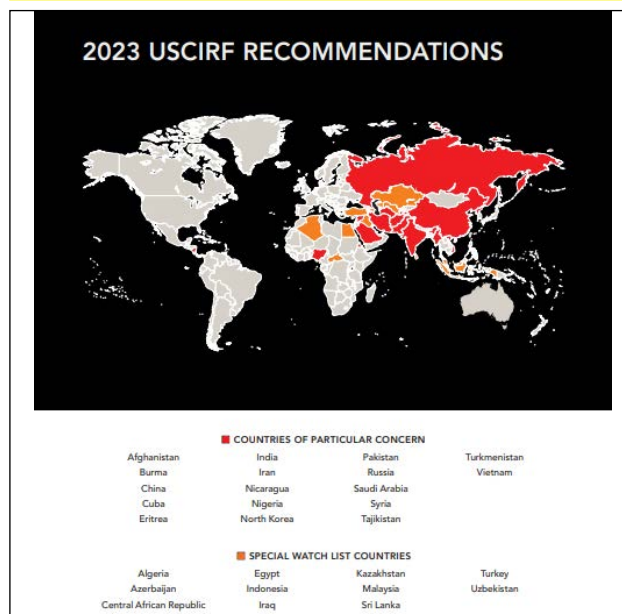
- **Concerns About Certain Laws and Policies:** The report highlights concern regarding certain laws and policies in the country that have been **criticized for their potential to discriminate on the basis of religion**.
  - These include laws related to conversion, interfaith relationships, hijab, and **cow slaughter**, as well as the **Citizenship (Amendment) Act, 2019** and the **National Register of Citizens (NRC)**. All of these, it alleges, have **not impacted minorities in a favorable way**.
- **Measures Affecting Freedom of Expression:** It raises concerns about **alleged measures that may have impacted critical voices**, particularly those belonging to **religious minorities**.
  - These include surveillance, harassment, property demolition, and detention under the **Unlawful Activities Prevention Act (UAPA), 1967**. Some **Non-Governmental organizations (NGOs)** have also been subject to scrutiny under the **Foreign Contribution Regulation Act (FCRA), 2010**.
- **India as a CPC:** It has **criticized the US State Department for not having designated India as a Countries of Particular Concern (CPC)** and has called for sanctions on Indian government agencies and officials.
  - USCIRF has been **recommending India's designation as a country of particular concern since 2020** but it hasn't been accepted by the US government so far.

### What are the Recommendations of the Report?

- For 2023, based on religious freedom conditions in 2022, **USCIRF recommends that the State Department:**
  - **Redesignate as CPCs:** Burma, China, Cuba, Eritrea, Iran, Nicaragua, North Korea, Pakistan, Russia, Saudi Arabia, Tajikistan, and Turkmenistan;
    - **Designate as Additional CPCs:** Afghanistan, India, Nigeria, Syria, and Vietnam;
  - **Maintain on the Special Watch List (SWL):** Algeria and the Central African Republic (CAR);
    - **Include on the SWL:** Azerbaijan, Egypt, Indonesia, Iraq, Kazakhstan, Malaysia, Sri Lanka, Turkey, and Uzbekistan;
  - **Redesignate as Entities of Particular Concern (EPCs):** Al-Shabaab, Boko Haram, Hay'at Tahrir al-Sham (HTS), the Houthis, Islamic State in the Greater Sahara (ISGS), Islamic State in West Africa Province (ISWAP also referred to as ISIS-West Africa), and Jamaat Nasr al-Islam wal Muslimin (JNIM).

### Criteria for Designation of Countries in Different Categories

- **CPCs:** When the government of the countries engage in or tolerate "systematic, ongoing, and egregious violations" of the right to freedom of religion or belief under IRFA 1998.
- **SWL:** It is based on the governments' perpetration or toleration of severe religious freedom violations.
- **EPCs:** For systematic, ongoing, and egregious religious freedom violations.



Note:

### What is the State of Freedom of Religion in India?

- Freedom of religion in India is a **fundamental right guaranteed by Article 25-28 of the Constitution of India**.
  - **Article 25** (Freedom of conscience and free profession, practice and propagation of religion).
  - **Article 26** (Freedom to manage religious affairs).
  - **Article 27** (Freedom as to payment of taxes for promotion of any religion).
  - **Article 28** (Freedom as to attendance at religious instruction or religious worship in certain educational institutions).
- Further, **Article 29 and 30 of the Constitution** deal with the protection of interests of minorities.

## WTO Needs to Relook at Farm Subsidies

### Why in News?

The finance minister of India has urged the **World Trade Organisation (WTO)** to look at the **issue of farm subsidies** with an open mind as it impacts the food security needs of emerging economies in the backdrop of COVID-19 pandemic and the Russia-Ukraine war.

- The FM said this while Speaking at the **Asian Development Bank (ADB)** Governor's seminar on 'Policies to support Asia's rebound'.

#### Note:

- The Asian Development Bank (ADB) Governor's Seminar is an **annual event that brings together the Governors of ADB's member countries**, leading policy makers, development experts, etc. to discuss developmental issues in the Asia-Pacific region.
  - **Headquartered in Manila (Philippines)**, the ADB is a regional development bank established in 1966 to promote economic and social development in Asia and the Pacific.
  - **The Board of Governors** is ADB's highest policy-making body; comprised of one representative from each member nation.

### What are the Subsidies under WTO?

#### ➤ Amber Box:

- Amber box subsidies are those **that can distort international trade by making a country's products cheaper** in comparison to those of other countries.
  - **Examples:** Subsidies for inputs such as **fertilisers, seeds, electricity, irrigation, and Minimum Support Price (MSP)**.
- According to the WTO, agriculture's **amber box is used for all domestic support measures** that are deemed to distort production and trade.
  - As a result, the trade **agreement requires signatories to commit to reducing trade-distorting domestic supports** that fall into the amber box.
- Members who do not make these commitments must keep their amber box support within 5-10% of their value of production. (**De Minimis Clause**)
  - **10% for developing countries**
  - **5% for developed countries**

#### ➤ Blue box:

- It is the **"amber box with conditions"** — conditions, designed to reduce distortion.
- Any support that would normally be in the amber box is placed in the blue box if **it requires farmers to limit production**.
  - These subsidies aim to limit production by imposing production quotas or requiring farmers to set aside part of their land.
- At present there are **no limits on spending on blue box subsidies**.

#### ➤ Green Box:

- Green Box is domestic support **measures that don't cause trade distortion or at most cause minimal distortion**.
- The Green box subsidies are **government funded without any price support to crops**.
  - They also include environmental protection and regional development programmes.
- "Green box" subsidies are therefore **allowed without limits** (except in certain circumstances).

### Why is there a Need to Relook into Subsidy Norms?

#### ➤ Unequal Opportunities to Global South:

- Ever since the establishment of WTO, there has been a **complaint regarding the export of agricultural**

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goods, and in general, the viewpoints of the **Global South and emerging markets** have not been given equal weight as those of the developed nations in trade discussions.

- The 'Global South' largely refers to countries in Asia, Africa and South America.
- **Issues with Food Subsidy Limit:** There is an issue with the reference price adopted under global trade norms - a WTO member country's food subsidy bill should not breach the limit of 10% of the value of production based on the reference price of 1986-88.
  - Subsidies for agriculture and poor farmers in developing countries were not counted at all and were frozen by the WTO.
  - Food security is comparatively stronger in developed nations than in developing countries because of the unbalanced nature of trade agreements.
- **Rising Food Insecurity:** The challenges on food security posed by the Covid-19 pandemic and Russia-Ukraine conflict have once again emphasized to relook the subsidy norms as food and fertilizer security have become more important now.
- **India's Demand:** As part of permanent solution, India has asked for measures like amendments in the formula to calculate the food subsidy cap and inclusion of programmes implemented after 2013 under the ambit of 'Peace Clause'.

### What is the WTO's Peace Clause?

- As an interim measure, the WTO members agreed on a mechanism called the 'Peace Clause' in December 2013 and pledged to negotiate a permanent solution.
- Under the Peace Clause, WTO members agreed to refrain from challenging any breach in prescribed ceiling by a developing nation at the dispute settlement forum of the WTO.
- This clause will stay till a permanent solution is found to the food stockpiling issue.

## One Year of India- UAE CEPA

### Why in News?

Recently, the **India-UAE Comprehensive Economic Partnership Agreement (CEPA)** completed one year of implementation.

### What is CEPA?

- It is a kind of free trade pact that covers negotiation on the trade in services and investment, and other areas of economic partnership.
- It may even consider negotiation in areas such as trade facilitation and customs cooperation, competition, and IPR.
- Partnership agreements or cooperation agreements are more comprehensive than Free Trade Agreements.
- CEPA also looks into the regulatory aspect of trade and encompasses an agreement covering the regulatory issues.

### What is the India-UAE CEPA?

- **About:**
  - The India-UAE CEPA is a landmark **free trade agreement (FTA)** between the two countries. It covers trade in goods, services, investment, and other areas of economic cooperation.
  - The CEPA entered into force on **May 1, 2022** and is expected to increase the **total value of bilateral trade in goods to over USD 100 billion** and trade in services to over USD 15 billion **within five years**.
  - The **CEPA is the first deep and full-fledged FTA signed by India** with any country in the past decade.
- **Salient Features:**
  - **Trade in Goods:**
    - The CEPA provides for preferential market access for over **80% of products traded between India and the UAE**.
    - India will benefit from the **reduction or elimination of tariffs on its exports to the UAE**, especially in sectors such as gems and jewellery, textiles, leather, footwear, sports goods, plastics, furniture, agricultural and wood products, engineering products, medical devices and automobiles.
  - **Trade in Services:**
    - The CEPA covers **11 broad service sectors and more than 100 sub-sectors**, such as business services, communication services, construction and related engineering services, distribution services, educational services, environmental services, financial services, health related and social services, **tourism and travel related services, recreational cultural and sporting services and transport services**.

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- Both countries have offered enhanced market access for each other's service providers across these sectors.
- **Investment:**
  - The CEPA provides for a **liberal and non-discriminatory regime for cross-border investment between India and the UAE.**
  - It also includes provisions on, dispute settlement and cooperation on investment facilitation.
- **Some Other Areas of Cooperation:**
  - Protection and promotion of investments
  - Technical barriers to trade (TBT)
  - **Sanitary and phytosanitary (SPS) measures**
  - Dispute settlement
  - Movement of natural persons
  - Pharmaceutical products
  - **Intellectual property rights (IPR)**
  - Digital trade

### How are India-UAE Trade Relations?



#### ➤ Trade:

- **UAE is India's 3<sup>rd</sup> largest trading partner (after US, China).** Bilateral trade turnover between the two was US\$ 68.4 billion in 2021.

#### ➤ FDI:

- UAE is the **7<sup>th</sup> largest investor in India** with cumulative **FDI inflows** of US\$ 15,179 million from **April 2000 – September 2022.**

#### ➤ Exports:

- Major Indian exports to UAE are **petroleum products, gems and jewellery, machinery and instruments, chemicals, iron and steel, textiles and garments, cereals, meat and meat products, etc.**

#### ➤ Imports:

- Major Indian imports from UAE are **crude oil, gold, pearls and precious stones, metal ores and metal scrap, chemicals, electrical machinery, etc.**

#### ➤ Impact of India-UAE CEPA on Trade Ties:

##### ○ Bilateral Trade:

- Bilateral trade between India and the UAE **reached historic highs during FY 2022-23;** increased from USD 72.9 billion (FY 22) to USD 84.5 billion (FY 23), **registering an increase of 16%.**

##### ○ Indian Exports to the UAE:

- Indian exports to the UAE increased from USD 28 bn to USD 31.3 bn (same period as above); **an 11.8% year-on-year growth in percentage terms.**
- During the same period, growth in India's global exports was 5.3%, excluding the UAE, India's global exports grew at 4.8%.

##### ○ Sectors that Witnessed Significant Export Growth:

- Mineral Fuels
- Electrical Machinery (particularly telephone equipment)
- Gems & Jewellery
- Automobiles (Transport vehicles segment)
- Essential Oils/Perfumes/Cosmetics (Beauty/Skin care products)
- Other Machinery
- Cereals (Rice)
- Coffee/Tea/Spices
- Chemical Products



Note:

# Social Issues

## Highlights

- Polygamy in India
- Report on Human Rights Defenders & Unfair Business Practices
- UN Report on Maternal and Infant Health
- Local Reservation in Jobs
- Who's Tipping the Scales Report: IPES
- Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) Act, 1994

## Polygamy in India

### Why in News?

Recently, the Chief Minister of Assam has said that the state government will move to ban the practice of Polygamy through “**Legislative Action**”, and that an “**Expert committee**” would be formed to examine the issue.

### What is Polygamy?

#### ➤ About:

- Polygamy comes from two words: “poly,” which means “many,” and “gamos,” which means “marriage.” As a result, polygamy **relates to marriages that are several**.
- Thus, polygamy is marriage in which **a spouse of either sex may have more than one mate** at the same time.
- Traditionally, polygamy — mainly the situation of a **man having more than one wife** — was practiced widely in India. The **Hindu Marriage Act, 1955** **outlawed** the practice.
- The **Special Marriage Act (SMA), 1954** allows individuals to perform inter-religious marriages, but **it forbids polygamy**. The Act has been used by **many Muslim women to help them stop practicing polygamy**.

#### ➤ Types:

- **Polygyny:**
  - It is the matrimonial structure in which a **male individual has numerous wives**. Polygamy in this form is more common or widespread.
  - Monarchs and emperors in the **Indus Valley Civilisation** were believed to have several wives.

#### ○ Polyandry:

- It is a type of marriage in which a **female has several husbands**.
- Nevertheless, this can be an extremely uncommon occurrence.

#### ○ Bigamy:

- When one is already married additionally, the marriage continues to be valid, then married with someone else is known as bigamy plus the **person committing this will be called bigamist**.
- It is considered a criminal offense in many countries, including India. In other words, it is the **act of entering into a marriage with someone else while still being in a valid marriage** with another person.

#### ➤ Prevalence in India:

- The **National Family Health Survey-5 (2019-20)** showed the **prevalence of polygamy was 2.1% among Christians**, 1.9% among Muslims, 1.3% among Hindus, and 1.6% among other religious groups.
- The data showed that the highest prevalence of polygynous marriages was in the **Northeastern states with tribal populations**.
- A list of 40 districts with the highest polygyny rates was dominated by those with high tribal populations.

### What are the Various Religious Laws Pertaining to Marriage in India?

#### ➤ Hindus:

- The Hindu Marriage Act, which came into effect in 1955, made it clear that **Hindu polygamy would be abolished and criminalized**.

Note:

- Under Section 11 Act, which states that polygamous marriages are void, the **Act cautiously mandates monogamous relationships**.
- When someone performs it, they are punished under Section 17 of the very same Act, as well as Sections **494 and 495 of the Indian Penal Code, 1860**.
  - Because **Buddhists, Jains, and Sikhs** are all considered Hindus and do not have their own laws, the provisions in the Hindu Marriage Act apply to these **three religious denominations as well**.
- **Parsi:**
  - The **Parsi Marriage and Divorce Act, 1936, had already outlawed bigamy**.
  - Any Parsi, who has been married during his or her life, is subject to the penalties provided for by the India Penal Code for an offence to return to marriage during the lifetime of a Parsi or not, without being legally divorced by a wife or husband or having his or her previous marriage declared invalid or dissolved.
- **Muslims:**
  - The clauses under the '**Muslim Personal Law Application Act (Shariat) of 1937**', as construed by the All India Muslim Personal Law Board, apply to Muslims in India.
  - Polygamy is **not prohibited in Muslim legislation** because it is recognised as a **religious practice**, hence they tend to preserve and practice it.
  - It is, nevertheless, clear that if this **method is determined to violate the constitution's basic rights**, it can be overturned.
    - When there is a disagreement between the Indian Penal Code and personal laws, the **personal laws are implemented since it is a legal principle that a specific law supersedes the general law**.

### ***What are the Judicial Perspectives Related to Polygamy?***

- **Parayankandiyal v. K. Devi & Others (1996):**
  - The **Supreme Court (SC)** concluded that monogamous relationships were the **standard and ideology of Hindu society**, which scorned and condemned a second marriage.

- Polygamy was not allowed to become a part of Hindu culture due to the influence of religion.
- **State of Bombay v. Narasu Appa Mali (1951):**
  - The Bombay High Court ruled that the **Bombay (Prevention of Hindu Bigamy Marriage) Act, 1946 was not discriminatory**.
  - The SC ruled that a state legislature has the authority to enact measures for public welfare and reforms, even if it **violates the Hindu religion or custom**.
- **Javed & Others v. State of Haryana & Others (2003):**
  - The SC decided that under Article 25 freedom is **subjected to social harmony, dignity, and wellness**.
  - Muslim law allows for the marriage of four women, but it is not compulsory.
  - This will not be violating religious practice to not marry four women.

### ***What is the Impact of Polygamy on Indian Society and the Constitutional Standpoint?***

- Polygamy has a significant impact on **Indian society and has been debated for its validity from a constitutional standpoint**, particularly in relation to religions such as Islam and Hinduism.
- India is a secular state, where **no religion is considered superior or subordinate to another, and each religion is treated equally under the law**.
- The Indian Constitution guarantees **fundamental rights to all citizens**, and any legislation that conflicts with these rights is deemed unconstitutional.
- **Article 13 of the Constitution** specifies that any law that contravenes Part III of the Constitution is invalid.
  - In **R.C. Cooper v. Union of India (1970)**, the SC observed that the theoretical approach that the component and construct of state intervention ascertain the **severity of the safeguard that an underprivileged group** may purport is incompatible with the constitutional provision, which aims to provide the ordinary citizen with the broadest possible safeguards of his fundamental rights.
- **Article 14 of the Constitution** guarantees equal treatment and protection under the law to every individual within the territory of India.
- The state is prohibited from discriminating against any person based on their religion, ethnicity, gender, or place of birth, **according to Article 15(1) of the Constitution**.

Note:



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### ***In Which Countries Polygamy Legal?***

- Polygamy is permissible and legal exclusively for Muslims in nations such as India, Singapore, as well as Malaysia.
- Polygamy is still recognised and practiced in nations such as **Algeria, Egypt, and Cameroon**. These are the only areas in the world where polygamy is still legal.

## **Report on Human Rights Defenders & Unfair Business Practices**

### ***Why in News?***

Recently, **Business & Human Rights Resource Centre (BHRRC)** has released a report titled “**Human rights defenders & business in 2022: People challenging corporate power to protect our planet**”, seeking to underscore the number of attacks against activists seeking to protect their “Communities, Environments, and Livelihood” from the impact of Irresponsible Business Practice.

- BHRRC is a UK-based center, which is dedicated to **advancing human rights in business** and eradicating abuse.

### ***What are the Findings of the Report?***

- **Global:**
  - **Total Attacks:**
    - Globally, there are 4,700 attacks on **Human Rights** defenders raising concerns about harmful business practice from **January 2015-March 2023**.
    - Of them, 555 were in 2022, “revealing that **on average more than 10 defenders were attacked every single week** for raising legitimate concerns about irresponsible business activity.
  - **Mining Sector:**
    - **Mining** has remained the **most dangerous sector for defenders**, with 30% of all the attacks in 2022 being linked to it.
    - The sector is even more dangerous for **Indigenous defenders** — **41%** of attacks against Indigenous peoples in 2022 related to mining.

### ○ **Non-Lethal Attacks Uninvestigated:**

- The people fighting against human rights violations and environmental crimes by corporations faced a multitude of attacks, with **86% of them being non-lethal**. However, these are often precursors to lethal violence.
- Non-lethal attacks are generally **left uninvestigated and unpunished**, which can have a chilling effect on the work of defenders and promote impunity that feeds further violence where defenders persist in their critical work.

### ○ **Major Attacks:**

- **Judicial harassment**, which includes **arbitrary arrest, unfair trial and strategic lawsuits** against public participation, **was the most common form of attack** against protesters across the world.
  - Around half the cases of attacks tracked by the organisation were of this nature.
- Judicial harassment causes significant distress and **harm to defenders and diverts time away from their human rights work** while draining their resources.
  - It can have a chilling effect, deterring others from speaking out against abuse.

### ○ **Attacks on Women:**

- Nearly a **quarter of the attacks were against women** who challenged “both corporate power and patriarchal gender norms”.
- Many of these attacks were online threats and smear campaigns that caused them immense long-term psychological harm.
- These tactics are meant to stigmatise, isolate and silence women defenders.

### ➤ **India:**

- India recorded the 2<sup>nd</sup> highest number of attacks on **defenders protesting harmful business practices** in 2022. India saw 54 such incidents of attacks (affecting one or more individuals).
  - The **only country to perform worse than India was Brazil**, with 63 such incidents.
  - **Mexico, Cambodia, and the Philippines** followed with **44, 40, and 32** attacks, respectively.
- India also had the **greatest number of companies linked to attacks**.

Note:



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### ➤ Recommendations:

- States should “pass and implement **legislation recognising the right to defend rights and the vital role of defenders**, both individual and collective, in **promoting human rights, sustainable development**, and a healthy environment and committing to zero-tolerance for attacks.
- Collect and report data on non-lethal and lethal attacks to inform **more effective protection mechanisms** and **passing anti-SLAPP (Strategic Lawsuits Against Public Participation) legislation** to prevent companies silencing defenders.
- Ensure **effective remedy for violations** when they occur, including by strengthening judicial systems to **hold businesses accountable for acts of retaliation against defenders** and **actively participating in investigation** and prosecution of those responsible for attacks.
- Move towards supporting the adoption of a binding **UN Treaty on business and human rights** and ensure that it explicitly recognises the risks defenders face and their right to defend human rights.

### How do Businesses Violate Human Rights?

- **Labor Rights Violations:** Businesses may violate the rights of their workers by **engaging in practices such as Forced Labor, Child Labor**, gender-based discrimination, and **violations of freedom of association and collective bargaining rights**.
- **Environmental Impacts:** Businesses may contribute to environmental harm through **Pollution, Deforestation, and other activities** that can harm local communities and their rights to clean air, water, and a healthy environment.
- **Human Rights Abuses in Supply Chains:** Companies may source their products or services from **suppliers that violate human rights**, such as those that engage in human trafficking, or other forms of exploitation.
- **Land Rights Violations:** Businesses may be involved in **land acquisition or development projects** that **displace local communities, infringe on their land rights**, or harm their livelihoods.
- **Corruption:** Businesses may engage in corrupt practices such as **bribery, extortion, or money laundering** that can undermine the rule of law and the rights of citizens.

### What are the Efforts to Safeguard Human Rights Defenders?

#### ➤ UN Declaration on Human Rights Defenders:

- The Declaration on human rights defenders was **adopted by consensus by the UN General Assembly** in 1998.
  - It says, Human rights defenders are people or groups **who peacefully work to promote and protect human rights and freedoms**. They play a vital role in making sure that these rights are respected and upheld around the world, as outlined in international human rights agreements.
- The Declaration is formally called the “**Declaration on the Right and Responsibility of Individuals, Groups and Organs of Society to Promote and Protect Universally Recognized Human Rights and Fundamental Freedoms**”.
- It is **not a legally binding instrument**, but it contains principles and rights that are based on human rights standards enshrined in other legally binding international instruments that are legally binding.

- **Note:** India does not have a specific law to provide protection to Human Rights Defenders. The **National Human Rights Commission** works with human rights defenders to serve its mandate of promotion and protection of human rights in the country in the letter and spirit.

## UN Report on Maternal and Infant Health

### Why in News?

A new report from the **United Nations (UN)** has found that progress in reducing the number of women and babies who die every year during **pregnancy, childbirth, or the first weeks after birth** has **stopped since 2015**.

### What are the Key Findings of the Report?

#### ➤ Global Maternal and Neonatal Health Challenges:

- The report highlights that **India is at the forefront of the global burden of maternal deaths, stillbirths, and newborn deaths**, representing **17% of the total**.
  - Following India, countries with the highest

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number of absolute maternal and neonatal deaths and stillbirths in 2020 are **Nigeria, Pakistan, Democratic Republic of Congo, Ethiopia, Bangladesh, China, Indonesia, Afghanistan and Tanzania.**

- The key findings of the report revealed **how gains made between 2000 and 2010 were faster than they have been in the years since 2010** and how it should be in the next decade to meet global targets.

#### ➤ Trends:

##### ○ Maternal Mortality Ratio (MMR):

- MMR observed an annual reduction rate of **2.8% between 2000 and 2009**, which decreased to **1.3% between 2010 and 2020.**
  - **Maternal mortality ratio** refers to the number of maternal deaths per **1,000 live births** in a given population or region.
  - It is a crucial indicator of the health and well-being of women during pregnancy, childbirth, and the postnatal period.
- An improvement of reducing this indicator by **11.9% is required in the next decade to meet global targets** of an MMR equivalent to 70 deaths per 1,000 live births.

##### ○ Stillbirth Rate (SBR):

- Between **2000 and 2009**, the SBR was reduced by **2.3% and by 1.8%** between 2010 and 2021.
  - The **SBR** is defined as the number of babies born with **no signs of life at 28 weeks or more of gestation**, per 1,000 total births.
- A **5.2% reduction** is required between **2022 and 2030** to meet global targets of less than 12 stillbirths per 1,000 live births.

##### ○ Neonatal Mortality Rate (NMR):

- NMR records a similar trend; a **3.2% reduction** between 2000 and 2009, **2.2% reduction** between 2010 and 2021.
  - Neonatal mortality rate refers to the number of deaths of infants within the **first 28 days of life per 1,000 live births.**
- NMR needs to be reduced by another **7.2% between 2022 and 2030** to meet the global target of ending newborn mortality.

#### ➤ Measures Suggested:

- **Maternal and infant health** can be improved by increasing essential health services. Three measures are used to assess availability: **at least four antenatal care contacts, skilled attendants**

**at birth, and postnatal care within the first two days after birth.**

- **Antenatal care coverage** has improved from **61% in 2010 to 68% in 2022**, with a projected increase to only **69% by 2025.**
- **Skilled attendant at birth coverage** has increased from 75% to 86% between 2010 and 2022, and is **expected to reach 88% by 2025.**
- **Postnatal care coverage** has shown the highest improvement, from 54% to 66% between 2010 and 2022, projected to reach **69% by 2025.**

### ***What are the Major Reasons Behind Maternal and Infant Deaths?***

#### ➤ Maternal Deaths:

- **Severe Bleeding (hemorrhage):** This is the leading cause of maternal mortality, often occurring during childbirth or in the **immediate postpartum period.**
- **High Blood Pressure Disorders (pre-eclampsia and eclampsia):** These conditions can result in complications such as **organ failure, seizures, and even lead to maternal death.**
- **Unsafe Abortions:** In areas where access to safe and legal **abortions** is limited, **women may resort to unsafe procedures**, leading to complications and maternal deaths.
- **Other Factors:** Roughly a third of women **do not have even four of a recommended eight antenatal checks** or receive essential postnatal care, while some **270 million women lack access to modern family planning methods.**

#### ➤ Infant Deaths:

- **Prematurity and Low Birth Weight:** Babies born too early (**preterm**) or with a low birth weight are more **vulnerable to various health complications** and have a higher risk of mortality.
- **Birth Asphyxia:** When a baby does not receive enough oxygen during childbirth, it can result in **birth asphyxia**, leading to **brain damage or death** if resuscitation is not performed promptly.
- **Sudden Infant Death Syndrome (SIDS):** **SIDS** refers to the sudden, unexplained death of an infant under one year of age, **usually during sleep.**

### ***What are the Government Initiatives Related to Maternal and Infant Health?***

- **Janani Shishu Suraksha Karyakram (JSSK):** Government of India has launched this scheme on 1st June, 2011,

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which entitles all pregnant women delivering in public health institutions to absolutely free and no expense delivery including Cesarean section.

- The initiative stipulates **free drugs, diagnostics, blood and diet, besides free transport from home to institution**, between facilities in case of a referral and drop back home. In 2013, this was expanded to sick infants and antenatal and postnatal complications.
- Similar entitlements have been put in place for all **sick new-born accessing public health institutions for treatment till 30 days after birth**.
- **Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)**: It was launched in 2016 to ensure **quality antenatal care and high risk pregnancy detection** in pregnant women on 9th of every month.
- **LaQshya**: In order to further accelerate the decline in MMR in the coming years, the government has launched 'LaQshya - Labour room Quality improvement Initiative'.
  - LaQshya program is a **focused and targeted approach to strengthen key processes related to the labour rooms** and maternity operation theatres which aims at improving quality of care around birth and **ensuring Respectful Maternity Care**.

### ***What are the Ways to Improve Maternal and Infant Health?***

- **Addressing Socioeconomic Factors**: There is a need to recognize and address the social determinants of health, such as **poverty, education, and gender inequality**, which significantly impact maternal and infant health.
- **Creating a Garbh Raksha Helpline**: To enhance the provision of **quality and timely healthcare for mothers and infants**, especially in underserved regions, it is imperative to **establish district-level task forces in collaboration with medical personnel**.
  - These task forces would work towards improving healthcare delivery and outcomes at the local level. This can include **Garbh Raksha helpline number and Ambulance and mobile health units**.
  - For instance in Delhi, **Pink ambulances driven by women and managed by women for women patients** were started during **Covid-19 pandemic**.
- **Nutrition and Food Security**: Implement innovative approaches to improve maternal and infant nutrition,

such as **community gardens, fortified food programs, and mobile applications that provide personalized dietary recommendations**. Addressing food insecurity through initiatives like **food banks and voucher systems** can also contribute to better health outcomes.

- **Health Education and Awareness**: There is a need to create innovative educational programs that **target mothers, families, and communities to raise awareness about maternal and infant health**.
  - Utilizing **digital platforms, mobile applications, and interactive media** to deliver **engaging and culturally sensitive health information** will also be fruitful.
  - Also there is a need to **incorporate mental health screenings** into routine prenatal and postnatal care.

## **Local Reservation in Jobs**

### ***Why in News?***

Due to Local Reservation Law in Jobs, the state has received fewer **new investment projects compared to previous years**, causing the state's share of new investment projects in the country to **drop to 1.06% in 2022-23 from 3 % previous year**, lowest in six years.

- Haryana enacted the **Haryana State Employment of Local Candidates Act, 2020** in early 2022, reserving 75% of private sector jobs with monthly salaries up to Rs 30,000 for locals.

### ***What is Haryana State Employment of Local Candidates Act, 2020?***

- **About**:
  - It requires firms with **10 or more employees to reserve 75% of all jobs** offering a salary of less than Rs. 30,000 a month for eligible candidates of State domicile.
  - It will be mandatory **for all these employers to register all their employees** drawing gross monthly salary or wages not more than Rs 30,000 on the designated portal available on the official website of the Labour Department, Haryana.
- **Similar Attempts in other States**:
  - Job reservation Bills or laws for domiciles have also been announced in other States including **Andhra Pradesh, Madhya Pradesh and Jharkhand**.
  - The job quota Bill passed in the Andhra Pradesh Legislative Assembly in 2019, also reserving **three-fourths of private jobs for locals**.

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## What are the Pros and Cons of Local Reservation in Jobs?

### ➤ Pros:

- **Constitutionally Valid:** Article 16 of the constitution of India **doesn't prohibit reservation based on the domicile** and the residence. It seems constitutionally valid to provide first opportunities to the locals in local jobs because **these people wear all the negative externalities generated by job** creating establishments.
- **Equality:** Reservation in local jobs provides **equality among the weakest section of the society**, because reservation is only confined to low strata jobs, and it is as per the spirit of the Equal Protection of Law as per Article 14 of the constitution of India.
- **Suitable Solution for Unemployment:** Reservation in local jobs seems a suitable solution **amid unemployment and stagnant job creation**.
  - In the constitution of India, there are **special provisions for jobs and education for states of Andhra Pradesh and Telangana** under the article 371 D and E, due to their special circumstances. So, the reservation in local jobs **amid the unemployment situation seems justified and as per the special provisions** of the constitution of India.
- **Boost Local Economy:** When companies hire local people, they **tend to spend their earnings in the local economy**, which can help to create jobs and generate economic growth.
  - Hiring local people means companies do not have to **bear the relocation costs of employees**. This can help to **reduce their operational costs**, which can be passed on to customers in the form of lower prices.
- **Improve Productivity:** Local employees are **more likely to be familiar with the local language, culture, and business environment**, which can help to improve their productivity and efficiency.

### ➤ Cons:

- **Can Trigger Exodus of Investors:** It could trigger an exodus of large domestic and **multinational investors across sectors** such as auto, IT that rely on highly skilled manpower.
  - In the case of **Haryana**, investment fell 30% in 2022 to Rs 39,000-odd crore from nearly Rs 56,000 crore in 2021-22, pushing it from the

ninth-best State in terms of new investment projects to the 13<sup>th</sup> rank in 2022-23 because of local reservation law.

- **Affect Existing Industries:** Raising the son of the soil issue and preventing free movement of manpower resources in the **State from other regions can have an adverse effect** on the existing industries in the State.
  - This may force those tech giants and other industries to shift their base from Haryana to other States and drain out the State's monetary resources to that extent.
- **Can Cause Extreme Talent Crunch:** Imposing the reservations on gig and platform **companies could create a crippling talent crunch**.
- **Against the Constitution:** The Constitution of India guarantees **freedom of movement and consequently employment within India** through several provisions.
  - Article 14 provides for equality before law irrespective of place of birth.
  - Article 15 guards against discrimination based on place of birth.
  - Article 16 guarantees no birthplace-based discrimination in public employment.
  - Article 19 ensures that citizens can move freely throughout the territory of India.

## Who's Tipping the Scales Report: IPES

### Why in News?

Recently, a report has been released by the **International Panel of Experts on Sustainable Food Systems (IPES)** titled "Who's tipping the scales", highlights how corporate capture of global **Food Governance** is increasingly taking place in more visible ways and raising concerns over **Bluwashing**.

### What is Bluwashing?

- Bluwashing is using **misinformation to deceive consumers into thinking that a company is more digitally ethical** and secure than it really is.
  - It is just like greenwashing but focused more on social and economic responsibility **rather than the environment**.

Note:



- Greenwashing is a form of deceptive marketing in **which a company falsely claims that its products, policies, or programs are environmentally friendly or beneficial, while doing little or nothing to actually assist the environment in practice.**
- The term 'bluewashing' was first used to **refer to companies who signed the United Nations Global Compact** and its principles but did not make any actual policy reforms.
- It is often done by companies making vague or unsubstantiated claims about their data privacy and security or making claims about the safety and security of **Artificial Intelligence.**

### ***What are the Highlights of the Report?***

- **Corporate Takeover of Food Governance:**
  - There has been a growing presence of firms in governance and spaces, staking claims to be legitimate actors.
  - Over recent decades, corporations **have succeeded in convincing governments that they must be central in any discussion** on the future of food systems.
  - Corporate partnerships provided a key source of funding for global food governance institutions and corporations with **greater influence over decision-making.**
- **Normalization of Corporate Role in Food Governance:**
  - The role of private corporations in food governance and decision-making has been normalized by **public-private partnerships and multi-stakeholder roundtables** while public governance initiatives have become heavily dependent on private funding.
    - The **UN Food Systems Summit, 2021** was described as a watershed moment in highlighting the importance of corporate influence in public health governance.
- **Concerns Over Corporate Influence:**
  - Civil society organizations, food scholars, and social movements have expressed concern that the **increased involvement of corporations in food governance could lead to a weakening of the public good and impact the rights of people and communities.**
- **Visible and Invisible Corporate Influence:**
  - Corporations have influenced global food governance in visible and invisible ways.

- Corporate influence could be seen in global food systems platforms such as the **Global Alliance for Improved Nutrition**, the Food and Land Use Coalition, and the Scaling Up Nutrition Movement.
- Other less visible ways in which corporate influence was seen in food systems governance was how the **private sector enterprises provided political and institutional donations, shaped trading & investment rules** and research strategies, and other structural aspects of global food systems.
- **Causes of Increases Corporate Involvement:**
  - The Covid-19 pandemic, coupled with **Russia's invasion of Ukraine** and **Food Inflation**, aggravated the issue of corporate involvement.
  - Following these crises, governments and multilateral agencies have been facing fund crunches.
- **Incidences of Corporate Involvement:**
  - The **CGIAR (Consultative Group on International Agricultural Research)** relied-on funding from **private firms and private philanthropic institutions** connected to the food industry.
  - The **Bill and Melinda Gates Foundation** which was the CGIAR's 2<sup>nd</sup> largest donor in 2020 contributed around USD 100 million, which was far more than what was contributed by **individual governments including that of the USA.**
  - The **FAO** was also found to have closely collaborated with corporations through **industry partnerships throughout its history.** However, the details regarding these contributions were not readily available.

### ***What are the Challenges Related to Excessive Corporate Involvement in Global Food Governance?***

- **Limited Accountability:**
  - Private players in the food system **may not be accountable to the public or to regulatory bodies**, which can lead to inadequate monitoring of food safety, quality, and sustainability.
  - Private players may also prioritize their profits over the public good, leading to **conflicts of interest that can compromise food safety, quality, and sustainability.**

Note:

### ➤ **Hyper-nudging:**

- Excessive corporate involvement can retrieve everyday transactions data (digital wallets to automated food services), which they can combine with information harvested online to **manipulate people's eating habits.**

### ➤ **Unequal Distribution of Benefits:**

- Private players may prioritize the interests of powerful actors, such as large-scale producers and retailers, **over small-scale farmers and consumers**, leading to unequal distribution of benefits from the food system.

### ➤ **Limited Transparency:**

- Private players may not disclose important information about their practices, products, and policies, **making it difficult for stakeholders to assess the impacts** of their actions on food System.

### ➤ **Exacerbate Food Security:**

- If the control of the Food System goes to **big data, technology and e-commerce platforms**, which may exacerbate food insecurity and further environmental degradation.
- Artificial intelligence is re-engineering ecosystems, and robotic tractors and drones if rolled out **as fast as digital infrastructures allow**. Millions of rural dwellers **will be forced to migrate** to urban areas.

### **What are the Recommendations?**

- Create a robust conflict of **interest and grievance policies and new mechanisms grounded in Human Rights**, that allow people's organizations, social movements and other civil society actors to participate in food governance on their own terms.
- Build up autonomous processes and spaces for claims and proposals from people's organizations and social movements, especially those that build agency for marginalized communities.

## **Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) Act, 1994**

### **Why in News?**

The Delhi High Court has remarked that certain aspects of the **PC & PNDT Act** need reconsideration for **effective implementation of the Act.**

- The court's direction came while dealing with a plea moved by a man seeking the quashing of an **FIR** registered against him under various sections of the PC & PNDT Act.

### **What is PC & PNDT Act?**

#### ➤ **About:**

- The Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) Act, 1994 is an Act of the Parliament of India that was enacted to **stop female foeticides and arrest the declining sex ratio in India**. The act banned **prenatal sex determination**.

#### ➤ **Objectives:**

- The main objective of enacting the act is to **ban the use of sex selection techniques before or after conception** and prevent the **misuse of prenatal diagnostic techniques for sex-selective abortion**.

#### ➤ **Provisions:**

- It regulates the use of **pre-natal diagnostic techniques**, like **ultrasound machine** by allowing them their use only to detect - genetic abnormalities, metabolic disorders, chromosomal abnormalities, and certain congenital malformations, haemoglobinopathies and sex-linked disorders.
- No laboratory or Centre or clinic will conduct any test including **ultrasonography for the purpose of determining the sex of the foetus**.
- No person, including the one who is conducting the procedure as per the law, will **communicate the sex of the foetus** to the pregnant woman or her relatives by words, signs or any other method.
- Any person who puts an **advertisement for pre-natal and pre-conception sex determination facilities** in the form of a notice, circular, label, wrapper or any document, or advertises through interior or other media in electronic or print form or engages in any visible representation made by means of hoarding, wall painting, signal, light, sound, can be **imprisoned for up to three years and fined Rs. 10,000**.

#### ➤ **Offences Under the Act Include:**

- **Conducting or aiding in prenatal diagnostic techniques in unregistered facilities** is an offense under the act.
- **Sex selection on a man or woman** is prohibited by the act.

Note:

- Performing **prenatal diagnostic techniques for any purpose other than the one specified** in the act is an offense.
- The **sale, distribution, supply, renting, etc. of any ultrasound machine** or any other equipment capable of detecting the sex of the fetus is prohibited by the act.

#### **Initiatives Against Sex-Selective Abortions:**

- **Beti Bachao Beti Padhao:**
  - Launched by the Government of India in 2015, it aims to address the **issue of declining child, sex ratio and empower girls** through awareness generation, education, and protection.
- **The National Plan of Action for Children, 2016:**
  - It identifies the **elimination of gender-biased sex selection** as one of the key priority areas for children's rights and well-being.

#### **What are the Concerns Raised by the Delhi High Court?**

- **The Practicality of Police Involvement in Raids and Seizures:**
  - Court noted that though the PC & PNDT Rules contemplate that the **police should not be involved in raids, seizure, etc. "as far as possible"**, the practicality of this aspect needs to be reconsidered since such action **"has to be as per the CrPC for conducting raids at facilities/clinics"**.
- **Powers of Investigation and Arrest:**
  - The Court observed that although the **Appropriate Authority is given the powers to investigate and conduct raids**, cancel or suspend the registration of medical centers and facilities that violate the PC & PNDT Act, **it does not have the power to arrest anyone under this Act.**
    - The offences under this Act have been made **'cognizable'**, meaning the police can make an arrest.
    - However, the court raised concerns about the **effectiveness of the Appropriate Authority's role in implementing the Act** since they do not have the power of arrest.
- **Low Rate of Conviction:**
  - The low conviction rate refers to the **percentage of cases in which the accused are found guilty**

**and convicted of the crime** for which they were charged.

- In the context of the PC & PNDT Act, it means that the number of people who are actually convicted for violating the provisions of the **Act is very low.**
  - This indicates a failure of the justice system to effectively **prosecute offenders and prevent the illegal practice of sex-selective abortion.**

#### **What are the Implications of the Delhi High Court's Remarks?**

- **Clarity on Police's Powers of Investigation and Arrest:**
  - The concerns raised by the court highlight the need for greater clarity on the role of the police in implementing the Act, as well as the powers of investigation and arrest vested in the Appropriate Authorities.
- **Increased Conviction Rate:**
  - The low rate of conviction under the PC & PNDT Act has been a persistent challenge, and the court's remarks may help in increasing the conviction rate in cases related to sex-selective abortion.

#### **What are the Ethical Issues Surrounding Prenatal Diagnosis and Sex-Selective Abortion?**

- **Violation of Rights and Human Dignity:** Sex-selective abortion is a form of **gender discrimination** and violence against women that **violates their right to life, dignity, and equality.**
  - It also **undermines the value and dignity of human life** and the **diversity of human society.**
- **Adds to Social Problems:** It has adverse consequences for the society such as **skewed sex ratio, increased trafficking and violence against women**, reduced marriage prospects for men, etc.
  - It also raises **moral questions about the use of prenatal diagnosis** for non-medical purposes and the responsibility of parents and health care providers towards the unborn child.
  - **Access to Healthcare:** Prenatal diagnosis and sex-selective abortion can exacerbate existing health disparities and inequalities, particularly for marginalized communities who may have limited access to healthcare and information.

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# Science & Technology

## Highlights

- Mitochondrial Replacement Therapy
- Auroras
- Star Engulfing Jupiter-Sized Planet
- Decarbonisation of Steelmaking
- Psychedelic Substances
- African Swine Fever and Pygmy Hogs
- Tea Fortification
- Sustainable Aviation Fuel (SAF)

## Mitochondrial Replacement Therapy

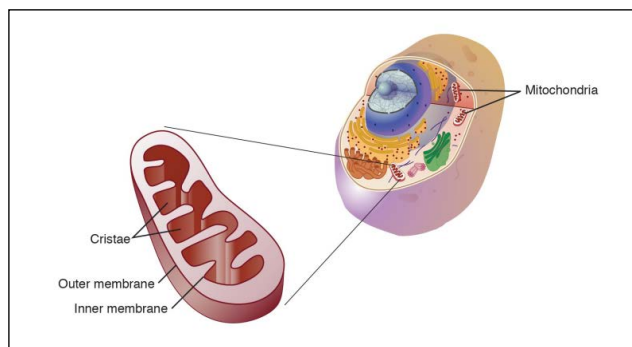
### Why in News?

The recent news of a **baby born in the UK with three parents' DNA** has sparked curiosity and discussions about the scientific breakthrough behind this remarkable achievement.

- This revolutionary technique, known as **mitochondrial replacement therapy (MRT)** or **three-parent IVF**, aims to prevent the **inheritance of mitochondrial diseases**.

### What is Mitochondria?

- **About:**
  - Mitochondria are **membrane-bound organelles** found in the cells of most **eukaryotic organisms**.
  - They are often referred to as the **"powerhouses" of cells** because they generate the **majority of the cell's energy** in the form of **adenosine triphosphate (ATP)**.



### Functions:

- Mitochondria carry out **cellular respiration**, a process that converts nutrients into ATP.

- Mitochondria convert energy from **carbohydrates, fats, and proteins into a usable form for the cell**.
- They metabolize **glucose to produce ATP**, which powers various cellular processes.
- Mitochondria participate in **cell signaling pathways**, influencing processes like **cell growth, differentiation, and apoptosis**.

### ➤ Inheritance:

- Mitochondria have their own DNA, known as **mitochondrial DNA (mtDNA)**, which encodes a **small number of essential proteins**.
- In most animals, **mtDNA is inherited solely from the mother**.
- Mutations in mtDNA can lead to **mitochondrial disorders** and various health conditions.

### ➤ Mitochondrial Diseases:

- Certain mutations in mitochondria can lead to mitochondrial diseases, **affecting energy production and impacting various organs**, including the brain, nerves, muscles, kidneys, heart, and liver.
- These diseases can result in severe symptoms, such as **organ failure, muscle wastage, and even brain damage**. Unfortunately, there is **no cure for mitochondrial diseases**, but they can be managed to some extent.
- Few examples of mitochondrial diseases are **Leigh Syndrome, Kearns-Sayre syndrome (KSS), Mitochondrial Myopathy and Mitochondrial DNA Depletion Syndrome**.

### What is Mitochondrial Donation Treatment (MDT)/MRT?

#### ➤ About:

- To address the issue of mitochondrial diseases, scientists and researchers developed an **advanced In Vitro Fertilization (IVF) technique** called

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### Mitochondrial Donation Treatment (MDT) or three-parent IVF.

- This technique involves a complex process to ensure that the **baby inherits healthy mitochondria** while carrying the **genetic material from both biological parents**.

#### ➤ The Scientific Process:

##### ○ Identifying Suitable Candidates:

- The procedure is specifically **intended for couples** who wish to have their **genetic child** but do not want to use a donor egg.

##### ○ Selection of Donor and Biological Parents:

- The **biological mother**, who has a **mitochondrial disease**, provides her **eggs**, which are fertilized by the **biological father's sperm**.
  - Additionally, a **separate female donor with healthy mitochondria** is involved.

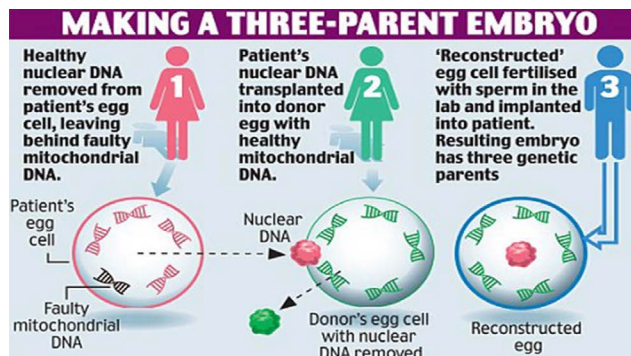
##### ○ Mitochondrial Replacement:

- The **genetic material (DNA) from the donor's egg is extracted and replaced with the genetic material from the biological parents**.

#### ➤ This creates an **embryo with the parents' DNA and the donor's mitochondria**.

##### ○ Implantation and Pregnancy:

- The modified embryo is then **implanted in the uterus** and carried free full term, resulting in the birth of a **baby free from the mother's mitochondrial disease**.



#### ➤ Potential Side Effects:

- While the procedure has shown promising results, it is not without minimal risks. In some cases, a small amount of **faulty maternal mitochondria** may be inadvertently passed on during the procedure.
- Further research and published data are needed to establish consensus and refine the technique for improved outcomes.

#### ➤ Legislation and Approval:

- The **UK government amended its law in 2015 to allow mitochondrial replacement therapy**, and the Newcastle Fertility Centre became the first licensed center to perform the procedure in 2017.

#### ➤ Mitochondrial Disease Statistics:

- Globally, an estimated 1 in 5,000 people have a genetic mitochondrial disease.
  - Mitochondrial disorders affect approximately **one in 6,500 babies in the UK, and around 12,000 people in the country** live with such conditions.
- In the United States, an estimated 1,000 to 4,000 babies with mitochondrial disease are born each year.

## Auroras

### Why in News?

A significant **geomagnetic storm** is anticipated, triggered by a **strong solar storm**. This occurrence has the potential to **"supercharge" auroras**, creating a **spectacular visual display in the night sky**.

### What are Auroras?

#### ➤ About:

- Auroras are **luminous phenomena that occur near the North (Aurora Borealis) and South Poles (Aurora Australis)**.
- They are caused by the **interaction of charged particles from the Sun with the Earth's magnetic field and atmosphere**.



#### ➤ Composition and Colors:

- Auroras consist of **gases and particles, including oxygen and nitrogen**.

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- The collisions of these particles with the atmosphere **release energy in the form of light.**
- The colors observed in auroras depend on the **type of gas and altitude of the collisions.**

➤ **Geomagnetic Storms and Auroras:**

- Geomagnetic storms, triggered by **solar events like coronal mass ejections (CMEs) and solar flares, enhance auroral activity.**
  - CMEs are **eruptions of plasma and magnetic fields from the Sun**, while **solar flares are bursts of energy.**
  - CMEs often occur alongside solar flares, which are explosions on the Sun's surface, but they are **also known to occur independently.**

➤ **Solar Storms and Aurora Intensity:**

- Strong solar storms result in **increased solar activity**, leading to **more pronounced auroral displays.**
- The number of charged particles reaching the Earth's atmosphere during these storms intensifies the auroras.
- The **strength of the solar storm** and the **alignment of the Earth's magnetic field** affect the **visibility and vibrancy** of the auroras.

➤ **Cultural and Scientific Significance:**

- Auroras hold cultural and spiritual significance in various indigenous communities around the world.
- Scientific research on auroras helps us understand the **Earth's magnetosphere, solar-terrestrial interactions, and space weather.**

### **What is a Geomagnetic Storm?**

➤ **About:**

- A geomagnetic storm refers to the **disruptions to the Earth's magnetic field caused by solar emissions.**

➤ **Cause:**

- The largest storms that result from these conditions are associated with solar coronal mass ejections (CMEs). When a **CME or a high-speed solar stream** reaches our planet, it **slams into the magnetosphere.**
  - The Earth's magnetosphere is created by its magnetic fields and it usually protects us from the particles emitted by the Sun.

- When a CME or a high-speed stream arrives at Earth, it **peels open the planet's magnetosphere**, kind of like an onion. This allows **energetic solar wind particles to stream down and hit our atmosphere over the poles.**

➤ **Conditions:** The solar wind conditions that are effective for creating geomagnetic storms are:

- **Sustained (for several to many hours) periods of high-speed solar wind**
- A **southward directed solar wind magnetic field** (opposite the direction of Earth's field) at the dayside of the magnetosphere.

➤ **Impact:**

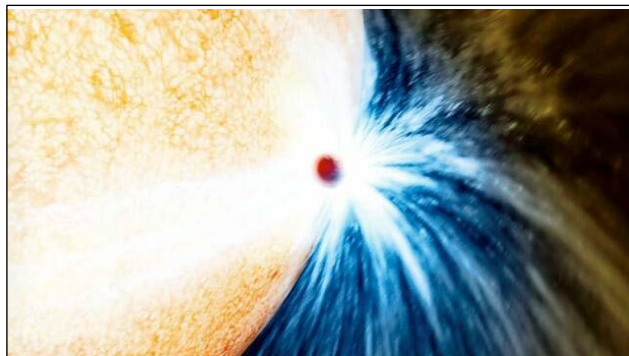
- Solar weather events like this can **supercharge auroras**, sometimes making them visible in places where they wouldn't have been otherwise.
- They can also **disrupt navigation systems and create harmful geomagnetic induced currents (GICs)** in the power grid and pipelines.

## **Star Engulfing Jupiter-Sized Planet**

### **Why in News?**

According to a recent study, scientists have observed a bloated **Sun-like star, identified as ZTF SLRN-2020**, swallowing a Jupiter-sized planet, causing the **star to expel some material** into space in an energetic belch.

- The researchers used the **Zwicky Transient Facility (ZTF)** at Caltech's Palomar Observatory to spot the star rapidly become 100 times brighter, then figured out why this happened.



Note:

### What are the Findings of the Study?

#### ➤ Star:

- The star is similar to our sun in size and composition and is located in our **Milky Way galaxy** about **12,000 light-years** from Earth in the **direction of the constellation Aquila**.
  - A light year is the distance light travels in a year, 5.9 trillion miles (9.5 trillion km).
  - The star is around 10 billion years old, twice as old as the sun.
  - The **constellation Aquila**, the eagle, is visible in the northern hemisphere from July through October. It is a **mid-sized constellation**, spanning 652 square degrees of the sky.
- The star is in the **early stages of the red giant phase**, which means that it was bloated in its old age and **had depleted hydrogen fuel in its core**, causing its dimensions to expand.
  - Red giant stars can swell to a hundred times their original diameter, engulfing **any planets in their way**.
  - Mercury, Venus and finally Earth, our solar system's three innermost planets, will meet this destiny as the sun evolves through its **red giant phase in about 5 billion years**.

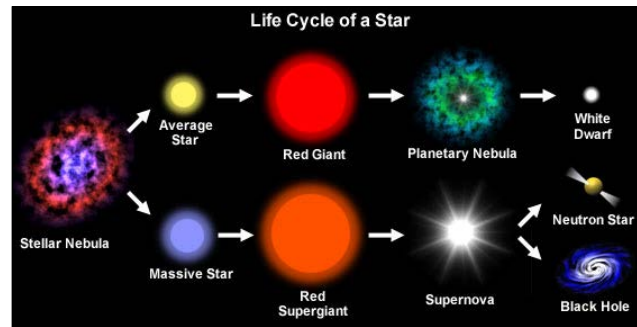
#### ➤ Star Engulfing the Planet:

- As the star grew, the planet's orbit brought it too close, and it started getting pulled into the **star's atmosphere**. The closer it got, the faster it was pulled in, **causing it to plunge into the star suddenly**, creating the emission of intense radiation.

### What is the Life Cycle of a Star?

- **Birth:** A star's life cycle begins with a **Nebula**, where gravity pulls gas and dust together to form a protostar.
  - **Nebulae** are huge clouds of gas and dust.
- **Main Sequence Stage:** When the core **gets hot enough**, **Nuclear Fusion** starts, and the star enters the main sequence stage.
  - During the main sequence stage, the **star burns hydrogen in its core, producing energy that keeps the star stable** and shining brightly.
  - Smaller stars burn fuel slowly and can shine for billions of years, while massive stars **burn it fast and may only last for hundreds of thousands of years**.

- **Old Age and Death:** As a star's hydrogen runs out, it expands and cools, becoming a red giant. Smaller stars turn into a planetary nebula, **then a white dwarf, and eventually a black dwarf**.
  - More massive stars **explode as a supernova**, scattering materials into space, and leaving behind a neutron star or a **black hole**.



## Decarbonisation of Steelmaking

### Why in News?

**Hydrogen** is a crucial part of the world's plans to **greenify** its manufacturing and **automobile industries** as a fuel whose production and use **needn't emit carbon**.

- **Hydrogen** can also be used as a reducing agent instead of **carbon monoxide (CO)**, which would result in **much lower greenhouse gas emissions**.

### What is the Direct Reduction Process by Hydrogen in Steel Making?

#### ➤ Procedure:

- **Direct reduction by hydrogen (DR-H)** in steel making is a process that uses **hydrogen gas** to reduce **iron oxide ( $\text{Fe}_2\text{O}_3$ )** into **metallic iron (Fe)** without the use of a **blast furnace**.
  - This method is also known as the **"green route"** for steel production, as it significantly reduces the **carbon emissions** associated with traditional **steelmaking processes**.
- The **Direct Reduction process** typically involves **mixing iron ore pellets or lumps with hydrogen gas** in a reactor vessel at temperatures ranging from **600 to 800°C**.

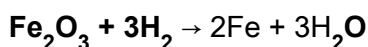
Note:



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- The **hydrogen reacts** with the **iron oxide** to form **metallic iron** and **water vapor**, as shown in the following chemical equation:



➤ **Significance:**

- **Lower Carbon Emissions:** Using Hydrogen as a reducing agent produces only **water vapor** as a byproduct making it a much cleaner alternative to **coal/coke**.
  - This process has the potential to reduce **carbon emissions** by up to **97%**.
- **Energy Efficiency:** The process is more efficient because it eliminates the need for heating and melting large quantities of iron ore in a **blast furnace**.
- **Higher Quality Steel:** The direct reduction process produces **high-quality iron** that is purer and has lower levels of impurities, resulting in **higher-quality steel**.
- **Flexibility:** Direct reduction by hydrogen can be used to produce steel from a **wide range of iron ores**, including those with **lower iron content**.
- **Cost-Effectiveness:** The direct reduction process can be more **cost-effective** than traditional steelmaking methods, especially when **natural gas prices are high**.

**What is the Use of Hydrogen in Industries other than Steel Making?**

- **Energy Production:** Hydrogen can be used as a fuel for power generation, either through combustion or fuel cells. In fact, **hydrogen fuel cells** are already used in some vehicles and are being explored as a **renewable energy** source for buildings.
- **Chemical Production:** Hydrogen is used as a **feedstock for the production of chemicals** like ammonia, methanol, and other hydrocarbons which are used in various industries (agriculture, transportation, and construction).
- **Electronics:** Hydrogen is used in the **manufacturing of electronic components, such as semiconductors**, and in the production of flat panel displays and **light-emitting diodes (LEDs)**.
- **Food Processing:** Hydrogen is used in the food processing industry as a **reducing agent to preserve the quality and appearance** of food products.

- **Medical Applications:** Hydrogen is being investigated as a **potential medical gas with anti-inflammatory and antioxidant properties**. It is also used as a tracer gas in medical diagnostics.

**Note:**

- The **National Green Hydrogen Mission** is a program to incentivise the commercial production of green hydrogen and make India a net exporter of the fuel.
- The **National Hydrogen Energy Mission (NHEM)** was announced in **Union Budget 2021-22** for promoting the **development and deployment of hydrogen energy technologies** in the country.

**What is the Status of Steel Production in India?**

- **Production and Consumption:** India is currently the **world's 2<sup>nd</sup> largest producer** of crude steel (as of 2021) and also the **2<sup>nd</sup> largest consumer of finished steel in 2021** (preceded in both cases by China).
- **Important Steel-Producing Centers in India:** Bhilai (Chhattisgarh), Durgapur (West Bengal), Burnpur (West Bengal), Jamshedpur (Jharkhand), Rourkela (Odisha) and Bokaro (Jharkhand).
- **Export:** India is a **significant exporter of steel products**, with major export destinations including the US, the UAE, and Nepal.
- **Government Policies:** The **National Steel policy** was launched in 2017 which projects **crude steel capacity of 300 million tonnes (MT)**, production of **255 MT** and a robust finished steel per capita consumption of **158 Kgs by 2030-31**.
- **Steel Industry and GHG Emissions:**
  - According to the **International Energy Agency (IEA)**, the **steel industry** is responsible for around **7% of global CO<sub>2</sub> emissions**, making it one of the largest industrial emitters of **greenhouse gases**.
- **Pollutants from Steel Industries:**
  - **Particulate Matter (PM2.5 and PM 10)**
  - **Oxides of Sulphur**
  - **Oxides of Nitrogen**
  - **Carbon Monoxide (CO)**
  - **Carbon Dioxide (CO<sub>2</sub>)**
  - **Solid Waste**

Note:



### ➤ Green Steel:

- The Ministry of Steel seeks to reduce CO<sub>2</sub> in steel industry through promotion of **Green Steel (manufacturing steel without using fossil fuels)**.
  - This can be done by using **low-carbon energy sources** such as **hydrogen, coal gasification, or electricity** instead of the traditional **carbon-intensive manufacturing route of coal-fired plants**.
- It eventually **lowers GHG emissions**, cuts cost and improves the quality of steel.

### **What are the Challenges Associated with Using Hydrogen in Steel Production?**

- **High Capital Costs:** The initial capital costs of building and operating a direct reduction plant are typically higher than traditional steel making methods. This can be a barrier to entry for smaller steel producers.
- **Availability of Hydrogen:** The availability and cost of hydrogen can be a challenge, especially if it is produced using fossil fuels. The development of low-cost, **green hydrogen production technologies** will be critical for the widespread adoption of this process.
- **Scale-up Challenges:** Scaling up the direct reduction process can be challenging, especially **when producing large volumes of steel** as it requires careful management of the reactor and the supply of hydrogen gas.
  - Also, it **requires a high degree of technical expertise** and process control to ensure the quality and consistency of the iron product.
- **Infrastructure Requirements:** The process requires specialized infrastructure, including storage and handling facilities for hydrogen gas. The development of this infrastructure can be costly and time-consuming.

## **Psychedelic Substances**

### **Why in News?**

In recent years, there has been renewed interest in the use of **Psychedelics** in the clinical and research domain of **Psychiatry**.

- In India, the **Narcotic Drugs and Psychotropic Substances Act 1985** prohibits the use of psychedelic substances.

### **What are Psychedelics?**

#### ➤ About:

- Psychedelics are a group of drugs that **alter perception, mood, and thought processing** while a person is still clearly conscious. Usually, the person's insight also **remains unimpaired**.
- Psychedelics are **non-addictive and non-toxic**. Compared to illicit drugs, psychedelics **cause much less harm to the end user**.

- The two most commonly used psychedelics are **d-lysergic acid diethylamide (LSD)** and **psilocybin**.
- Less common ones include **mescaline**, found in the North American **peyote cactus (*Lophophora williamsii*)**, and **N,N-dimethyltryptamine**, the principal component of the South American ceremonial sacrament ayahuasca.

#### ➤ **Impact on Body after Consumption:** Users of psychedelic substances report **changes in perception, somatic experience, mood, thought processing, and entheogenic experiences**:

- **Perceptual distortions** most commonly include the **visual domain**.
  - An intriguing phenomenon called **synaesthesia** may occur, where the sensory modalities cross and the user may **'hear colour' or 'see sounds'**.
    - Somatic experiences may include the **visceral, tactile, and interoceptive (body's internal state) domains**.
- Mood changes may include **elation, euphoria, anxiety, and paranoia**.
- Entheogenic experiences include **transcendental spiritual experiences**.

#### ➤ Issues:

- An overdose requires **cardiac monitoring and supportive management** in a low-stimulus and reassuring environment.
- Synthetic psychedelics (such as 25I-NBOMe) have been associated with **acute cardiac, central nervous system**, and limb ischaemia, as well as serotonin syndrome.
  - There have also been reports of death attributed directly to synthetic psychedelic use.

Note:



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### ➤ Treating Depression:

- In November 2022, the results from a **phase II psilocybin trial** were published in the New England Journal of Medicine. The trial found that a **single 25-mg dose of psilocybin reduced Depression scores** over three weeks in people with treatment-resistant depression.
- These findings were more recently replicated in a **phase IIB trial, which found that a single dose of 25 mg psilocybin improved measures of depression severity, anxiety, and functioning.**

### What is Narcotic Drugs and Psychotropic Substances Act 1985?

- It was enacted in 1985 and deals with **drugs and their trafficking** in the country.
  - The act has since been amended thrice in 1988, 2001, and 2014.
- The Act prohibits the production, manufacture, sale, purchase, transportation & consumption of many **narcotic drugs or psychotropic substances**, including cannabis, heroin, opium etc. The law,

- However **Bhang** is not prohibited under the Act.

- **Section 20** of the NDPS Act lays out the punishment for the **production, manufacture, sale, purchase, import and inter-state export of cannabis**, as defined in the Act. The prescribed punishment is based on the number of drugs seized.
- It also provides for the death penalty in some cases **where a person is a repeat offender.**

## African Swine Fever and Pygmy Hogs

### Why in News?

According to an article published in the journal 'Science', the **African Swine Fever** could **fatally affect the population of pygmy hogs**, the world's rarest and smallest pigs.

- The disease has already decimated porcine (related to pigs) populations across Asia since its advent in China in 2018.

## African swine fever (ASF)

**The virus is highly resistant to low temperatures** and can survive for extended periods of time in the blood, feces and tissue of infected animals.

ASF is a **highly contagious**, transboundary viral disease (*Asfarviridae* family; *Asfivirus* genus).

It can affect both domestic and wild pigs (wild boars and peccaries). **It is harmless to humans.**

According to the OIE, **24% of its member countries** (48 out of 200) **have reported the disease** as present since 2016.

Typical clinical signs of ASF are similar to those of classical swine fever (which is endemic in several countries of the Americas); therefore, a **laboratory test** is required to distinguish them.

The **peracute** form of the virus causes sudden death with few signs.

African swine fever can be transmitted through **direct contact** between sick and healthy animals. It can also be transmitted **indirectly** through feed containing meat from infected animals (the virus can remain infectious for 3 to 6 months in uncooked pork products); **biological vectors** such as ticks of the genus *Ornithodoros*; and contaminated **inanimate objects** (fomites) that can transmit the virus.

Global alarms went off in August 2018, when an ASF outbreak was first reported in **China**. The disease swept through the entire Asian country and spread to **Mongolia, Vietnam, Cambodia and Hong Kong**.

According to official data for this period, more than **2.5 million domestic pigs** have died or been killed—67.6% of them in Asia over the past 10 months.

Between 2016 and May 2019, there were a total of **10,211 outbreaks in Africa, Europe and Asia**.

Symptoms include **fever, loss of appetite**, low energy, abortion, internal hemorrhages, visible hemorrhages, and even death.

Note:

**Note:**

- ASF was first detected in Africa in the 1920s; however, the disease has been reported across Africa, Asia and Europe, in both domestic and wild pigs.
- The mortality rate is close to 95% - 100% and since the fever has no cure, the only way to stop its spread is by culling the animals.
- ASF is a disease listed in the World Organisation for Animal Health (OIE)'s Terrestrial Animal Health Code.

**What are the Characteristics of Pygmy Hog?**

- **Scientific Name:**
  - *Porcula Salvania*
- Features:**
  - It is one of the very few mammals that build its own home, or nest, complete with a 'roof'.
  - It is also an indicator species. Its presence reflects the health of its primary habitat, the tall, wet grasslands of the region.
- **Habitat:**
  - It thrives in wet grassland.
  - Once, it used to be found along a narrow strip of tall and wet grassland plains on the Himalayan foothills—from UP to Assam, through Nepal's terai areas, Bhutan and Bengal's duars.
    - Today, it is found only in India (Assam)
- **Protection Status:**
  - IUCN Red List: Endangered
  - CITES: Appendix I
  - Wildlife (Protection) Act, 1972: Schedule I
- **Threats:**
  - Habitat (grassland) loss and degradation
  - Illegal hunting
- **Conservation Effort - Pygmy Hog Conservation Programme 1995:**
  - Once thought to be extinct, it was rediscovered in 1971. The Durrell Wildlife Conservation Trust, UK, initiated the Pygmy Hog Conservation Programme in 1995 in collaboration with IUCN, Assam Forest Department and MoEF&CC.
    - It is currently being implemented by NGOs - Aaranyak and EcoSystems India.
  - Between 2008 and 2022, 152 of them were reintroduced into four protected areas (PAs) in

Assam, including the recent release of 36 individuals in Manas National Park.

- Between 2011 and 2015 animals were reintroduced into the Orang National Park.
- By 2025, the PHCP plans to release 60 pygmy hogs in Manas NP.

**Tea Fortification****Why in News?**

A recent study conducted in Maharashtra on 43 women to assess the impact of fortifying tea with folate and vitamin B12 has found a significant increase in Folate and Vitamin B12 levels. It also highlighted a significant increase in hemoglobin levels.

- However, the study has been found erroneous primarily because of its sample size.

**How Tea Fortification could be a Game-Changer?**

- **Countering Anaemia and NTDs:** According to the new study, Fortifying tea with folate and vitamin B12 may help counter anaemia and NTDs in Indian women as tea is the most common beverage drunk in India.
  - The majority of Indian women have a poor dietary folate and vitamin B12 intake resulting in their chronically low vitamin status, contributing to anaemia and the high incidence of folate-responsive neural-tube defects (NTDs) in India.
    - Vitamin B12 and folate are both important for the production of red blood cells in the body.
    - Vitamin B12 is necessary for the proper absorption and utilization of folate in the body; folate deficiency can cause severe birth defects (NTDs).

**Note:** Neural tube defects happen when the neural tube, which eventually forms the brain, spinal cord, and surrounding tissues, doesn't close properly during fetal development.

**Issues with Tea Fortification:**

- **Limited Cultivation:** Tea is largely grown and processed in the highlands of only 4 states: Assam, West Bengal, Tamil Nadu and Kerala.

Note:



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- **Lack of Infrastructure:** Many tea-growing areas lack adequate infrastructure for processing and packaging fortified tea.
  - This includes facilities for blending and packaging tea, as well as transportation and storage infrastructure.
- **Dietary Constraints:** Around 70% of the population lives in rural villages, where cereal grain is more often grown, milled, and purchased locally. And diets vary considerably according to cultural, religious, and ethnic differences and beliefs.

### What is Food Fortification?

#### ➤ About:

- **Fortification** is the addition of key vitamins and minerals such as iron, iodine, zinc, Vitamin A & D to staple foods such as rice, milk and salt to improve their nutritional content. These nutrients may or may not have been originally present in the food before processing.

#### ➤ Status of Food Fortification in India:

- **Rice:** Department of Food and Public Distribution (DFPD) has been running a “**Centrally Sponsored Pilot Scheme on Fortification of Rice & its distribution through Public Distribution System**”.
  - The scheme was initiated in 2019-20 for a three-year pilot run.
  - This scheme will run till 2023 and rice will be supplied to the **beneficiaries at the rate of Rs 1/kg**.
- **Wheat:** The decision on fortification of wheat was announced in 2018 and is being implemented in 12 states under India’s flagship **Poshan Abhiyaan** to improve nutrition among children, adolescents, pregnant mothers and lactating mothers.
- **Edible Oil:** Fortification of edible oil, too, was made compulsory across the country by FSSAI in 2018.
- **Milk:** In 2017, the **National Dairy Development Board of India (NDDB)** initiated the fortification of milk by encouraging companies to add vitamin D.

#### ➤ Significance:

- **Population-Wide Health Improvement:** Since the nutrients are added to staple foods that are widely consumed, this is an **excellent method to improve the health** of a large section of the population, all at once.

- **Safe Method:** Fortification is a **safe method of improving nutrition among people**.

- **If the quantity added is well regulated** as per prescribed standards that likelihood of an overdose of nutrients is unlikely.

- **No Impact on Food Habits:** It **does not require any changes in food habits** and patterns of people and is a socio-culturally acceptable way to deliver nutrients to people.

- It also does not alter the characteristics of the food—the taste, the feel, the look.

- **Cost-Effective:** This method is cost-effective especially if advantage is taken of the existing technology and delivery platforms.

- The Copenhagen Consensus estimates that every **1 Rupee spent on fortification results in 9 Rupees in benefits to the economy**.

#### ➤ Challenges:

- In India, food fortification is done for only a few food items (wheat, rice, salt); many other food items are not fortified, **leading to inadequate nutrient intake**.
- The process of **blending micronutrients** can have a **negative impact on natural foods’ protective substances**, such as phytochemicals and polyunsaturated fat.
- Consumption of **excess iron by pregnant women can adversely affect foetal development** and birth outcomes; children may have increased risk of contracting chronic diseases.
- Fortification may provide a **guaranteed market for MNCs**, which could potentially **harm the livelihoods of small businesses** across India.
- Fortification of certain food items, such as milk and oil, poses **technical challenges due to the instability of the added vitamins and minerals**.

### What Should be Done to Address Challenges Related to Tea Fortification?

- **Government Intervention:** The government can play a crucial role in promoting tea fortification by introducing policies and regulations that mandate the addition of certain nutrients to tea.

Note:



- e.g. - the government can make it **mandatory for tea manufacturers to fortify their products with essential micronutrients** like iron, folic acid, and Vit. B.
- **Promote Industry Involvement:** Tea manufacturers can take the lead in promoting tea fortification by investing in R&D and introducing fortified tea products to the market.
  - They can also collaborate with the government and non-profit organizations to promote the benefits of fortified tea.
- **Increase Consumer Awareness:** Educating consumers about the benefits of fortified tea can go a long way in promoting its consumption.
  - This can be achieved through various means such as advertising campaigns, social media, and awareness programs in schools and colleges.
- **Improve Logistics:** To implement tea fortification on a large scale, it is essential to have a robust logistics system in place.
  - This includes ensuring that the fortified tea reaches the target population in a timely and efficient manner, without any loss of nutritional value.

## Sustainable Aviation Fuel (SAF)

### Why in News?

Recently, the **Indian Institute of Petroleum (IIP)**, a laboratory of the **Council of Scientific and Industrial Research (CSIR)**, has tied up with **Boeing, Indigo, Spicejet** and the three **Tata Airlines - Air India, Vistara and AirAsia India** to support the production of **Sustainable Aviation Fuel (SAF)**.

### What is Sustainable Aviation Fuel (SAF)?

- **About:**
  - **Sustainable Aviation Fuel (SAF)**, also referred to as **bio-jet fuel**, is created using **domestically developed methods** using **cooking oil** and **oil-rich seeds from plants**.
  - The **SAF samples** produced by the institutes are undergoing strict testing at the **US Federal Aviation Administration Clearinghouse** to meet the standards required for the **ASTM D4054 certification** from **ASTM International**.

### Sources of Production:

- The **CSIR-IIP** has created fuel using different materials, such as **non-edible** and **edible oils**, as well as used **cooking oil**.
- They used various sources, including **palm stearin, sapium oil, palm fatty acid distillates, algae oil, karanja, and jatropha**.

### Benefits of SAF Scaling in India:

- **Scaling up the production and use of SAF** in India can bring several benefits, including **reducing GHG emissions**, **improving air quality**, **enhancing energy security**, **creating jobs in the renewable energy sector**, and **promoting sustainable development**.
- It can also help the **aviation industry meet its environmental targets** and contribute to global efforts to combat **climate change**.
- **Biofuel for aviation** can be mixed with regular **jet fuel** and used together. Compared to traditional fuel, it has **lower sulfur content**, which can decrease **air pollution** and support India's goal of achieving **Net Zero emissions**.

### What is ASTM Certification?

- **ASTM International**, formerly known as the **American Society for Testing and Materials**, is a global organization that develops and publishes technical standards for a wide range of **products, materials, and systems**.
- **ASTM standards** are used by **industry, governments, and other organizations** to ensure **quality, safety** and **reliability** in products and processes.
- **ASTM certification** is a process by which a product or material is tested and evaluated against relevant **ASTM standards**.
  - Certification can be used to demonstrate that a product or material meets certain requirements, such as **performance specifications, safety standards, or environmental regulations** etc.

### What are the Efforts for Promoting the SAF Worldwide?

- **CORSIA Program:** The **International Civil Aviation Organization (ICAO)** has established the **Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)** to address aviation emissions.

Note:



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- **CORSIA** requires airlines to offset any emissions above **2020** levels and encourages the use of **SAF** to reduce emissions in the first place.
- **Clean Skies for Tomorrow Initiative:** The **World Economic Forum** has launched the **Clean Skies for Tomorrow initiative**, which aims to accelerate the production and use of **SAF**.
- This initiative **brings together stakeholders from the aviation, fuel, and technology sectors** to collaborate on developing and scaling up **SAF** production.
- **SAF Blending Targets:**
  - The **European Union (EU)** has established blending targets for **sustainable aviation fuel** to reduce **GHG emissions** from aviation which aims to increase the use of **SAF** in aviation fuel over time.
  - Starting in **2025**, the blending of **SAF** with **conventional jet fuel** made of **gasoline** and **kerosene** will begin at **2%**.
    - The **blending targets** will increase **every five years**, with a goal of reaching **63% SAF blending in 2050**.
- **Sustainable Skies Act and SAF Production Incentives:**
  - To encourage the use and production of **sustainable aviation fuel (SAF)** in the **United States**, the US Congress introduced the **Sustainable Skies Act** in **May 2021**.

- The **Sustainable Skies Act** provides a **\$1 billion** grant over **five years** to expand the number of **SAF-producing facilities** in the **US**.

**Note:** Some other sustainable sources of fuels that India is working on include:

- **Biodiesel**
- **Ethanol blending in conventional fuel**
- **Hydrogen Fuel Cell**

### **What are the Challenges Associated with SAF?**

- **High Cost:** The **cost of producing SAF** is currently higher than traditional jet fuel, making it less economically viable for airlines to **invest in SAF production** and use.
- **Resource Availability:** There is **limited infrastructure** for the **production, storage, and distribution of SAF**, making it difficult to scale up production and supply of **SAF**.
- **Feedstock Availability:** The availability of **feedstock for SAF production** is limited, and there is competition for resources between other industries, such as the **food and agriculture sectors**.
- **Certification:** The certification process for **SAF** is **complex and time-consuming**, and there is a lack of globally recognized standards for **SAF production**.
- **Public Awareness:** There is a need to raise **public awareness** and **understanding** of the **benefits of SAF** and to **encourage greater support from policymakers and investors**.



Note:

# Environment & Ecology

## Highlights

- United Nations Forum on Forests
- Eretmoptera Murphy
- Climate Change Resilience Deficit in Asia-Pacific Countries
- Sludge Management
- Forest Fires in Goa
- Petersberg Climate Dialogue 2023
- Convention on Migratory Species
- River-Cities Alliance Global Seminar
- Debt-for-Climate Swaps
- International Leopard Day 2023
- India to Join International Climate Action in Civil Aviation
- Black Tigers
- Ludhiana Gas Leak Tragedy
- Paris Agreement and its Failure to Address the Climate Change

## United Nations Forum on Forests

### Why in News?

The **eighteenth session of the United Nations Forum on Forests (UNFF18)**, held in New York from **May 8-12, 2023**, brought together delegates from around the world to discuss the relationship between **sustainable forest management (SFM)**, **energy**, and the achievement of the **United Nations-mandated Sustainable Development Goals (SDGs)**.

### What are the Major Highlights of UNFF18?

- **Sustainable Forest Management (SFM) in Tropical Region:**
  - In a recent development, experts have underscored the significance of practicing **SFM in tropical regions**. With the surge in bioenergy consumption since 2013, there has been a **mounting strain on forests, making the need for sustainable sourcing of tropical timber even more crucial**.
  - The rise in bioenergy usage, driven by the **global push for renewable energy sources**, has inadvertently created additional pressure on tropical forests. As bioenergy relies on **biomass, such as wood pellets and chips**, as fuel, the demand for timber has intensified. This has raised concerns about the **potential negative impact on forest ecosystems**, biodiversity, and the overall sustainability of these regions.

- By implementing sustainable practices, such as **selective logging and reforestation**, the long-term health and vitality of these forests can be safeguarded.
- **Forest Ecosystems and Energy:**
  - Forestry director of the **Food and Agriculture Organization (FAO)**, highlighted the significant **contribution of forest ecosystems to renewable energy requirements**.
    - **Over five billion people** worldwide benefit from non-timber forest products, with forests providing **55% of these renewable energy needs**.
- **Forests and Climate Change Mitigation:**
  - The **Emissions Gap Report's findings** underscore the immense climate mitigation potential that forests hold. Through processes such as **carbon sequestration**, **forests act as carbon sinks, absorbing and storing substantial amounts of carbon dioxide from the atmosphere**.
    - By preserving and sustainably managing forests, **nations can leverage this natural capacity** to help bridge the emissions gap and achieve climate targets.
  - Forests have the potential for reducing **5 gigatonnes of emissions**.
- **Challenges and Countries Perspectives:**
  - **India:** India presented a case of a UNFF country-led initiative on long-term SFM and expressed concerns regarding **wildfires and the limitations of current forest certification schemes**.

Note:



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- **Saudi Arabia:** Saudi Arabia highlighted the importance of preventing forest fires and **urban expansion encroaching on forested areas**.
- **Suriname:** Suriname, claiming to be the **most forested and carbon-negative country**, shared its experiences of economic pressures impacting its green cover and environmental policies.
  - The country committed to deriving **23% of its net energy from renewable sources by 2025** and achieving **carbon neutrality by 2060**.
- **Congo and the Dominican Republic:** These countries stressed their commitment to forest conservation measures and called for **strategies to reduce pressures on natural forests while improving livelihoods**, given their heavy reliance on fuelwood.
- **Australia:** Australia mentioned that some species **rely on fire for germination** and shared information on mechanical fuel load reduction trials. The country emphasised the need to make wood residue markets financially feasible.
- **Other Perspectives:** Countries like Zhimin and Satkuru suggested replacing **plastic sticks with residues of compacted bamboo or sawdust** to produce **briquettes and pellets**, offering sustainable alternatives for energy production.

### ***What is the United Nations Forum on Forests?***

#### ➤ **About:**

- The **UNFF** is an intergovernmental policy forum which promotes “**management, conservation and sustainable development of all types of forests** and to strengthen long-term political commitment to this end.
- UNFF was established in **2000 by the UN Economic and Social Council**. The Forum has universal membership, and is **composed of all Member States of the United Nations**.

#### ➤ **Major Related Events:**

- **1992** - UN Conference on Environment and Development adopts the Forest Principles” and Agenda 21.
- **1995/1997** - **Intergovernmental Panel on Forests (1995)** and **Intergovernmental Forum on Forests (1997)** are established to implement the Forest Principles from 1995 to 2000.

- **2000** - UNFF is established as a functional commission of the UN Economic and Social Council.
- **2006** - UNFF agrees on **four Global Objectives on Forests**.
  - **The Four Global Objectives on Forests:**
    - Reverse the loss of forest cover worldwide through sustainable forest management (SFM);
    - Enhance forest-based economic, social and environmental benefits;
    - Increase significantly the area of sustainably managed forests;
    - Reverse the decline in official development assistance for SFM
    - Mobilise increased financial resources for implementation of SFM.
- **2007** - UNFF adopts the **UN Non-Legally Binding Instrument on All Types of Forests (Forest Instrument)**.
- **2009** – UNFF adopts decision on financing for sustainable forest management which calls for creation of a Facilitative Process to assist countries in reversing a 20-year decline in forest financing.
  - The Facilitative Process has an initial focus on **Small Island Developing States (SIDS) and Low Forest Cover Countries (LFCCs)**.
- **2011**- The International Year of Forests, “**Forests for People**”.

## **Eretmoptera Murphyi**

### ***Why in News?***

According to a study by the British Antarctic Survey (BAS), a tiny flightless Midge (small insect) called ***Eretmoptera mурphyi*** is changing the soil composition of **Antarctica’s** Signy Island.

- It is an **invasive species** on Antarctic Signy Island.

### ***What is Eretmoptera Murphyi?***

#### ➤ **About:**

- It is a native of South Georgia, a **sub-Antarctic Island**, and was accidentally introduced to Signy in the **1960s during a botany experiment**. Its proliferation became apparent in the 1980s.

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- Eretmoptera murphyi feasts on **dead organic matter** and has led to **faster plant decomposition**, thus increasing the **soil nitrate levels by three-five times compared to places on the island where the midge** (small insects which bite) **is absent** and only native invertebrate species live.

- High levels of nitrate **can be toxic for other plant species**, and it can also contaminate groundwater. High levels of nitrate in water can lead to **excessive algae growth**, which can **deplete oxygen levels and harm aquatic life**.

➤ **Cause for the Spread:**

- Experts believe that the spread of this midge, murphyi in Antarctica may have been **caused by humans who carried insects on their shoes**.

➤ **Concerns:**

- The midge can also survive in water, which raises concerns that it could spread to other islands.
- It has become **a big problem as the tiny insect has spread to a much larger area** with multiplying populations.
- Antarctica has a unique ecosystem that is vulnerable to invasive species, and the midge **invasion highlights that even harsh conditions can no longer protect it**.
- The activity of the midges, along with climate change, may also create conditions for other invasive species to become established and accelerate the effects of climate change.

## Climate Change Resilience Deficit in Asia-Pacific Countries

### Why in News?

A recent study, **“The Race to Net Zero: Accelerating Climate Action in Asia and the Pacific,”** by the **United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)** has revealed that most countries in **Asia and the Pacific** are **inadequately equipped to manage the growing threats** posed by extreme weather events and natural disasters.

- The study emphasizes the **lack of necessary data and resources to support adaptation and mitigation efforts** in the region.

### What are the Key Highlights?

➤ **Escalating Climate Challenges in Asia-Pacific:**

- **Increasing temperatures** in the region over the past 60 years have surpassed the **global average**, leading to more frequent and **intense extreme weather events and natural hazards**.
- **Tropical cyclones, heatwaves, floods, and droughts** have resulted in significant loss of life, displacement, health issues, and heightened poverty levels.
- Out of the top 10 countries most affected by such disasters, **six are located in the Asia-Pacific region**, causing disruptions in food systems, damaging economies, and undermining societies.

➤ **Disproportionate Impact on Vulnerable Groups:**

- Climate change and climate-induced disasters disproportionately burden marginalized and vulnerable groups, including **women, children, the elderly, persons with disabilities, migrants, indigenous populations**, and young people in vulnerable situations.
- The underlying drivers of poverty and societal inequalities are intensified by these challenges, hindering development progress.

➤ **Region’s Contribution to Greenhouse Gas Emissions:**

- The Asia-Pacific region is responsible for **more than half of the world’s greenhouse gas emissions**.

Note:



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- **Rapid development, coupled with a significant population**, places the region at a critical position in the **global climate crisis**.
- Many **low-lying cities and vulnerable small island states are located** within the region, exacerbating the risks faced by these areas.
- **Economic Costs of Climate Change:**
  - ESCAP estimates the annual **average losses from natural and biological hazards** in Asia and the Pacific to be around **780 billion USD**.
    - These losses are projected to increase to **1.1 trillion USD** under a **moderate climate change** scenario and **1.4 trillion USD** under the **worst-case scenario**.
  - Current financing for climate action **falls short of meeting the region's needs** and **limiting global warming to 1.5°C**.
- **Steps Required to Address:**
  - **Closing the Emissions Gap:**
    - **Energy Sector:**
      - Restructuring **national energy systems** and investing in **renewable energy infrastructure**.
      - Transitioning from **fossil fuels to renewable energy sources**.
      - Promoting **cross-border electricity grids** to increase the **share of renewable energy**.
      - Emphasizing **local solutions and decentralized power generation**.
    - **Transport Sector:**
    - **Shifting to low-carbon** transportation pathways.
      - **Reducing transport distance** through integrated land-use planning.
      - Encouraging **sustainable transport modes** with low-carbon or **net-zero emissions**.
      - Improving **vehicle and fuel efficiency**.
  - **International Trade and Investment:**
  - Integrating **climate considerations into regional trade agreements**.
    - Promoting **climate-smart trade practices**.
    - Encouraging the private sector to **adopt low-carbon pathways and sustainability practices**.
    - Increasing **transparency and accountability** through **sustainability reporting and greenhouse gas accounting**.

### What is UNESCAP?

- **About:** The UNESCAP is the **regional development arm of the United Nations for the Asia-Pacific region**.
  - It has **53 Member States and 9 Associate Members** from Asia-Pacific Region including India.
- **Established:** 1947
- **Headquarters:** Bangkok, Thailand
- **Objective:** To overcome some of the region's greatest challenges by providing results-oriented projects, technical assistance and capacity building to member States.

## Sludge Management

### Why in News?

The sludge found in Indian **sewage treatment plants (STPs)** plays a significant role in the efforts to treat polluted water from the **Ganga River**. A recent study of this sludge revealed its potential for **use as fertilizer and a potential biofuel**.

- The **National Mission for Clean Ganga**, aimed at preventing pollution and rejuvenating the Ganga River has introduced an emerging initiative called **'Arth Ganga' (economic value from Ganga)**.
  - This initiative aims to derive livelihood opportunities from the river rejuvenation program and includes measures to monetize and **reuse treated wastewater and sludge**.

### What is Sludge?

- **About:**
  - Sludge is the **thick residue generated during the treatment of wastewater or sewage in sewage treatment plants**.
  - It is the **semi-solid material** remaining after the liquid portion of the sewage has been separated and treated.
  - The composition of sludge can vary depending on the source and treatment processes used.
    - It typically **contains organic compounds, nutrients (such as nitrogen and phosphorus), and microorganisms**.
    - However, sludge can also contain **contaminants like heavy metals, industrial pollutants, and pathogens**.

Note:

- Treatment and processing of sludge can yield **organic fertilizers, biogas** for energy production, or construction materials.
- Contaminants in sludge require careful handling to avoid negative impacts on water bodies and agricultural land.

➤ **Classification of Treated Sludge:**

- Sludge can be classified as **class A or class B** according to the **standards of the United States Environment Protection Agency**.
  - Class A sludge is **safe for open disposal** and serves as organic fertilizer.
  - Class B sludge can be used in **restricted agricultural applications**, with **precautions to avoid exposure of edible parts of crops** to sludge-mixed soil and to limit contact with animals and people.
- India does not have established standards for classifying sludge as class A or B.

➤ **State of Sludge in Indian STPs:**

- Contractors under the **Namami Ganga Mission** are assigned land for **sludge disposal**.
  - Inadequate treatment of sludge by these contractors leads to its **release into rivers and local water sources during rainfall**.
- Data on the chemical characteristics of sludge is essential to **incentivize private players to treat and dispose of sludge properly**.
- This study marks the first of its kind initiative in India, aimed at effectively addressing the issue of sludge disposal.

**What are the Findings from the Study?**

➤ **Findings:**

- Most of the **dried sludge analyzed falls into the class B category**.
- **Nitrogen and phosphorus levels** exceed India's fertilizer standards, while **potassium levels are lower than recommended**.
- Total organic **carbon content is higher than recommended**, but **heavy metal contamination and pathogen levels surpass fertilizer standards**.
- Calorific value of sludge ranges from 1,000-3,500 kcal/kg, lower than that of Indian coal.

➤ **Recommendations for Improving Sludge Quality:**

- **Storage of sludge** for at least three months is recommended to **kill pathogens**.
- **Blending sludge with cattle manure**, husk, or local soil can reduce heavy metal content.
  - These measures, however, would still categorize sludge as class B.
- Converting sludge into class A would require more extensive treatment.

**What is the Arth Ganga Project?**

➤ **About:**

- 'Arth Ganga' implies a **sustainable development model with a focus on economic activities related to Ganga**.
- Prime Minister of India first introduced the concept during the first National Ganga Council meeting in Kanpur in 2019, where he urged for a shift from **Namami Gange** to the model of **Arth Ganga**.
- Under **Arth Ganga**, the government is working on **six verticals**:
  - The first is Zero Budget Natural Farming, which involves **chemical-free farming** on 10 km on either side of the river, and the **promotion of cow dung as fertilizer through the Gobardhan scheme**.
  - The **Monetization and Reuse of Sludge & Wastewater** is the second, which seeks to reuse treated water for irrigation, industries and revenue generation for Urban Local Bodies (ULBs).
  - Arth Ganga will also involve **Livelihood Generation Opportunities**, by creating haats where people can sell local products, medicinal plants and ayurveda.
  - The fourth is to **increase public participation** by increasing synergies between the stakeholders involved with the river.
  - The model also wants to **promote the cultural heritage and tourism of Ganga** and its surroundings, through boat tourism, adventure sports, and by conducting yoga activities.
  - Lastly, the model seeks to promote institutional building by **empowering local administration for improved water governance**.

Note:



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## Forest Fires in Goa

### Why in News?

The inquiry of bushfires that broke down in March 2023 by Goa Forest department has found that the fires were largely triggered by natural causes.

### What did the Forest Department Inquiry Find?

- **Cause behind Forest Fire:** The report suggests that a **conductive environment and extreme weather conditions** — **deficient rainfall** in the preceding season, **unusually high temperatures, low moisture and humidity** — led to the fires.
  - Very little rain in Goa since October 2022, **along with heat-wave-like conditions and low humidity, created conditions that were ripe for forest fires.**
- **Goa's Forest Fire:**
  - The **India State of Forest Report (ISFR) 2021** published by the Forest Survey of India (FSI) classifies **100% of Goa's forest cover as "less fire prone"**.
  - **Also, Goa does not experience crown fires** (caused by friction of trees) which mostly occur abroad.

Surface fires are common  
in moist deciduous  
forests of Goa.

- Minor surface fires that burn undergrowth and dead organic matter on the forest floor are common due to the **slash-and-burn techniques** used by villagers to clear grazing land for cattle.
  - Cashew farmers often start minor constrained fires to clear weeds and reduce undergrowth.

### What are Forest Fires?

- **About:**
  - **Forest fires** are uncontrolled fires that **occur in areas with a significant amount of combustible vegetation**, such as forests, grasslands, or shrublands.
- **Causes of Forest Fire:**
  - **Natural:** **Lightning** is the most prominent cause which set trees on fire. However, rain extinguishes such fires without causing much damage.
    - **Spontaneous combustion of dry vegetation and volcanic activities** also cause forest fires.

- High atmospheric temperatures and dryness (low humidity) offer favorable circumstance for a fire to start.

- **Man-Made:** Fire is caused when a source of fire like **naked flame, cigarette or bidi, electric spark** or any source of ignition encounters inflammable material.

### ➤ Types:

- **Crown fires** burn trees up their entire length to the top. These are the **most intense and dangerous wildland fires**.
- **Surface fires** burn only surface litter and duff. These are the **easiest fires to put out** and **cause the least damage** to the forest.
- **Ground fires** (sometimes called **underground/ subsurface fires**) **occur in deep accumulations of humus, peat** and similar dead vegetation that become dry enough to burn.



### ➤ Advantages:

- Cleaning the Forest Floor
- Providing Habitat
  - Killing Disease
  - Nutrient Recycling

### ➤ Disadvantages:

- Kill or Injure unintended Plants/Trees
- Can Lead to Erosion and Sedimentation

Note:



- Can Devastate the Ecosystem
- Threat to Human Life
- **Vulnerability in India:**
  - The forest fire season **normally extends from November to June in India.**
  - A report by the **Council of Energy, Environment and Water (CEEW)** has noted:
    - A tenfold increase in forest fires over the past two decades and says more than **62% of Indian states are prone to high-intensity forest fires.**
    - Andhra Pradesh, Odisha, Maharashtra, Madhya Pradesh, Chhattisgarh, Uttarakhand, Telangana, and the Northeastern states are most prone to forest fires.
    - **Mizoram has seen the highest incidence of forest fires** over the last two decades, and **95% of its districts are forest fire hotspots.**
  - The ISFR 2021 estimates that **more than 36% of the country's forest cover is prone to frequent forest fires, 6% is 'very highly' fire-prone, and almost 4% is 'extremely' prone.**
    - Also, An FSI study has found that **nearly 10.66% area under forests in India is 'extremely' to 'very highly' fire prone.**

### ***What are the India's Initiatives Related to Managing Forest Fires?***

- **National Action Plan for Forest Fires (NAPFF):** It was started in 2018 with the goal of **reducing forest fires by informing, enabling, and empowering forest fringe communities** and incentivizing them to collaborate with state forest departments.
- **National Mission for Green India (GIM):** Launched under the **National Action Plan on Climate Change**, the GIM aims to **increase forest cover and restore degraded forests.**
  - It promotes the use of community-based forest management, biodiversity conservation, and sustainable forest practices, which contribute to preventing forest fires.
- **Forest Fire Prevention and Management Scheme (FFPM):** FFPM is implemented by the FSI under the MoEF&CC. It **aims to strengthen the forest fire management system by utilizing advanced technologies such as remote sensing.**
  - It is the only government-sponsored programme dedicated to assisting states in dealing with forest fires.

### ***What should be done to Mitigate Forest Fires?***

- **Create Fire Breaks:** Fire breaks are areas where vegetation has been removed, creating a gap that can slow or stop the spread of a fire.
- **Monitor and Manage Forests:** Monitoring forests and managing them appropriately can help prevent fires from starting or spreading.
- **Early Detection and Rapid Response:** Early detection of a forest fire is critical for effective mitigation.
  - The Forest Survey of India (FSI) is using **satellite imaging technology (like MODIS)** to analyse forest fire affected areas and boost prevention.
- **Fuel Management:** Reducing the accumulation of dead trees, dry vegetation, and other combustible materials through activities such as thinning and selective logging.
- **Firewise Practices:** Safe practices must be adopted in areas near forests viz. factories, coal mines, oil stores, chemical plants and even in household kitchens.
- **Practice Controlled Burning:** Controlled burning involves setting small fires in a controlled environment.

## **Petersberg Climate Dialogue 2023**

### ***Why in News?***

The **Petersberg Dialogue on Climate Change** was hosted in **Berlin, Germany** from May 2-3, 2023, by **Germany and the United Arab Emirates**, which is hosting the **28th Conference of Parties (COP28)** to the **United Nations Framework Convention on Climate Change (UNFCCC).**

### ***What is Petersberg Dialogue?***

- The Petersberg Climate Dialogue is an **annual high-level political and international forum held before the United Nations Climate Change Conferences (COP).**
- It was initiated in 2010 by former German Chancellor Angela Merkel.
- The forum aims to prepare for **successful negotiations at COP climate change conferences.**
- The central goal is to **strengthen trust in multilateral climate negotiations and between states.**
- The dialogue focuses on **climate adaptation, climate finance, and dealing with loss and damage.**

Note:



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### ***What are the Key Takeaways from the Petersberg Climate Dialogue?***

- **Need for Clean Energy Transition:**
  - **UN Secretary-General** emphasized the need to “**break our fossil fuel addiction and drive decarbonization in every sector**” to achieve a **1.5°C global warming pathway**.
- **Global Renewables Target:**
  - German Foreign Minister initiated discussions around a potential global target for renewables at the next climate conference. And stressed the need to make **sharp cuts in greenhouse gas emissions to limit global warming to 1.5°C**.
- **Fossil Fuel Phaseout:**
  - **COP28** President called for a **tripling of renewable energy capacity by 2030** followed by a **doubling in 2040**. And urged participants to **ramp up renewable energy capacity building and focus on phasing out fossil fuel emissions** while phasing up viable, affordable **zero-carbon alternatives**.
- **Status of Climate Finance:**
  - The developed countries are “**on a good track**” to deliver the **USD 100 billion per year** they had promised to mobilize by **2020 during COP15 in 2009**.
    - However, a recent estimate pegs climate finance needs at **1 trillion USD annually by 2030** for emerging markets alone, highlighting the urgent need for financial reparations.
- **Urgent Global Financial Systems Transformation:**
  - The need for an urgent global financial systems transformation was underlined so that **crucial climate finance** can be unlocked for the most **climate vulnerable countries in the world**.
    - The burden of keeping global temperatures from rising beyond 1.5°C **cannot fall on the poorest countries**, who are **least responsible for the stock of greenhouse gases** in the atmosphere.
- **Global Stocktake:**
  - 2023 is the year for the Global Stocktake, which aims to assess whether current efforts will enable us to reach the objectives set out in the **Paris Agreement**.
    - The report has been underway for the past two years and is set to be released in September of 2023.

- **Union Minister for the Indian Ministry of Environment, Forest and Climate Change**, stated that the outcome of the first Global Stocktake should focus on **how climate change impacts, actions, and responses** have a bearing on the **developmental priorities of developing countries**, including **eradication of poverty**. It should also seek to convey a message on **sustainable lifestyles and sustainable consumption** to inform the next round of **Nationally Determined Contributions** and enhanced international cooperation.

### ***What are the India's Initiatives for Climate Change and Green Energy?***

- **National Adaptation Fund for Climate Change (NAFCC):**
  - It was established in 2015 to meet the cost of adaptation to climate change for the State and Union Territories of India that are particularly vulnerable to the adverse effects of climate change.
- **National Clean Energy Fund:**
  - The Fund was created to promote clean energy, and funded through an initial **carbon tax** on the use of coal by industries.
  - It is governed by an Inter-Ministerial Group with the Finance Secretary as the Chairman.
  - Its mandate is to fund research and development of innovative **clean energy technology** in the fossil and non-fossil fuel-based sectors.
- National Adaptation Fund:**
  - The fund was established in 2014 with a corpus of Rs. 100 crores with the aim of bridging the gap between the need and the available funds.
  - The fund is operated under the Ministry of Environment, Forests, and Climate Change (MoEF&CC).

## **Convention on Migratory Species**

### ***Why in News?***

The Ministry of Environment, Forest, and Climate Change in collaboration with the **United Nations Environment Programme/ Convention on Migratory**

Note:

**Species (UNEP/CMS)** had organized a meeting of Range Countries to strengthen conservation efforts for migratory birds and their habitats in the **Central Asian Flyway (CAF)**.

- The meeting was attended by 11 countries, including Armenia, Bangladesh, Kazakhstan, Kyrgyzstan, Kuwait. The delegates agreed on an institutional framework for the CAF and a draft roadmap for updating the CMS CAF Action Plan.

### What is CMS?

- **About:**
  - It is an intergovernmental treaty under the **UNEP**-popularly known as **Bonn Convention**.
  - It was signed in 1979 and in force since 1983.
  - As of 1 March 2022, the **CMS** has **133 Parties**.
    - India is also a party to CMS since 1983.
- **Aim:**
  - It aims to conserve terrestrial, marine and avian migratory species throughout their range.
  - It lays the legal foundation to conduct conservation measures on a global scale.
    - The legal instruments under CMS may range from legally binding Agreements to less formal MoU.
- **Two appendices under CMS:**
  - **Appendix I** lists 'Threatened Migratory Species'.
  - **Appendix II** lists 'Migratory Species requiring international cooperation'.
- **India and the CMS:**
  - India has signed a non-legally binding Memorandum of Understanding (MoU) with CMS on conservation and management of **Siberian Cranes (1998)**, **Marine Turtles (2007)**, **Dugongs (2008)**, and **Raptors (2016)**.
  - With 2.4% of the world's land area, India contributes to around 8% of the known global biodiversity.
    - India also provides **temporary shelter** to several migratory species including **Amur Falcons**, **Bar-headed Geese**, **Black-necked Cranes**, **Marine Turtles**, **Dugongs**, Humpback Whales, etc.

### What is a Migratory Species?

- A species or lower taxon of wild animals of which the entire population or any geographically separate part of the population **cyclically and predictably cross one or more national jurisdictional boundaries**.

- The word '**cyclically**' relates to a **cycle of any nature**, such as astronomical (circadian, annual, etc.), life or climatic, and of any frequency.
- The word '**predictably**' implies that a **phenomenon can be anticipated to recur in a given set of circumstances**, though not necessarily regularly in time.

### What is Central Asian Flyway?

- The **CAF** is a major migratory route for birds, **covering 30 countries from the Arctic Ocean to the Indian Ocean**.
  - Indian subcontinent is a part of a CAF with at least 279 populations of 182 migratory waterbird species (including 29 globally threatened species).
- It is home to more than 400 species of migratory birds, including threatened and endangered species such as the Siberian crane and the lesser white-fronted goose.

### What are Flyways?

- Flyways are the area used by a group of birds during their annual cycle which includes their breeding areas, stopover areas, and wintering areas.
- The CMS Secretariat has identified **nine major flyways globally with respect to bird migration**.

### What are some Efforts made by India for Migratory Species?

- **National Action Plan for the Conservation of Migratory Birds (2018-2023):** India has launched the National Action Plan for the conservation of migratory species along the Central Asian Flyway.
  - **To reduce pressure on critical habitats and migratory routes** by addressing the various challenges faced by migratory birds, including habitat loss, degradation and fragmentation, hunting, poaching, pollution, and climate change.
  - **To stop the decline of migratory birds** and reverse the scenario by 2027.
  - **To avoid threats to habitats and migratory routes** and ensure their sustainability for future generations.
  - **To support trans-boundary cooperation among various countries** along the Central Asian Flyway to conserve migratory birds and their habitats.

Note:

- To improve the database on migratory birds and their habitats to enhance our understanding of their conservation needs.
- **India also Announced:**
  - Conservation of marine turtles- by launching its **Marine Turtle Policy and Marine Stranding Management Policy**, by 2020,
  - **Reduction of pollution** from **micro-plastic** and **single-use plastic**,
  - **Transboundary protected areas** for conservation of species like **Tigers**, **Asian elephants**, **Snow Leopard**, the **Asiatic Lion**, the **one-horned rhinoceros**, and the **Great Indian Bustard**, and
  - Sustainable **infrastructure** development like **Linear Infrastructure Policy Guidelines** to tailor development in ecologically fragile areas.
- **Project Snow Leopard (PSL):** PSL was launched in 2009 to promote an inclusive and participatory approach to conserve snow leopards and their habitat.
- **Dugong Conservation Reserve:** India has established its first **Dugong conservation reserve** in Tamil Nadu.
- **Wildlife Protection Act, 1972:**
  - Rare and endangered species of birds including migratory birds are included in Schedule-I of the Act thereby according them highest degree of protection.
  - Stringent punishments have been provided in the Act for violation of provisions of the Act.
  - Important habitats of birds, including migratory birds have been notified as protected Areas under the Act for better conservation and protection of birds and their habitats.
- **Other Initiatives:**
  - Focused protection measures involving the local communities have been taken up in the State of Nagaland for protection of **Amur Falcons** that migrate to Northeast India on their route to Southern Africa.

- India has taken several steps to **conserve vultures** like imposing ban on veterinary use of **diclofenac**, establishment of Vulture breeding centres etc.
- **Wildlife Crime Control Bureau** has been established for control of illegal trade in wildlife and its parts and products.

## River-Cities Alliance Global Seminar

### Why in News?

**National Mission for Clean Ganga (NMCG)** in association with the **National Institute of Urban Affairs (NIUA)** organized the '**River-Cities Alliance (RCA) Global Seminar: Partnership for Building International River-Sensitive Cities**'.

- The purpose of the RCA Global Seminar was to provide a platform to discuss and learn good practices for managing urban rivers.
- Previously, a meeting of **RCA - DHARA 2023 (Driving Holistic Action for Urban Rivers)** was held in February 2023, featuring sessions on International best practices and examples for urban River Management.

### National Institute of Urban Affairs

- NIUA is an institute for research, **training and information dissemination in urban development and management**. It is located in New Delhi, India.
- It was established in **1976 as an autonomous body under the Societies Registration Act 1860**.
- The Institute is supported by the **Ministry of Housing and Urban Affairs**, Government of India, State Governments, urban and regional development authorities and other agencies concerned with urban issues.

### What is RCA?

- **About:**
  - The RCA is a **joint initiative of the Ministry of Jal Shakti (MoJS) & the Ministry of Housing and Urban Affairs (MoHUA)**, with a vision to connect river cities and focus on sustainable river centric development.

Note:



- The Alliance focuses on three broad themes- **Networking, Capacity Building and Technical Support**.
- Beginning with 30 member cities in November 2021, the Alliance has expanded to 110 river cities across India and **one international member city from Denmark**.

➤ **Objective:**

- The RCA intends to facilitate **knowledge exchange (online) for Indian cities** to learn new practices and approaches for urban river management.
- It will also be an opportunity for **international cities to learn about experiences in Indian cities**, which may be relevant to their contexts.

**What is the National Mission for Clean Ganga?**

➤ **About:**

- It is being implemented by the National Council for Rejuvenation, Protection and Management of **River Ganga** also known as the **National Ganga Council**.
- This mission was established on 12<sup>th</sup> August 2011 under the **Societies Registration Act, 1860** as a registered society.
- It acted as the implementation arm of **National Ganga River Basin Authority (NGRBA)** which was constituted under the provisions of the **Environment (Protection) Act (EPA), 1986**.
  - NGRBA has since been dissolved with effect from the 7<sup>th</sup> of October 2016, consequent to constitution of National Council for Rejuvenation, Protection and Management of River Ganga (referred as National Ganga Council).

➤ **Objectives:**

- The objective of the NMCG is to reduce **pollution and ensure rejuvenation of the Ganga River**.
- The mission incorporates **rehabilitating and boosting the existing STPs (Sewage Treatment Plants)** and instant short-term steps to **curb pollution at exit points on the riverfront** in order to check the inflow of sewage.

➤ **Organizational Structure:**

- The **Act envisages five tier structure at national, state and district level** to take measures for prevention, control and abatement of environmental pollution in river Ganga as below:

- **National Ganga Council** under chairmanship of Hon'ble Prime Minister of India.
- **Empowered Task Force (ETF)** on river Ganga under chairmanship of Hon'ble Union Minister of Jal Shakti (Department of Water Resources, River Development and Ganga Rejuvenation).
- **National Mission for Clean Ganga (NMCG)**.
- **State Ganga Committees**
- **District Ganga Committees** in every specified district abutting river Ganga and its tributaries in the states.

**What are the Other Initiatives for River Rejuvenation in India?**

- **Namami Gange Programme:** It is an Integrated Conservation Mission, approved as a 'Flagship Programme' by the **Union Government in June 2014** to accomplish the twin objectives of effective abatement of pollution and conservation and rejuvenation of National River Ganga.
- **Ganga Action Plan:** It was the first **River Action Plan that was taken up by the Ministry of Environment, Forest and Climate Change in 1985**, to improve the water quality by the interception, diversion, and treatment of domestic sewage.
  - The National River Conservation Plan is an extension to the Ganga Action Plan. It aims at cleaning the Ganga River under Ganga Action Plan phase-2.
- **National Water Mission (2010):** It ensures integrated **water resource management leading to water conservation**, less wastage, equitable distribution forming better policies.
- **National River Ganga Basin Authority (NRGBA):** It was formed by the Government of India in the year 2009 under **Section-3 of the Environment Protection Act, 1986**.
  - Ganga was declared as the 'National River' of India in 2008.
  - **Clean Ganga Fund:** In 2014, it was formed for cleaning up of the Ganga, setting up of waste treatment plants, and conservation of biotic diversity of the river.
  - **Bhuvan-Ganga Web App:** It ensures involvement of the public in monitoring of pollution entering into the river Ganga.
  - **Ban on Waste Disposal:** In 2017, the **National Green Tribunal** banned the disposal of any waste in the Ganga.

Note:

## Debt-for-Climate Swaps

### Why in News?

**Climate change** is a global problem that impacts everyone, but it affects some countries more than others. Unfortunately, the countries most vulnerable to the effects of climate change are often the **least able to afford the investment needed to strengthen their resilience**.

- This puts these countries in **danger of facing prolonged fiscal crises**, forcing them to **rely on aid from the international community**.
- **Debt-for-climate swaps** are an innovative financial instrument that aims to address this issue by creating **fiscal space for climate investments**.

### What is Debt-for-Climate Swaps?

- **About:**
  - Debt-for-climate swaps can incentivize debtor countries to take meaningful action on climate while reducing their debt burdens.
  - These swaps involve **reducing debt in exchange for policy commitments or spending by debtor countries**.
    - Both official **bilateral and commercial debt** can be involved in debt-for-climate swaps.
    - Bilateral debt swaps involve redirecting previously committed debt service payments to official bilateral creditors towards **financing mutually agreed projects in areas such as climate action**.
  - In the past decade, **debt-for-climate swaps have become relatively popular among low- and middle-income countries**.
    - **Multilateral development banks and multilateral organizations such as the United Nations Development Programme (UNDP)** have been **advocating this instrument as a debt-relief measure**.
- **History:**
  - Debt-for-climate swaps are a variation of debt-for-nature swaps, which were first proposed in the 1980s as a way to **conserve biodiversity and protect tropical forests in exchange for debt relief**.
  - The first debt-for-nature swap was implemented in 1987 between **Bolivia and Conservation International**, a **non-governmental organization (NGO)**.

- Debt-for-climate swaps emerged in the 2000s as a broader concept that encompasses **not only nature conservation but also climate mitigation and adaptation**.

- The **first debt-for-climate swap was implemented in 2006** between **Germany and Indonesia**, with the latter committing to **reduce greenhouse gas emissions from deforestation and forest degradation (REDD+)** in return for debt relief.

### ➤ Benefits:

#### ○ For Creditors:

- Debt-for-climate swaps can enhance their **development cooperation and climate finance objectives**, improve their **debt recovery prospects**, and **strengthen their diplomatic relations** with debtor countries.

#### ○ For Debtors:

- Debt-for-climate swaps can **reduce their external debt stock and service, free up fiscal resources** for other development needs, increase their domestic investment in climate action, and improve their environmental and social outcomes.

#### ○ For Both Parties:

- Debt-for-climate swaps can foster **mutual trust and collaboration**, create win-win solutions, and contribute to the global efforts to achieve the **Paris Agreement** and the **Sustainable Development Goals**.

### ➤ Challenges:

- Creditor countries are primarily hesitant to go for debt-for-climate swaps unless they are structured to make sure that the **public expenditure commitment towards climate action is superior in value to the remaining debt service**.
  - However, conditional climate grants are designed and structured to make them impossible to divert and are targeted only for climate investment purposes.

### Why should Creditor Countries Engage in Debt-for-Climate Swaps?

- Creditor countries should engage in debt-for-climate swaps because signatories to the **Paris Agreement** and the **Glasgow Financial Alliance for Net Zero (GFANZ)**, a global coalition of financial institutions,

Note:



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have the commitment to provide financial assistance to developing countries to build clean, climate-resilient futures.

- Debt-for-climate swaps are one way to fulfill their commitments.

### **How do Debt-for-Climate Swaps Help Small Island Countries?**

- **Small island developing states (SIDS)** are eyeing debt-for-climate swaps to address the two challenges they face: **adapting to increasing climate risk** and **recovering from financial distress**.
  - Debt-for-climate swaps offer a possible solution for SIDS to address these issues. These involve reducing external debt in exchange for policy commitments or spending by the debtor country.
  - By participating in debt-for-climate swaps, SIDS can **reduce its external debt** and **free up fiscal resources** for other developmental needs, including **climate action**. This can help them **increase their domestic investment in climate action**.

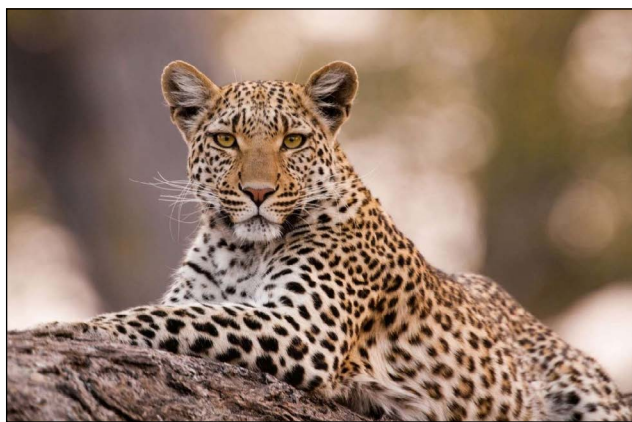
## **International Leopard Day 2023**

### **Why in News?**

On **International Leopard Day** (May 3, 2023), the **Cape Leopard Trust (CLT)**, an active predator conservation working group, launched a new portal dedicated to **leopards to promote and celebrate leopards globally**.

- The portal was launched at the **Global Leopard Conference**.

### **What are the Characteristics of Leopard?**



- **Scientific Name:**
  - *Panthera pardus*
- **About:**
  - Leopards are elusive and **nocturnal animals** whose size and colour depend on the habitat. They are great climbers and hide in trees, where they hide their prey to avoid competition.
- **Geographical Extent:**
  - **Members of the cat family**, leopards live in Asia, sub-Saharan Africa, Southern Russia, and the Indian subcontinent.
    - The Indian leopard (*Panthera pardus fusca*) is a leopard widely distributed on the Indian subcontinent.
- **Habitat:**
  - In comparison to other large carnivores, **leopards are quite adaptable with respect to their habitat needs** and food requirements, being found in:
    - Agro-pastoral landscapes
    - Plantations
    - Near human habitation (both rural and urban)
- **Population in India:**
  - As per '**Status of leopards in India, 2018**' report released by MoEF&CC, there has been a "**60% increase in the population count of leopards in India from 2014 estimates**".
    - The 2014 estimates placed the population of leopards at nearly 8,000 which has **increased to 12,852**.
  - The **largest number of leopards have been estimated in Madhya Pradesh (3,421)** followed by **Karnataka (1,783)** and **Maharashtra (1,690)**.
- **Threat:**
  - **Habitat loss**
  - **Poaching**
  - **Human-wildlife conflict**
- **Protection Status:**
  - **IUCN Red List: Vulnerable**
  - **CITES: Appendix I.**
  - **Wildlife Protection Act 1972: Schedule I**
- **Human-Leopard Conflict:**
  - The areas that often witness leopard-human conflicts include Srinagar in the Kashmir Valley, the **Brahmaputra Valley** in Assam, **Gir National Park** in Gujarat, and **Kalakkad-Mundanthurai Tiger Reserve** in southern Tamil Nadu.

Note:

# India to Join International Climate Action in Civil Aviation

## Why in News?

The Ministry of Civil Aviation (MoCA) has announced has recently announced that India will start participating in the **International Civil Aviation Organisation's (ICAO)** Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) and the Long-Term Aspirational Goals (LTAG) from 2027.

- CORSIA Scheme is envisaged in 3 phases: Pilot (2021-2023) and first phases (2024-2026) are voluntary phases whereas second phase (2027-2035) is mandatory for all the member States.
  - India has decided **not to participate in the voluntary phases of CORSIA.**

## What are CORSIA and LTAG?

- **Background:**
  - The ICAO has been **tasked to reduce carbon emissions from international civil aviation** as one of its focus areas.
    - In order to mitigate carbon emissions from aviation and its impact on climate change, the global body has adopted several key aspirational goals. Among them are:
      - **2% annual fuel efficiency improvement through 2050**
      - **carbon neutral growth**
      - **net zero by 2050**
    - The ICAO has clubbed them under CORSIA and LTAG.
- **CORSIA:**
  - It is a global scheme established by the ICAO **to address the growth in CO<sub>2</sub> emissions from international aviation.**
  - CORSIA **aims to stabilize net CO<sub>2</sub> emissions at 2020 levels** through a combination of measures, including carbon offsetting, **carbon credits**, and **sustainable aviation fuel.**

- It offers a harmonized way **to reduce emissions from international aviation, minimizing market distortion**, while respecting the special circumstances and respective capabilities of ICAO Member States.
- CORSIA complements the other measures by offsetting the amount of CO<sub>2</sub> emissions that cannot be reduced through **technological improvements, operational improvements, and sustainable aviation fuels** with emissions units from the carbon market.
- CORSIA is **applicable only to flights originating from one country to another.**

## ➤ LTAG:

- 41<sup>st</sup> ICAO Assembly **adopted LTAG for international aviation of net-zero carbon emissions by 2050** in support of the **UNFCCC Paris Agreement's** temperature goal.
- The LTAG does not attribute specific obligations or commitments in the form of emissions reduction goals to individual States. Instead, it recognizes each State's special circumstances and respective capabilities e.g., the level of development, maturity of aviation markets.

## What is the ICAO?

- It is a **specialized agency of the United Nations** that was created in 1944 to promote safe, secure, and efficient air transportation around the world.
- ICAO **develops international standards and recommended practices for aviation**, including regulations for air navigation, communication, and airport operations.
- It also **works to address global aviation issues**, such as air traffic management, aviation security, and environmental protection.
- It is **headquartered in Montreal, Canada.**

## What could be the Potential Advantages for Joining such Initiatives?

- **Reducing Greenhouse Gas Emissions:** Joining CORSIA and striving towards the LTAG will help reduce the greenhouse gas emissions from international aviation. This is essential for combating climate change and protecting the environment.

Note:



- India also has set an ambitious target of achieving Net Zero by 2070.
- India also has committed to reduce its Carbon intensity of its economy by 45% by 2030.
- **Increasing Sustainability:** CORSIA and the LTAG encourage airlines to adopt more sustainable practices, such as using more efficient aircraft, reducing fuel consumption, and investing in renewable energy.

### How does Aviation Sector Affect Climate?

- **Greenhouse Gas Emissions:** Aviation is a significant source of greenhouse gas emissions, particularly carbon dioxide. The burning of fossil fuels in aircraft engines produces **carbon dioxide, water vapor, nitrogen oxides, and other greenhouse gases** that contribute to climate change.
- **Contrails:** Contrails are the white, streaky lines that airplanes leave in the sky. They are made up of ice crystals that form when water vapor in the aircraft's exhaust condenses in the cold, high-altitude atmosphere. Contrails can **have a warming effect on the planet by trapping heat in the Earth's atmosphere.**
- **Cirrus Clouds:** Similar to contrails, cirrus clouds also form from aircraft emissions. These clouds can have a warming effect on the planet, as they trap heat in the Earth's atmosphere.

### What are the Key Initiatives taken by the MoCA to Reduce Carbon Emissions?

- **Green Airports:** A green airport is an airport that has implemented sustainable practices to reduce its environmental impact and promote sustainable development. Green airports aim to **minimize their carbon footprint, conserve energy & water resources, and reduce waste and emissions.**
- **National Civil Aviation Policy (NCAP) 2016:** It includes a goal of developing a sustainable aviation framework that **promotes the use of alternative fuels, energy-efficient aircraft, and infrastructure,** among others.
- **Sustainable Aviation Fuel (SAF):** Initiatives to encourage the use of SAF have been taken for sustainable development and the **reduction of carbon emissions at airports.**

## Black Tigers

### Why in News?

- Recently, the death of a **Rare Black Tiger** was reported in the **Similipal Tiger Reserve** in Odisha.
  - Similipal has the world's highest rate of black tiger sightings in the world.

#### Note:

The death can have a big impact on the **Population of Tiger**. The population of black tigers is very limited, and the death of a male tiger will affect the breeding of tigers in the region.

### What are the Key Points Related to Black Tigers?

- **About:**
  - Black Tigers are a rare colour variant of the **Bengal tiger** and are **not a distinct species** or geographic subspecies.
  - The coat colouration and patterning that make the wild cats appear dark boil down to a **single mutation in the Transmembrane Aminopeptidase Q (Taqppep) gene.**
- **Pseudo Melanistic:**
  - The abnormally dark or black coat in such tigers is termed **pseudo melanistic or false coloured.**
    - Melanistic refers to having very dark skin/hair due to higher-than-normal level of the pigment (substance that gives pigmentation to skin/hair is called melanin).
- There is a **high probability (about 60%) that the tiger will have the mutant gene,** if randomly selected from Similipal.



Note:

### ➤ Causes for Black Colour:

- The tigers in the Similipal Tiger Reserve are an isolated population in eastern India and **gene flow between them and other tiger populations** is very restricted.
- Due to Geographic Isolation, **genetically related individuals have been mating with each other for many generations**, leading to inbreeding.
  - This has important implications for tiger conservation as such isolated and inbred populations are prone to extinction over even short periods of time.

### **What are the Key Points of Similipal Tiger Reserve?**

#### ➤ About:

- It was formally designated a tiger reserve in **1956** and brought under **Project Tiger** in the year 1973. It was declared a **biosphere reserve** by the Government of India in June, 1994.
  - It has been part of the **UNESCO World Network of Biosphere Reserve** since 2009.
- It is part of the **Similipal-Kuldiha-Hadagarh Elephant Reserve** popularly known as **Mayurbhanj Elephant Reserve**, which includes 3 protected areas i.e., Similipal Tiger Reserve, Hadagarh Wildlife sanctuary and Kuldiha wildlife sanctuary.

#### ➤ Location:

- It is situated in the **northern part of Odisha's Mayurbhanj district**. Geographically, it lies in the **eastern end of the eastern ghat**.

#### ➤ Wildlife:

- Similipal is home to a wide range of wild animals including tigers and **elephants**, besides 304 species of birds, 20 species of amphibians and 62 species of reptiles.

#### ➤ Other Major Protected Areas in Odisha:

- **Bhitarkanika National Park.**
- **Chilika (Nalaban island) WLS.**
- **Baisipalli WLS.**
- **Nandankanan WLS.**
- **Gahirmatha (Marine) WLS.**

### **What are the Tiger Conservation Efforts in India?**

- **Project Tiger 1973:** Project Tiger is a Centrally Sponsored Scheme of the Ministry of Environment, Forests and Climate Change (MoEFCC) launched in 1973. It provides havens for tigers in the country's national parks.
- **National Tiger Conservation Authority (NTCA):** It is a statutory body under the MoEFCC and was established in 2005 following the recommendations of the Tiger Task Force. NTCA has been constituted under section 38 L (1) of **Wildlife (Protection) Act, 1972**.
- **Conservation Assured | Tiger Standards: CA|TS** is a set of criteria which allows tiger sites to check if their management will lead to successful tiger conservation.

## **Ludhiana Gas Leak Tragedy**

### **Why in News?**

The **National Green Tribunal (NGT)** has formed an eight-member fact-finding committee to look into the death of 11 people due to a recent gas leak in Ludhiana district of Punjab.

- The NGT took **suo motu cognisance** of the matter based on media reports.

### **What happened in Ludhiana?**

#### ➤ Background:

- A gas leak has claimed the lives of 11 people in the Giaspur area of Ludhiana.
- The Police has suspected that a poisonous gas may have emanated from a partially open manhole in the locality and spread to the shops and houses nearby.
  - The inquiry for the cause of the leak is on.
- The autopsy reports suggested that the deaths were due to **"inhalation poisoning"**.
  - Forensic experts have suspected **Hydrogen Sulphide – a neurotoxic gas** – to be responsible for the tragedy.
  - According to an expert - Probably some acidic waste was thrown into sewer which reacted with methane, carbon monoxide and other sewerage gases to produce hydrogen sulphide.

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### ➤ Neurotoxins:

- Neurotoxins are poisonous substances which can **directly affect the nervous system**.
  - These substances can disrupt or even kill neurons or nerve cells, which are important for transmitting and processing signals in the brain and other parts of the nervous system.
- **Neurotoxic Gases:**
  - **Methane, hydrogen sulphide, carbon monoxide and carbon dioxide** are common neurotoxic gases.
  - **Methane and carbon monoxide are odourless gases**, but **hydrogen sulphide has a pungent odour** and in higher concentration can be fatal for humans.
    - Hydrogen sulphide is so toxic that even one breath of it taken inside can kill a person.

### **What are the Safeguards Against Chemical Disasters in India?**

- **Background:** Prior to the **Bhopal Gas tragedy**, the **IPC 1860** was the only law providing safeguards against such disasters; however, soon after the tragedy, the government came with a series of legislations regulating the environment and prescribing and specifying safeguards and penalties. Some of the laws are:
  - **Bhopal Gas Leak (Processing of Claims) Act, 1985** gave powers to the central government to secure the claims arising out of or connected with the Bhopal gas tragedy.
    - Under the provisions of this Act, such claims are dealt with speedily and equitably.
  - The **Environment Protection Act (EPA), 1986** gives powers to the central government to undertake measures for improving the environment and set standards and **inspect industrial units**.
  - The **Public Liability Insurance Act, 1991** is an insurance meant to **provide relief to persons affected by accidents** that occur while handling hazardous substances.
  - Under the **Hazardous Waste (Management Handling and Transboundary Movement) Rules, 1989**, industries are required to **identify major accident hazards, take preventive measures** and submit a report to the designated authorities.

- Under the **Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989**, importers must furnish complete product safety information to the competent authority and must transport imported chemicals in accordance with the amended rules.
- **Chemical Accidents (Emergency, Planning, Preparedness and Response) Rules, 1996** requires the central govt to **constitute a central crisis group for management of chemical accidents**; set up quick response mechanism termed as the crisis alert system.
  - Each state is required to set up a crisis group and report on its work.
- **The National Environment Appellate Authority Act, 1997:** Under this Act, the National Environment Appellate Authority can hear appeals regarding the restriction of areas in which any industries, operations or processes or class of industries shall not be carried out or shall be carried out subject to certain safeguards under the EPA1986.

### **What is the National Green Tribunal?**

#### ➤ About:

- It is a **statutory body set up under the National Green Tribunal (NGT) Act, 2010** for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources.
- With NGT, **India became the 3<sup>rd</sup> country in the world to set up a specialised environmental tribunal**, only after **Australia and New Zealand**, and the first developing country to do so.
- NGT is mandated to **make disposal of applications or appeals finally within 6 months** of filing of the same.
- The NGT has five places of sitting, New Delhi is the principal place of sitting and Bhopal, Pune, Kolkata and Chennai are the other four.

#### ➤ Powers:

- The Tribunal has **jurisdiction over all civil cases involving substantial questions relating to the environment** (including enforcement of any legal right relating to environment).
- It can take **Suo Motu cognizance** of the environmental cases.

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- Apart from original jurisdiction side on filing of an application, NGT also has **appellate jurisdiction** to hear appeal as a Court (Tribunal).
- NGT is not bound by the procedure laid down under the **CPC 1908** but shall be **guided by principles of 'natural justice'**.
- An order/decision/award of Tribunal is executable as a decree of a civil court.

## Paris Agreement and its Failure to Address the Climate Change

### Why in News?

Recently, the **World Meteorological Organization (WMO)** released its **State of the Global Climate 2022 report** which pointed out that the **Paris Agreement on Climate Change** has been ineffective in fulfilling its agenda.

- The Paris Agreement that serves as the centre point of ongoing global negotiation on climate change was inked in 2015.

### What has the Report Highlighted on Performance of Paris Agreement?

- **Inability to Achieve Climate Related Goals:**
  - After signing of the Agreement, the last eight years (2015-2022) have **consecutively been the warmest years on record globally**.
    - The situation could have been far worse if the **La Nina weather event** had not occurred in the past three years, which has a cooling effect on the weather system.
  - Globally updated **Nationally Determined Contributions (NDCs)** to limit global warming to **1.5°C** have failed even to achieve **2°C** target.
  - The Paris Agreement has **not been able to equitably phase out fossil fuels** predominantly responsible for the climate crisis.
  - Neither the NDCs nor the disaster risk reduction and climate risk management plans are in place to combat climate-induced extreme weather phenomena.
- **Suggestions:**
  - To complement the **Paris Agreement**, a **new global framework in the form of a Fossil Fuel Treaty** should be introduced.

- Most industrialised and emission-belching countries should be made to follow the Paris Agreement's commitments.
- **Accelerated climate action** with deeper, faster emissions cuts is needed as tools, the knowledge, and the solutions are available.
- There is a **need to undertake massively scaled-up investments** in adaptation and resilience, particularly for the **most vulnerable countries and communities** who have done the least to cause the crisis.

### What is the Paris Agreement on Climate Change?

- It is a **legally binding global agreement** under the **United Nations Framework Convention on Climate Change (UNFCCC)** that was adopted in 2015. It was adopted in **UNFCCC COP21**.
- It aims to combat climate change and limit global warming to well below **2°C** above pre-industrial levels, with an ambition to limit warming to **1.5°C**.
- It replaced the **Kyoto Protocol** which was an earlier agreement to deal with climate change.
- The Paris Agreement sets out a framework for countries to work together to **reduce greenhouse gas emissions, adapt to the impacts of climate change, and provide support to developing countries** in their efforts to address climate change.
- Under the Paris Agreement, **each country is required to submit and update their NDCs every 5 years**, outlining their plans for reducing greenhouse gas emissions and adapting to climate change.
  - NDCs are pledges made by countries to reduce their greenhouse gas emissions and to adapt to the impacts of climate change.
  - **India's updated NDCs:**

#### PM MAKES FIVE PLEDGES

- 1 India will increase its non-fossil energy capacity to 500GW by 2030
- 2 India will meet 50% of its energy requirements from renewable energy by 2030
- 3 India will reduce the total projected carbon emissions by one billion tonnes from now to 2030
- 4 By 2030, India will reduce the carbon intensity of its economy by 45% (from a previous target of 35%)
- 5 By 2070, India will achieve the target of net zero

#### WHAT IS NET ZERO?

Net zero refers to a balance where emissions of greenhouse gases are offset by the absorption of an equivalent amount from the atmosphere. Experts see net zero targets as a critical measure to successfully tackle climate change and its devastating consequences

#### PLEDGES BY TOP THREE EMITTERS

- CHINA: Beijing announced no new pledges on Monday. It previously pledged net zero by 2060.
- UNITED STATES: The US touted domestic legislation to spend \$55bn to boost renewable power and electric vehicles. It has pledged net zero by 2050.
- INDIA: The country's economy will become carbon neutral by the year 2070

Note:



# Security

## Highlights

- Common Uniform in Indian Army

- Command Cyber Operations and Support Wings

## Common Uniform in Indian Army

### Why in News?

Recently, the **Indian Army** has decided that from 1<sup>st</sup> August 2023, all officers of the rank of Brigadier and above will wear **Common Uniform** items irrespective of their cadre and appointment, in order to promote and strengthen common identity and approach.

### What is the Significance of this Decision?

- This decision will help to promote a more cohesive and integrated organizational culture within the Indian Army.
  - A standard uniform will ensure a common identity for all senior-rank officers, while **reflecting the true ethos of the Indian Army**.
- By eliminating **regimental parochialism** and promoting **a sense of common identity** and purpose among senior officers, the Army may be better able to meet the challenges of modern warfare and **adapt to changing strategic circumstances**.
  - **Regimental Parochialism** refers to loyalty towards one's regiment or corps. It is a sense of pride and attachment to one's unit that can sometimes lead to a lack of cooperation or competition with other units within the same organization.
- It may also improve the ability of senior officers to **command troops of mixed regimental lineage**.
  - By presenting a neutral uniform rather than a regimental one, senior officers **may be able to establish a more inclusive and collaborative leadership** style that transcends traditional loyalties and affiliations.

### What is the Tradition in Other Armies?

- In the British army, from where the **Indian Army derives its uniform pattern** and associated heraldry, the uniform worn by officers of the rank of Colonel and above is referred to as the **Staff uniform**, to distinguish it from the Regimental uniform.
  - The wearing of any item of Regimental uniform, particularly headdress, with the Staff uniform is not authorised.
- Among neighbouring countries, the **Pakistan and Bangladesh armies follow the same pattern as the British army**.
  - All regimental uniform items are **discarded beyond the rank of Lt Colonel**. All officers of the rank of Brigadier and above wear similar pattern uniform.

## Command Cyber Operations and Support Wings

### Why in News?

In the recent **Army Commanders' Conference (ACC)**, the Indian Army decided to operationalize the **Command Cyber Operations and Support Wings (CCOSWs)** to strengthen its **cybersecurity capabilities**, defend its networks, and counter threats in the key domain of **cyberspace**.

### What is the Army Commanders' Conference (ACC)?

- The ACC is a **biannual institutional event** that serves as a platform for **high-level conceptual discussions and decision-making on important policies for the Indian Army**.
- The latest conference discussed various agenda points, updates from the Army Headquarters, progress on **transformation initiatives**, and **budget management**.

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### What are CCOSWs?

#### ➤ About:

- The CCOSWs are a specialized unit of the Indian Army that will assist the **formations in undertaking mandated cyber security functions**.
  - The unit will be responsible for **safeguarding the networks and enhancing the cybersecurity posture** of the Indian Army.
- They will also facilitate better **utilization of modern communication systems and networks within the Indian Army**.

#### ➤ Importance:

- The migration towards **network centricity and increased reliance on modern communication systems** makes the CCOSWs important.
  - The CCOSWs will help the Indian Army counter their adversaries in the **grey zone and their cyber warfare**. And to stay ahead of its **adversaries in terms of cybersecurity**.
- The CCOSWs will be instrumental in maintaining the **confidentiality, integrity, and availability of critical information**.
- The CCOSWs will ensure that the Indian Army's communication networks are **secure from cyber-attacks**. And will be responsible for identifying and **mitigating cyber threats to the Indian Army's networks**.

### What Were the Other Key Decisions Made in ACC?

#### ➤ Training and Technology Infusion:

- Nominating lead directorates and test bed formations to evolve optimal employment philosophies and facilitate better **modern communication systems and networks across the force**.

#### ➤ Force Structuring and Optimization:

- Quantifying progress on the ongoing transformational initiatives in the key domains of **force structuring and optimization, modernization and technology infusion, processes and functions, human resource management, and jointness and integration**.
- Deliberating upon the efficient implementation of the **Agnipath Scheme**.
- Transitioning from the existing (5-year) **1+3+1 years Technical Entry Scheme (TES) model to (4-year) 3 + 1 TES model** from January 2024 onwards.
  - The current five-year TES model for officer entry as B.Tech graduates has been in place since 1999.
    - Under the current model, **1 year of military training is imparted**, followed by **3 years of B.Tech degree at Cadet Training Wings (CTWs)** and **1 year at one of the three engineering colleges of the Army**.
  - The Upcoming new model will have **3 years of technical training at CTWs**, followed by **1 year of Basic Military Training (BMT)**.
    - The new model has received **AICTE approval in March 2023**.

#### ➤ Paralympic Events:

- Identifying and training selected motivated soldiers for **paralympic events**.



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# Art and Culture

## Highlights

- India's Climate and Weather Trends

## India's Climate and Weather Trends

### Why in News?

Although India has received some rain recently, experts predict that the year 2023 will be hotter and drier.

- The **Indian Meteorological Department (IMD)** has predicted a normal monsoon, but the development of **El Nino** could lead to a reduction in monsoon rainfall.
- Additionally, the **IMD has released data on fatalities caused by extreme weather events**, marking the first time they have done so.

### What is the Current Situation in India?

- **Uneven Rainfall Distribution:**
  - Despite the recent showers, the entire country has received ample rainfall, except for the **northeastern states, Jharkhand, and West Bengal**.
  - Some areas in Maharashtra, Gujarat, Uttar Pradesh, and Madhya Pradesh have experienced up to **15 times more rainfall than expected** due to various local weather phenomena.
- **El Nino and Global Warming:**
  - The **IMD** has predicted normal monsoon, but the development of **El Nino** could **suppress rainfall over India**.
  - Globally, 2023 is expected to be **one of the top four warmest years on record due to the rapid development of the El Nino event**, which has an overall warming impact on the planet.
- **India's Warming Trend:**
  - **India's warming trend is slightly lower than the global average**, with the year 2022 being 1.15 degree Celsius warmer than pre-industrial times.

- The warming over India is not uniform across regions. Some states like **Himachal Pradesh, Goa, and Kerala** have become much hotter than others, while eastern states such as **Bihar, Jharkhand, and Odisha** have experienced the least warming.
- Sea surface temperatures in the tropical **Indian Ocean** have risen by almost one degree Celsius between 1950 and 2015.

### What do the Climate Models Say About the Impact of Upcoming El Nino?

- **Weak Monsoon for India:** The development of an El Nino in May or June 2023 may cause a weakening of the **southwest monsoon season**, which brings around 70% of the total rainfall India receives and on which most of its farmers still depend.
  - However, sub-seasonal factors such as the **Madden-Julian Oscillation (MJO)** and monsoon low-pressure systems can temporarily enhance rainfall in some parts as witnessed in the year 2015.
- **Hot Temperatures:** It may also cause **heatwaves** and **droughts** in India and other regions around the world such as South Africa, Australia, Indonesia and the Pacific Islands.
- **Heavier Rainfall in the West:** It brings heavy rainfall and flooding to other regions such as California in the United States and could cause **bleaching and death of coral reefs**.
- **Rising Global Average Temp:**
  - The El Nino in 2023 and going into 2024 may push the global average temperature towards 1.5°C warmer than the preindustrial average.
  - The warming of the oceans is also one of the major impacts of an El Nino event.
    - This is when ocean heat content is already at a record high, according to the **World Meteorological Organization (WMO)**.

Note:



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### Which Weather Event Causes the Most Fatalities?

- **Lightning strikes** caused more deaths than any other weather event in India.
  - In 2022, lightning strikes were responsible for 60% of weather event-related deaths in India (1,608 out of 2,657 recorded deaths).
- Floods and extreme rainfall events claimed 937 lives.
- The actual number of casualties could be higher, as IMD and state governments relied on media reports to compile the list.

DEATHS CAUSED BY EXTREME WEATHER EVENTS	
Lightning	1,608
Floods and Heavy Rains	917
Cyclones	6
Snowfall	33
Gale	8
Heat Wave	30
Cold Wave	1
Dust Storm	22
Thunderstorm	32
Based on data from 29 states	

**Total  
2,657**

### What are India's Climate Change Mitigation Initiatives?

- **National Action Plan on Climate Change (NAPCC):**
  - Launched in 2008 to address climate change challenges in India.

- Aims to achieve low-carbon and climate-resilient development for India.
- There are **8 national missions** forming the core of the NAPCC which represent multi-pronged, long term and integrated strategies for achieving key goals in climate change. These are-
  - **National Solar Mission**
  - **National Mission for Enhanced Energy Efficiency**
  - **National Mission on Sustainable Habitat**
  - **National Water Mission**
  - **National Mission for Sustaining the Himalayan Ecosystem**
  - **National Mission for A Green India**
  - **National Mission for Sustainable Agriculture**
  - **National Mission on Strategic Knowledge for Climate Change.**

- **Nationally Determined Contributions (NDC):**
  - India's commitments to reduce greenhouse gas emissions and adapt to climate change.
  - Pledged to **reduce the emissions intensity of GDP by 45%** by 2030 from 2005 levels and generate **50% of electricity from non-fossil fuel sources by 2030.**
  - Pledged to create additional carbon sink and **achieve net zero emissions by 2070.**
- **National Adaptation Fund on Climate Change (NAFCC):**
  - Established in 2015 to provide financial assistance to state governments for implementing adaptation projects in various sectors.
- **State Action Plan on Climate Change (SAPCC):**
  - Encourages all states and union territories to prepare their own SAPCCs based on their specific needs and priorities.
  - SAPCCs outline strategies and actions for addressing climate change at the sub-national level.
  - Aligned with the objectives of the NAPCC and the NDC.



Note:



# Miscellaneous

## Highlights

- Target Olympic Podium Scheme
- SAKSHAM- LMIS
- Gallantry Awards
- 36th CISO Deep-Dive Training Programme
- BRO Celebrates 64th Raising Day
- BizAmp-Amplifying Businesses of Northeast Region
- World Press Freedom Index 2023

## Target Olympic Podium Scheme

### Why in News?

Olympian and World Championship silver medallist archer **Atanu Das** has been re-introduced in the **Target Olympic Podium Scheme (TOPS)**.

- Other big names to be included in TOPS are rifle shooter **Mehuli Ghosh** and 15-year-old **Tilottama Sen**, who won **bronze** in 10m air rifle event at **International Shooting Sport Federation World Cup 2023** held in Cairo, Egypt.
- A total of **27 new names were inducted in the TOPS Core and Development lists** which now takes the total number of **TOPS athletes to 270** (101 in Core, 169 in Development).

### What is the Target Olympic Podium Scheme (TOPS)?

- **About:**
  - To improve India's performance at **Olympics and Paralympics**, the **Ministry of Youth Affairs and Sports (MYAS)** started the Target Olympic Podium Scheme (TOPS) in **September 2014**.
    - This was revamped in **April 2018** to establish a technical support team for **managing the TOPS athletes and providing holistic support**.
- **High Priority Sports:**
  - The **Ministry of Youth Affairs & Sports** is responsible for **appointment of TOPS members** with emphasis on ensuring representation from '**High-Priority**' sports (**Archery, Badminton, Boxing, Hockey, Shooting and Wrestling**).

### Recent Success:

- The TOPS sponsored athletes gained relative success at the **2016 Rio Olympics** and the **2018 Commonwealth Games**.
  - **P V Sindhu and Sakshi Malik** captured **silver and bronze** in Badminton and Wrestling respectively at the **2016 Rio Olympics**.
  - In the 2016 **Paralympic Games**, the **TOPS Athletes won 2 Gold, 1 Silver and 1 Bronze** demonstrating the effectiveness of the Scheme.
- In the Commonwealth Games, out of the 70 athletes who won medals at the, **47 of them were supported under the TOP Scheme**.

### Mission Olympic Cell:

- The **Mission Olympic Cell** is a dedicated body created to assist the athletes who are selected under the TOP Scheme.
  - The MOC is under the Chairmanship of the **Director General, Sports Authority of India (DG, SAI)**.

### National Sports Development Fund (NSDF):

- The **National Sports Development Fund (NSDF)** was established in November, 1998 under Charitable Endowments Act, 1890 with the aim of promotion of **sports and games in the country**.
- **NSDF** has been vital in the working of TOPS across disciplines.

### Upcoming Olympic Events:

- **Summer Olympics 2024: Paris, France**
- **Winter Olympics 2026: Milan-Cortina d'Ampezzo, Italy**
- **Summer Olympics 2028: Los Angeles, USA**
- **Summer Olympics 2032: Brisbane, Australia**

Note:

### **What are the Government Initiatives Related to Promotion of Sports?**

- **Samagra Shiksha Abhiyaan**
- **Fit India Movement**
- **Khelo India**
- **SAI Training Centers Scheme**
- **National Sports Talent Search Portal**
- **National Sports Awards Scheme**
- **National Youth Festival**

## **SAKSHAM- LMIS**

### **Why in News?**

The **Union Health Ministry** has introduced the **SAKSHAM** (Stimulating Advanced Knowledge for Sustainable Health Management), a **Learning Management Information System (LMIS)** of the **Ministry of Health and Family Welfare**.

### **What is SAKSHAM?**

- **About:**
  - SAKSHAM serves as a **comprehensive digital learning platform** for offering online training and medical education to all healthcare professionals across the country.
- **Developed By:**
  - **National Institute of Health & Family Welfare (NIHFW)**.
- **Objective:**
  - The platform aims to ensure **inclusive capacity building among health professionals**, ranging from those **working in rural and remote primary health centers** to those in **metropolitan cities' tertiary care** and corporate hospitals.
- **Coverage:**
  - Currently, SAKSHAM: LMIS hosts over **200 public health and 100 clinical courses**, accessible through online mode.
- **Prospects:**
  - Saksham will be developed as a **centralized resource repository for training and teaching material**.
    - It will also act as a **central database of trained healthcare professionals** in the country.

### **What is the National Institute of Health & Family Welfare?**

- **Establishment:** NIHFW was established on **9<sup>th</sup> March 1977**, under the autonomous Ministry of Health and Family Welfare, Government of India.
- **Mandate:** NIHFW's primary mandate is to act as a **think tank** for the **promotion of health and family welfare programs in the country**.
  - It is also the premier organization for capacity building through training of health professionals, frontline health workers such as **Accredited Social Health Activists (ASHAs)** and **Auxiliary Nurse Midwife (ANMs)** and other central and state officers & healthcare staff.

## **Gallantry Awards**

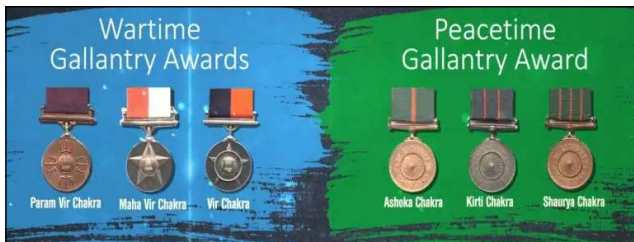
### **Why in News?**

Recently, **President of India** presented **gallantry awards** to 37 personnel of the armed forces, paramilitary, and police forces for their bravery and valour in the line of duty. Eight personnel were conferred with the **Kirti Chakra**, and 29 personnel received the **Shaurya Chakra**.

### **What are the Gallantry Awards in India?**

- Post-Independence, the **first three gallantry awards** namely **Param Vir Chakra**, **Maha Vir Chakra**, and **Vir Chakra** were instituted by the government of India on **26<sup>th</sup> January 1950** and were deemed to have effect from **15<sup>th</sup> August 1947**.
- Thereafter, three other **gallantry awards** — the **Ashoka Chakra Class-I**, the **Ashoka Chakra Class-II**, and the **Ashoka Chakra Class-III** — were instituted in **1952** and were deemed to have effect from **15<sup>th</sup> August 1947**.
  - These awards were renamed **Ashoka Chakra**, **Kirti Chakra**, and **Shaurya Chakra** respectively in **January 1967**.
- **Order of precedence of these awards** is the **Param Vir Chakra**, the **Ashoka Chakra**, the **Mahavir Chakra**, the **Kirti Chakra**, the **Vir Chakra**, and the **Shaurya Chakra**.

Note:



- The gallantry awards are **announced twice in a year** — first on the occasion of the **Republic Day** and then on the occasion of the **Independence Day**.

### What is Kirti Chakra?

- **About:**
  - It is the **peacetime equivalent of the Maha Vir Chakra**, the **second-highest peacetime gallantry award**.
  - Awarded for displaying conspicuous gallantry, indomitable courage, and extreme devotion to duty, or self-sacrifice away from the field of battle.
- **Eligibility and Design:**
  - Open to **civilians as well as military personnel**, including posthumous awards.
  - A **circular silver medal with a lotus flower in the center** and a chakra around it, suspended from a green ribbon with two orange stripes.



### What is Shaurya Chakra?

- **About:**
  - An Indian military decoration **awarded for gallantry, courageous action, or self-sacrifice** while not engaged in direct action with the enemy.
  - Represents the spirit of bravery, valor, and devotion to duty in peacetime.



### ➤ Eligibility and Design:

- Open to civilians as well as military personnel, including posthumous awards.
- **Circular bronze medal with a replica of the Ashoka Chakra**, the national emblem of India, in the center.
- Features a lotus wreath around the Ashoka Chakra symbol.
- Suspended from a green ribbon with three vertical lines.

## 36<sup>th</sup> CISO Deep-Dive Training Programme

### Why in News?

The **National e-Governance Division (NeGD)**, under its **Capacity Building scheme**, organised 36<sup>th</sup> **CISO Deep-Dive training programme** with 24 participants from Central Line Ministries and States/UTs at **Indian Institute of Public Administration, New Delhi**.

- The training program is a part of a series of workshops organised under the **Cyber Surakshit Bharat initiative**.

### What is Cyber Surakshit Bharat Initiative?

- The **Cyber Surakshit Bharat initiative** was conceptualised with the mission to spread awareness about cyber-crime and build capacities of Chief Information Security Officers (CISOs) and frontline IT officials, across all government departments.
- It was launched by the **Ministry of Electronics and Information Technology (MeitY)** in **2018** in cooperation with **National e-Governance Division (NeGD)** and various industry partners in India.

### What is CISOs Deep Dive Training?

- **About:**
  - It is the first-of-its-kind partnership between the Government and industry consortium under **Public Private Partnership (PPP) model**.
- **Objectives:**
  - Create awareness on the emerging landscape of cyber threats.
  - Provide in-depth understanding of related solutions.

Note:

- Applicable frameworks, guidelines & policies related to cyber security.
- Share best practices to learn from success & failures.
- Provide key inputs to take informed decisions on Cyber Security related issues in their respective functional area.

➤ **Participants:**

- The programme is organised for chief information security officers (CISOs) and frontline IT officials from various ministries and departments, government and semi-government organisations from central and state governments, PSUs, and banks among others.

➤ **Training:**

- NeGD provides logistic support in arranging the training programmes, whereas the industry consortium provides technical support for the training.
- The training partners from the industry are **Microsoft, IBM, Intel, Palo Alto Networks, E&Y, and Dell-EMC, NIC, CERT-In, and CDAC** are knowledge partners from the Government side.

**What are the Other Initiatives Related to Enhancing Cyber Security?**

➤ **Global:**

- **Budapest Convention on Cybercrime**
- **Internet Governance Forum (IGF)**

➤ **India-Specific:**

- **National Cyber Security Strategy 2020**
- **National Critical Information Infrastructure Protection Centre (NCIIPC)**
- **Indian Cyber Crime Coordination Centre (I4C)**
- **National Cyber Crime Reporting Portal**
- **Computer Emergency Response Team - India (CERT-In)**
- **Digital Personal Data Protection Bill 2022**
- **Defence Cyber Agency (DCyA)**
- **Digital India Bill, 2023**
- **Cyber Swachhta Kendra:** In 2017, this platform was introduced for internet users to clean their computers and devices by wiping out viruses and malware.

## **BRO Celebrates 64<sup>th</sup> Raising Day**

### **Why in News?**

**Border Roads Organisation (BRO)** celebrated its 64<sup>th</sup> Raising Day on May 07, 2023, at all its detachments across the country.

### **What are the Key Highlights of the Event?**

- The **BRO Technical Training Complex and an Automated Driving Track** were inaugurated.
  - These facilities will enhance the training standards of the BRO personnel and help them to be better prepared for various challenges.
- **BRO-centric software, developed as part of 'Digital India' initiative** were also launched on the occasion.
  - These softwares have been developed to **automate various aspects of the functioning of the BRO** for smoother & faster output and increased transparency.
- An MoU was signed for construction of indigenous **Class 70R Double Lane Modular Bridges** which will help in bolstering the operational preparedness of the **Armed Forces**.
  - Class 70R Double Lane Modular Bridges are **pre-engineered steel bridges** designed to carry vehicular traffic on two lanes.
- The event also witnessed flagging-in '**Ekta Avam Shradhanjali Abhiyaan**', a multi-modal expedition which began on April 10, 2023.

### **What is Ekta Avam Shradhanjali Abhiyaan?**

- It was launched to **commemorate the sacrifices and contribution of its Karmyogis in nation building** as a part of 64th BRO Day Celebrations.
- It is a multi-model expedition; the team comprises of Motorcycles and Motor cars which started from North East and Northern part of the country.
  - The motorcycle leg of the expedition commenced on 14 Apr 2023, **from Kibithu, Arunachal Pradesh**.
- Expedition members from 18 Projects **had collected Soil, Water and Saplings from 108 remote border locations** and the same were planted at BRO Alma Mater, BRO School and Centre, Pune.

Note:



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### What is Border Road Organisation?

#### ➤ About:

- BRO was conceived and **raised in 1960 by Pandit Jawaharlal Nehru** for coordinating the speedy development of a **network of roads in the North and the North Eastern border** regions of the country.
- It works under the administrative control of the **Ministry of Defence**.
- It has diversified into a large spectrum of construction and development works comprising **airfields, building projects, defence works and tunneling** and has endeared itself to the people.

#### ➤ Achievements so far:

- The BRO, in more than six decades, **has constructed over 61,000 kms of roads, over 900 Bridges**, four Tunnels and 19 airfields under challenging conditions along India's borders and **in friendly foreign countries, including Bhutan, Myanmar, Afghanistan and Tajikistan**.
- In 2022-23, the BRO completed 103 infrastructure projects, the most by the organisation in a single year.
  - These include construction of **Shyok Bridge in Eastern Ladakh** and **Steel Arch Siyom Bridge of Load Class 70 in Arunachal Pradesh** on Along-Yinkiong Road.

## BizAmp-Amplifying Businesses of Northeast Region

### Why in News?

Recently, an outreach program named **BizAmp** was organized by the **Ministry of MSME** in association with **NSIC Venture Capital Fund Limited (NVCFL)** under its **Self-Reliant India (SRI) Fund** at Dimapur Nagaland.

### What is BizAmp?

- BizAmp is the **first outreach program** in the **Northeast Region of the country** which focused on **maximizing capital benefits through NVCFL's SRI Fund**
- The program aims to **empower micro, small, and medium enterprises (MSMEs)** from the **Northeastern States** and **amplify their businesses** utilizing benefits under the **SRI Fund**.

- The event included dedicated a platform for beneficiary MSMEs to present their **stories and inspire aspiring MSMEs**.
- The event showcased concerted efforts of State and Central government with the presence of Industry Secretaries from various northeastern states who provided insights about various policies designed for MSMEs to assist them in their growth.

### What is SRI Fund?

#### ➤ About:

- The fund was started as part of the government's flagship '**Atmanirbhar Bharat**' program to provide funding support to MSMEs in India.

#### ➤ Aim:

- The fund aims to **help MSMEs grow faster, become national and international champions**, and make India self-reliant by producing relevant technologies, goods, and services.

#### ➤ SRI Fund Structure:

- The SRI Fund is **an investment strategy that functions as a Fund of Funds**, investing in other funds rather than directly in companies. Here is how the SRI Fund is structured:
  - The fund operates through the mother-fund and daughter-fund structure.
  - The overall corpus of the SRI fund (Mother fund) is INR 10,006 crore, with the Government of India as the anchor investor.
  - The daughter funds are **Securities and Exchange Board of India (SEBI)**-registered Category I and Category II **Alternate Investment Funds (AIFs)**.
  - Daughter funds are mostly venture capital and private equity funds.
  - Daughter funds invest in MSMEs covered under the Micro, Small & Medium Enterprises Development Act, 2006.

#### ➤ Managing Authority:

- The SRI fund is being managed by **NVCFL**.
  - NVCFL is registered with the SEBI as a Category II AIF under the provisions of the SEBI (AIF) Regulations, 2012.

#### ➤ Impact on MSMEs:

- The SRI Fund provides growth capital to MSMEs through equity/quasi-equity/equity-like structured instruments.

Note:



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### What is the Importance of Empowering MSMEs in Northeast India?

- Nurturing the MSME sector is important for the **economic well-being of the nation**.
- Empowering MSMEs in Northeast India is important for **enhancing their contribution to the regional and national economy** and achieving the vision of self-reliance. MSMEs can create jobs, boost exports, foster innovation, and support rural development.
- Empowering MSMEs in the region **benefits local communities, especially women and youth**.

### What are India's Initiatives in Empowering MSMEs in Northeast India?

- The **Northeast MSME Conclave** was organized in Guwahati to promote entrepreneurship and trade opportunities, with a focus on building infrastructure, providing market linkages, setting up MSME parks and tool rooms, and introducing a policy exclusively for the Northeast.

## World Press Freedom Index 2023

### Why in News?

On the **World Press Freedom Day (WFPD)** (3<sup>rd</sup> May), the **World Press Freedom Index 2023** was published by **Reporters Without Borders (RSF)**.

- India ranked **161<sup>st</sup>** among the **180** countries with a score of 36.62. In 2022, India's rank was 150.

### What is World Press Freedom Day?

- **About:**
  - The day was proclaimed by the **UN General Assembly** in 1993, following the recommendation of **UNESCO's** General Conference in 1991.

### OVERALL RANKING

**161/180**

Where India stands now

India's position in '22

**150/180**

### HOW NEIGHBOURS FARE

Bhutan – **90**

Sri Lanka – **135**

Pakistan – **150**

Afghanistan – **152**

Bangladesh – **163**

### IN SECURITY INDICATOR

**172/180**

Only **China, Mexico, Iran, Pakistan, Syria, Yemen, Ukraine & Myanmar** below India

- The day also marks the **1991 Windhoek Declaration (adopted by UNESCO)**.
- To **raise public awareness of the value of press freedom**, the importance of protecting journalists' rights, and the importance of encouraging independent, free media.

### ➤ Theme for 2023:

- 'Shaping a Future of Rights: Freedom of Expression as a Driver for All Other Human Rights'

### What are the Key Highlights of the World Press Freedom Index 2023?

#### ➤ Ranking of Countries:

##### ○ Top and Worst Performers:

- **Norway, Ireland and Denmark** occupied the top three positions.
- **Vietnam, China and North Korea** were at the bottom on the list.

##### ○ India's Neighbours:

- **Sri Lanka** also made significant improvement on the index, ranking 135th this year as against 146<sup>th</sup> in 2022.
- **Pakistan** is ranked at 150<sup>th</sup> position.
- The situation has gone from 'problematic' to 'very bad' in three other countries: Tajikistan (down 1 at 153<sup>rd</sup>), India (down 11 at 161<sup>st</sup>) and Turkey (down 16 at 165<sup>th</sup>).

#### ➤ India's Performance Analysis:

- India's position has been **consistently falling in the index since 2016** when it was ranked 133.
- The reasons behind the fall in ranking is the **increased violence against journalists and a politically partisan media**.
- The other phenomenon that **dangerously restricts the free flow of information is the acquisition of media outlets by oligarchs** who maintain close ties with political leaders.
- The organisation asserts that **many journalists in India are forced to censor themselves** due to extreme pressure.

### What is the World Press Freedom Index?

#### ➤ About:

- It has been published every year since 2002 by **Reporters Without Borders** or **Reporters Sans Frontieres (RSF)**.

Note:



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- RSF is an independent **NGO** based in Paris that has **consultative status** with the **United Nations**, **UNESCO**, the **Council of Europe**, and the **International Organisation of the Francophonie (OIF)**.

- OIF is a 54 french speaking nations collective.

- The **report ranks 180 countries based on their level of press freedom**, taking into account factors such as censorship, media independence, and the safety of journalists. However, it is not an indicator on the quality of journalism.

➤ **Scoring Criteria:**

- The Index's rankings are **based on a score ranging from 0 to 100** that is assigned to each country or territory, with 100 being the best possible score (the highest possible level of press freedom) and 0 the worst.

➤ **Evaluation Criteria:**

- Each country or territory's score is evaluated using **five contextual indicators**: political context, legal framework, economic context, sociocultural context and safety.

### ***What about the Freedom of Press in India?***

- The Constitution, the supreme law of the land, guarantees **freedom of speech and expression under Article 19**, which deals with 'Protection of certain rights regarding freedom of speech, etc.
- Freedom of press is not expressly protected by the **Indian legal system** but it is impliedly protected under **article 19(1) (a) of the constitution**, which states - "All citizens shall have the right to freedom of speech and expression".
- In 1950, the Supreme Court in **Romesh Thappar v. State of Madras** observed that freedom of the press lay at the foundation of all democratic organisations.
- However, **Freedom of press is also not absolute**. It faces certain restrictions under **Article 19(2)**, which are as follows-
  - Matters related to interests of the sovereignty and integrity of India, the security of the State, friendly relations with foreign States, public order, decency or morality or in relation to contempt of court, defamation or incitement to an offence.

Note:

# Rapid Fire Current Affairs

## Highlights

- Moroccan Locust Outbreak
- Bhopal First Indian City to Track Progress on SDGs
- World Migratory Bird Day
- SAMUDRA SHAKTI - 23
- National Technology Day 2023
- Jal Shakti Abhiyan: Catch the Rain 2023 Campaign
- ISSF World Cup, Baku
- National MSME Council Meet
- Shanghai Cooperation Organisation Startup Forum 2023
- Men's World Boxing Championships
- Santiniketan
- April 2023: Fourth Warmest April Globally
- Swachh Bharat Mission Grameen Phase II
- Persona Non Grata
- Rabindranath Tagore, Maharana Pratap, and Gopal Krishna Gokhale
- Sittwe Port
- Fertilizer Flying Squads
- IBM and NASA Create Geospatial Model
- Indian Air Force Heritage Centre
- Paralakhemundi Railway Station
- MoHUA and MoR jointly Signed MoU with JICA for Project SMART
- ALH (Advanced Light Helicopters) DHRUV
- Malcha Mahal
- Washington Declaration
- World Pulmonary Hypertension Day
- Cyclone Mocha
- New President of World Bank
- Ekatha Harbour
- World Press Freedom Prize
- ASEAN-India Maritime Exercise 2023
- Government to Ease Life for Gay Couples
- Organ Donation and Transplantation Manual
- RVNL Gets Navratna Status
- Successful Test Launch of StarBerrySense
- Uganda Passes Anti-LGBTQ
- National Manufacturing Innovation Survey
- Flash Floods in the Horn of Africa
- Underground Ammunition Storage Facility
- Successful Trial of Air Droppable Container
- India's First Undersea Tunnels
- Supreme Court Orders FIRs on Hate Speech
- India's Core Sector Growth Slows

## Moroccan Locust Outbreak

The **Moroccan locust outbreak** in Afghanistan's **wheat-producing regions** is posing a significant threat to the **country's food security and economy**. The outbreak, affecting eight provinces, is expected to destroy **700,000-1.2 million tonnes of wheat**, equivalent to a **quarter of the annual harvest**. If left untreated, the locust population could multiply by a hundredfold in the next year, exacerbating the food security crisis in Afghanistan and **neighboring countries**.

The Moroccan locusts are known as the **most economically damaging plant pests** worldwide. The impact extends beyond the wheat crop, as the Moroccan locusts consume over 150 species of plants, including tree crops, pastures, and various food crops grown in Afghanistan.



Moroccan locusts, scientifically known as "**Dociostaurus maroccanus**". They belong to the family **Acrididae**, which includes **grasshoppers and locusts**. These locusts are known for their **ability to form swarms**, causing

Note:



significant agricultural damage in the regions they infest. They are **medium to large-sized insects**, with adults typically measuring around **4-5 centimeters in length**. They have a robust body, short antennae, and powerful hind legs adapted for jumping. The coloration of their bodies can vary, ranging from **greenish brown to reddish-brown**.

Read more: **Climate Change & Locust Infestations**

## Bhopal First Indian City to Track Progress on SDGs

Bhopal has taken a significant step towards localizing the **United Nations-mandated sustainable development goals (SDGs)**. It has become the **first city in India to adopt voluntary local reviews (VLR)** to demonstrate its commitment and capacity to achieving the SDGs. The SDGs localisation involves translating the **global agenda of the 2030 Agenda** for Sustainable Development into **actionable local plans** that contribute to the overall achievement of the goals. Bhopal's VLR is the result of collaboration between the **Bhopal Municipal Corporation, UN-Habitat, and various local stakeholders**, aiming to showcase the city's efforts towards sustainable and inclusive urban transformation. The review incorporates both quantitative and qualitative approaches, including a qualitative mapping of 56 developmental projects.



In 2015, all 193 member states of the **UN adopted the Agenda 2030**, which consists of **17 SDGs and 169 targets**. Member states report their progress towards these goals through **voluntary national reviews (VNRs)** submitted to the **UN's high-level political forum (HLPF)**. Recognizing the importance of local and regional

engagement, cities and regions have increasingly undertaken their own subnational reviews known as VLRs. Although VLRs do not have an official basis in the 2030 Agenda or other intergovernmental agreements, they have proven useful in facilitating local action. **New York City was the first to present its VLR to the HLPF in 2018**, and as of 2021, 33 countries had made 114 VLRs or similar review documents publicly available.

Read more: **Sustainable Development, Global Sustainable Development Report, 2022**

## World Migratory Bird Day

**World Migratory Bird Day (WMBD)** was observed on **May 13, 2023**, with the theme "**Water and its importance for Migratory Bird**". In the run-up to **World Environment Day**, several mass mobilization activities were organized across India under the Mission LiFE program. These events aimed to underscore the importance of **biodiversity conservation** and environmentally friendly habits at the community level. Participants took the **LiFE pledge** to adopt **sustainable practices and reduce their environmental impact**.

**WMBD is a bi-annual global campaign** aimed at raising awareness about **migratory birds, promoting their conservation**, and emphasizing the importance of preserving their habitats. Celebrated on the **second Saturday in May and October each year**, the campaign is organized through a collaborative partnership between **two United Nations treaties, the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and the African-Eurasian Migratory Waterbird Agreement (AEWA)**, along with the non-profit organization Environment for the Americas (EFTA).

Read more: **World Migratory Bird Day 2022**

## SAMUDRA SHAKTI - 23

The **4th edition of the India-Indonesia Bilateral exercise, Samudra Shakti-23**, commenced as **INS Kavaratti**, an indigenously designed and built **ASW Corvette**, arrived in Batam, Indonesia. Taking place from May 14-19, 2023, the exercise aims to enhance interoperability, jointness, and mutual cooperation between the Indian and Indonesian navies. Alongside INS Kavaratti, an Indian Navy **Dornier Maritime Patrol aircraft**

Note:



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and Chetak helicopter are also participating. At the same time, the Indonesian Navy is represented by KRI Sultan Iskandar Muda, CN 235 Maritime Patrol Aircraft, and AS565 Panther Helicopter.

The Other Exercise between India and Indonesia is **Garuda Shakti**, a joint military exercise. And **India-Indonesia CORPAT** is a coordinated patrol between the navies of India and Indonesia, aimed at enhancing maritime security and cooperation in the Andaman Sea and the Straits of Malacca.



Read more: **38th India-Indonesia CORPAT**

## National Technology Day 2023

The Prime Minister of India recently inaugurated the **National Technology Day 2023** program. The event marked the beginning of the **celebration of the 25<sup>th</sup> year of National Technology Day**, which would be held from **May 11<sup>th</sup> to May 14<sup>th</sup>** featuring dedicated multiple projects related to scientific and technological advancement in the country, with a total worth of more than **Rs 5,800 crore**. The theme of the event was **"School to Start-ups - igniting young minds to innovate"**.

The projects for which the foundation stone was laid include **Laser Interferometer Gravitational Wave Observatory - India (LIGO-India)** in Hingoli, the **Homi Bhabha Cancer Hospital and Research Centre** in Jatni, Odisha, and the **Platinum Jubilee Block of Tata Memorial Hospital** in Mumbai.

The PM also highlighted the significance of **May 11<sup>th</sup>** in India's history, as it commemorates the day when

**India's scientists achieved a remarkable feat in Pokhran Nuclear Testing.**

Addressing the role of technology in defence, the PM mentioned **Innovations for Defense Excellence (iDEX)** and India's goal of a self-reliant defence sector. He also highlighted advancements in the space sector, such as **SSLV and PSLV orbital platforms**, and the need to provide opportunities for youth and start-ups in this domain.

Read more: **National Technology Day, Laser Interferometer Gravitational Wave Observatory - India (LIGO-India), Pokhran Nuclear Testing**

## Jal Shakti Abhiyan: Catch the Rain 2023 Campaign

Recently, the **National Water Mission (NWM)**, Department of Water Resources, River Development and Ganga Rejuvenation (DoWR), Ministry of Jal Shakti organised a workshop- cum- orientation programme at **Dr. Ambedkar International Centre, New Delhi** for **Central Nodal Officers (CNO) and Technical Officers (TO)**, who will be visiting the 150 water-stressed districts across the nation, for ensuring effective and action-oriented implementation of the **"Jal Shakti Abhiyan: Catch the Rain" – 2023 (JSA: CTR)**.

JSA: CTR- 2023 is **4<sup>th</sup>** in the series of Jal Shakti Abhiyan launched in 2019 and aims to address **water stress in 150 districts across India** and focuses on water conservation, renovation of water bodies, bore well recharge, watershed development, and afforestation.

The 2023 campaign is being implemented from **4<sup>th</sup> March 2023 to 30<sup>th</sup> November 2023** in all the districts (rural as well as urban areas) of the country with the theme **"Source Sustainability for Drinking Water"**.

The workshop also discussed the use of **GIS technology**, data uploading, and other measures to ensure effective implementation.

Read more: **National Water Mission (NWM)**

## ISSF World Cup, Baku

**Sarabjot Singh and TS Divya** emerged as champions in the mixed team **10m air pistol** event at the **ISSF World Cup in Baku, Azerbaijan**. They defeated **Damir Mikec and Zorana Arunovic of Serbia** to claim the **gold medal**.

Note:

The ISSF World Cup is an international shooting sport competition organised by the **International Shooting Sport Federation (ISSF)**. The ISSF is the **governing body for the Olympic shooting events** and is responsible for overseeing and promoting the shooting sport on a global scale.

Read more: [ISSF World Cup](#)

## National MSME Council Meet

Recently, the **Ministry of Micro, Small, and Medium Enterprises (MSME)** organised the inaugural meeting of the **National MSME Council**, in New Delhi.

The council has been established as an **administrative and functional body to oversee coordination between central ministries and departments**, promote collaboration between the central and state governments, and monitor the progress of reforms in the MSME sector, including the **Raising and Accelerating MSME Performance (RAMP)** program.

The RAMP program launched in June 2022 aims to enhance **market access, credit availability, governance, and environmental sustainability** for MSMEs.

Read more: [Raising and Accelerating MSME Performance \(RAMP\)](#)

## Shanghai Cooperation Organisation Startup Forum 2023

India's Department of **Promotion for Industry and Internal Trade, Ministry of Commerce** recently organized the first-ever physical **Shanghai Cooperation Organization (SCO) Startup Forum** in New Delhi. This event marked the third edition of the **Startup India initiative** aimed at expanding **startup interactions amongst the SCO Member States**, promoting **innovation, generating employment**, and encouraging young talent to develop innovative solutions. The event focused on promoting **collaboration and entrepreneurship, creating common platforms**, and sharing best **practices among SCO nations**. The workshop on the '**Role of Bilateral and Multilateral Engagements in developing a startup ecosystem**' aimed to build closer ties between these nations and boost the startup ecosystem.

The SCO is a permanent **intergovernmental international organization** established in **2001**. It aims to maintain **peace, security, and stability in the Eurasian region**. The SCO consists of nine member states and is seen as a **counterweight to NATO**. Its official languages are **Russian and Chinese**. The SCO's origins can be traced back to the **Shanghai Five**, formed in 1996 with **Kazakhstan, China, Kyrgyzstan, Russia, and Tajikistan**. After Uzbekistan joined in 2001, it became the SCO. **India and Pakistan** joined in 2017, and Iran is set to become a permanent member in 2023.

Read more: [Shanghai Cooperation Organization \(SCO\) , India & Startup](#)

## Men's World Boxing Championships

Prime Minister of India has conveyed his heartfelt congratulations to **Deepak Bhorla, Hussamuddin, and Nishant Dev** for their remarkable achievement in the **Men's World Boxing Championships held in Tashkent**. They have created history by ensuring India's best-ever haul of three medals at the prestigious tournament. **Deepak Bhorla (51kg)** won silver, **Hussamuddin (57kg)** and **Nishant Dev (71kg)** won bronze medals in the semifinals.



The Men's World Boxing Championships, taking place from April 30 to May 14, 2023, in **Uzbekistan**, is a prominent event that brings together more than 400 boxers from across the globe, competing in 13 weight categories to claim victory and honor. Organized by the

Note:



**International Boxing Association (IBA)** and the **Boxing Federation of Uzbekistan**, with the support of the **Government of Uzbekistan**, the tournament not only showcases top-notch boxing skills but also serves as a platform to celebrate the **vibrant culture and warm hospitality of Uzbekistan**.

Read more: [World Women's Boxing Championships](#)

## Santiniketan

**Santiniketan**, initially built by **Debendranath Tagore** in 1863 and later expanded by his son, **Nobel laureate Rabindra Nath Tagore** which is also the location of **Visva-Bharati University**, has been recommended for inclusion in **UNESCO's World Heritage List**. The recommendation was made by the **International Council on Monuments and Sites (ICOMOS)**, based on a file submitted by the Indian government. **ICOMOS, an international cultural body headquartered in France**, is dedicated to the preservation and promotion of **global architectural and landscape heritage**. This recommendation comes as great news for India on the occasion of **Rabindranath Tagore's 162<sup>nd</sup> birth anniversary (9<sup>th</sup> May 2023)**. The formal announcement of the nomination will take place at the **World Heritage Committee meeting** in Riyadh, Saudi Arabia, in September 2023. If Santiniketan's nomination is accepted, it will become **India's 41st world heritage site** and Bengal's third after **Darjeeling Himalayan Railways(1999)** and **Sundarbans National Park (1987)**.

Read more: [Rabindra Nath Tagore](#)

## April 2023: Fourth Warmest April Globally

According to a recent analysis by the **European Union's** Earth observation program **Copernicus Climate Change Service (C3S)**, **April 2023** ranked as the **fourth warmest April globally**. The month exhibited a **temperature deviation of 0.32 degrees Celsius** above the **1991-2020 average**, showcasing a notable contrast in **European air temperatures**. C3S highlighted that above-average temperatures were observed in the **equatorial eastern Pacific**, indicating a **potential shift towards El Nino conditions**, which typically contribute to **warmer global temperatures**. Although April 2023 was slightly cooler than the record-breaking April 2016, it closely

resembled the temperatures observed in April 2017 and 2018. The analysis also revealed regional variations, with **certain areas experiencing colder-than-average conditions** while others faced **abnormal dryness or increased rainfall**.

Read more: [World Likely to See 2°C Warming by 2050](#)

## Swachh Bharat Mission Grameen Phase II

India celebrates a major milestone in its **Swachh Bharat Mission Gramin (SBM-G)** as **50% of the country's villages have achieved ODF Plus status in phase II of the mission**. ODF Plus villages sustain their **Open Defecation Free (ODF)** status while implementing **solid or liquid waste management systems**. Leading states in terms of ODF Plus villages include **Telangana, Karnataka, Tamil Nadu, and Uttar Pradesh** among the big states, and **Goa and Sikkim** among the small states.

Under the SBM-G, various initiatives have been undertaken to address waste management and improve sanitation practices. **Plastic Waste Management Units** and **waste collection sheds** have been established, promoting the **recycling of plastic waste for road construction and fuel usage**. **Bio-gas/CBG plants** and **community compost pits** have been set up to manage **organic waste** effectively, contributing to the **circular economy** and creating clean and green villages. The **GOBARdhan** initiative focuses on converting waste into resources such as **biogas and bio-slurry**, fostering **entrepreneurship**, and promoting **green energy investment**. **Grey water** management has been addressed through the construction of **soak pits and leach pits**, while faecal sludge management involves the desludging of sanitation systems and the establishment of treatment units. These comprehensive efforts have resulted in improved sanitation, reduced environmental impact, and economic benefits for the local community.



Read more: [Swachh Bharat Mission Grameen Phase-II](#)

Note:



## Persona Non Grata

Diplomatic tensions between **Canada and China** escalated as reciprocal expulsions of diplomats took place, with Canada **expelling a Chinese diplomat** and China declaring a Canadian diplomat **persona non grata**.

The concept of persona non grata finds its roots in the **Vienna Convention on Diplomatic Relations**, a treaty signed in 1961 that **governs diplomatic relations between countries**. According to Article 9 of the convention, a country has the right to declare any member of a **diplomatic staff persona non grata "at any time and without having to explain its decision."** This designation carries diplomatic significance and signifies that the person is an **unwelcome individual** whose presence in the country is prohibited.

The use of persona non grata is **not limited to diplomats alone**. It can also be applied to **foreign individuals who are not part of diplomatic missions** but whose entry or presence in a **country is deemed undesirable**. The Vienna Convention allows countries to exercise this right as a **means to express their discontent** with the actions of other nations. While the convention **does not establish specific criteria for declaring** someone persona non grata, historically, it has been used as a **form of diplomatic sanction or retaliation**.

During the **Cold War**, it was often used as a **"tit-for-tat"** measure between the **United States and the Soviet Union**, with both sides expelling each other's diplomats in response to perceived provocations. Even outside the realm of diplomacy, individuals from the entertainment industry, such as Hollywood actor Brad Pitt, have faced this designation in certain countries due to their involvement in projects deemed politically sensitive.

Read more: **Vienna Convention**

## Rabindranath Tagore, Maharana Pratap, and Gopal Krishna Gokhale

On 9th May, the **Prime Minister** paid tribute to **Rabindranath Tagore, Maharana Pratap, and Gopal Krishna Gokhale** on their birth anniversaries.

**Rabindranath Tagore**, also known as **Gurudev**, was a **prolific literary figure and polymath**, known for his

contributions to Bengali literature and music. As per Bengali Calendar, **'Rabindranath Tagore Jayanti'** is **observed on the 25<sup>th</sup> day of the Bengali month of Baishakh**, and this day is being celebrated today, May 9<sup>th</sup>, 2023. **Tagore's compositions of over 2000 songs**, called **"Rabindra Sangeet,"** and his renowned works like **Gitanjali** have left a lasting impact. As the first **non-European Nobel Prize laureate in Literature in 1913**, he became a symbol of **artistic excellence**. Tagore's philosophies and the establishment of **Vishwa-Bharati University** continue to inspire generations.

**Maharana Pratap**, born on 9<sup>th</sup> May 1540 in Kumbhalgarh, Rajasthan, was the **13<sup>th</sup> King of Mewar**. He is known for his valiant efforts in the **Battle of Haldighati** fought against the **Mughal forces in 1576**. Although he was defeated in the battle, his bravery and resilience are celebrated. Maharana Pratap's loyal horse, **Chetak**, is remembered for **sacrificing its life during the war**. Despite the defeat, Maharana Pratap later reclaimed parts of Mewar and made significant contributions to the region. He passed away on 19th January 1597, leaving behind a legacy of courage.

**Gopal Krishna Gokhale**, a prominent **social reformer** and **educationist**, was born on 9<sup>th</sup> May 1866 in present-day Maharashtra. Gokhale played a crucial role in **India's freedom movement**. He advocated for **social empowerment, education, and peaceful methods to achieve independence**. Gokhale was associated with the **Moderate Group of the Indian National Congress** and played a key role in framing the **Morley-Minto reforms of 1909**. He established the **Servants of India Society**, worked on various publications, and mentored **Mahatma Gandhi**, who considered him his political guru.

Read more: **Rabindranath Tagore, Gopal Krishna Gokhale, Birth Anniversary of Maharana Pratap**

## Sittwe Port

Recently, **India and Myanmar** jointly inaugurated the **Sittwe Port in Myanmar's Rakhine State**, marking an important milestone in enhancing **bilateral and regional trade** while also contributing to the local economy of the state.

Note:

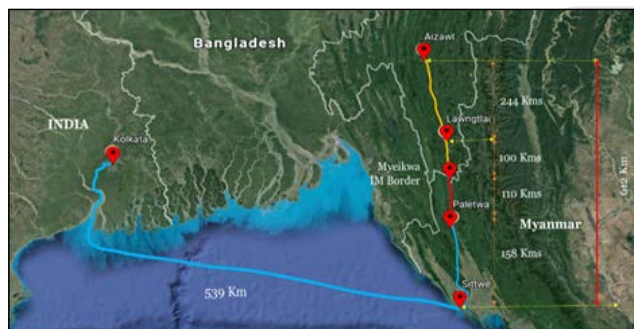


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The port's operationalization is expected to provide **greater connectivity and leads to employment opportunities**, as well as enhance growth prospects in the region. The project aims to provide an alternative connectivity route for **Mizoram with Indian ports through the Kaladan River in Myanmar**.

It includes segments such as **shipping from Haldia to Sittwe port, inland water transport from Sittwe to Paletwa via the Kaladan River, road transport from Paletwa to the Indo-Myanmar border, and further road transport to NH.54 in India**.

The Sittwe Port is part of the **Kaladan Multi-Modal Transit Transport Project**, funded by the Indian government, and will play a crucial role in linking India's **East Coast to the North-eastern states** through waterways and roads.



Read more: **India-Myanmar Relations, Kaladan Multi-Modal Transit Transport Project**

## Fertilizer Flying Squads

The **Department of Fertilizers (DoF)**, under **Union Ministry of Chemicals and Fertilizers**, has implemented a range of measures **to combat malpractices and ensure the availability of quality fertilizers for farmers in India**. These initiatives have **successfully prevented the diversion and black marketing of fertilizers** across the country.

Specialized teams called **Fertilizer Flying Squads (FFS)** have been formed to **keep a strict vigil and crack down on activities such as diversion, black marketing, hoarding, and the supply of sub-standard fertilizers**. Stringent actions – surprise inspections conducted across states/UTs and seizure of suspected urea bags – have been taken. Additionally, sample testing has been intensified to address the misuse of urea for non-agricultural purposes.

For the first time, 11 persons have been jailed under **Prevention of Blackmarketing and Maintenance of Supplies (PBM) Act 1980** for diversion and black marketing of urea in the last one year. Several other legal and administrative proceedings have also been **exercised under Fertilizer Control Order-1985**.

The measures have not only benefitted the farmers but have also **generated cross-country demand for Indian fertilizers**. By preventing the smuggling of urea across borders, neighboring countries have approached India for urea imports. DoF has also encouraged innovative practices such as the **Integrated Fertilizer Management System (iFMS)** to raise **awareness among farmers about fertilizer quality**.

Read more: **Fertiliser Consumption in India**

## IBM and NASA Create Geospatial Model

Recently, **NASA** and IBM, an American MNC, have introduced a **new geospatial model to convert satellite data into high-resolution maps of floods, fires, and other landscape changes**, providing insights into the **planet's history and future**. This collaboration aims to offer a preview of the **geospatial platform in the second half of this year**, with potential applications including assessing climate-related risks, monitoring forests for **carbon-offset initiatives**, and **developing predictive models to tackle climate change**, emphasizing that foundation models like this enhance the scalability, affordability, and efficiency of deploying artificial intelligence.

**Geospatial technology**, utilizing tools like **GIS (Geographic Information System)**, **GPS (Global Positioning System)** and **Remote Sensing** enables geographic mapping and analysis. It captures **spatial information about objects, events, and phenomena, either static or dynamic**. Static data includes road positions, earthquake events, or regional malnutrition, while dynamic data involves moving vehicles, pedestrians, or the spread of diseases. This technology aids in creating intelligent maps to **identify spatial patterns in large datasets and supports decision-making regarding the allocation of scarce resources**.

Read more: **Geospatial technology**

Note:

## Indian Air Force Heritage Centre

India's Defence Minister, inaugurated the **nation's first Indian Air Force Heritage Centre in Chandigarh**. The centre, spread across 17,000 sqft at the Government Press Building, **houses five vintage aircraft**, including the **first IAF-made patent aircraft, the Air Force 'Kanpur-1 Vintage Prototype Aircraft'**. The heritage centre also provides visitors with **cockpit exposure and experience with flight simulators**. Along with the historical significance, the centre will also **showcase various rescue operations being undertaken by the IAF** all over the country and the initiatives undertaken by the Air Force Family Welfare Association for the benefit of the families of air warriors.

Read more: **INDIAN AIR FORCE DAY**

## Paralakhemundi Railway Station

The **Indian National Trust for Art and Cultural Heritage (INTACH)** has opposed the **railway ministry's decision to demolish the heritage station at Paralakhemundi**, one of the **oldest railway stations in Odisha, built in 1899 by the then royals**. The station is being redeveloped, and a new building is being constructed that **overshadows the existing heritage structure**. INTACH has requested to give the **old station a heritage tag and preserve it as it is**.

The **INTACH is a non-profit organization based in India**, founded in 1984 with the aim of **conserving and preserving India's cultural heritage**. The organization works towards promoting awareness about India's diverse cultural heritage, protecting and conserving historic buildings, monuments, and sites of archaeological importance, and supporting traditional art forms and crafts.

## MoHUA and MoR jointly Signed MoU with JICA for Project SMART

The **Ministry of Housing & Urban Affairs and Ministry of Railways**, in collaboration with the **Japan International**

**Cooperation Agency (JICA)**, have signed an **MoU for 'Station Area Development along Mumbai-Ahmedabad High Speed Rail' (Project-SMART)**. This project aims to develop the **surrounding areas** of Mumbai-Ahmedabad High-Speed Railway (HSR) stations **to improve accessibility and convenience for commuters and other stakeholders** and to **promote economic activities** in the vicinity of station areas. The project will enhance the institutional capacity of state governments, municipal corporations, and urban development authorities to plan, develop and manage the surrounding areas of MAHSR stations.

The MoU covers **four HSRs: Sabarmati, Surat, Virar, and Thane**. **Surat, Virar, and Thane are greenfield developments** while **Sabarmati is a brownfield development**.

The MoHUA, Gujarat, Maharashtra, and JICA are organizing seminars and field visits. The goal is to prepare **Station Area Development Plans and a model handbook for Transit Oriented Development**. The handbook will contain methodologies adopted in Japan, India, and other countries.

## ALH (Advanced Light Helicopters) DHRUV

The three defense services and the **Coast Guard** had all grounded their ALH fleets after a Navy ALH-MkIII was ditched at sea on March 8, 2023, followed by a Coast Guard ALH also suffering an incident.

ALH Dhruv is a **multi-role, twin-engine, utility, and advanced light helicopter** designed and developed by the **Hindustan Aeronautics Limited (HAL)**. The major variants of ALH Dhruv are:

- Mk-I
- MK-II & Mk-III
- MK-III Maritime Role (Navy/ Coast Guard)
- MK-IV Armed version

**Dhruv MkIII** is fitted with modern surveillance radar and electro-optical equipment, which enable them to undertake **the role of maritime reconnaissance in addition to providing long-range Search and Rescue**, both by day and night. In addition to special operations capabilities, ALH MK III is also fitted with a heavy machine gun to undertake constabulary missions.

Read more: **Dhruv MK III: Advanced Light Helicopter**

Note:



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## Malcha Mahal

The Delhi Tourism Department has launched its much awaited 'haunted walks', for which the **Malcha Mahal** was chosen as the first destination of the journey.

The Malcha Mahal or Wilahat Mahal is a **Tughlaq-era hunting lodge, built by Feroz Shah Tughlaq** in the 14th century. It is situated 1.5 km from the main road, deep inside a forest in Chanakyapuri, Delhi. It is named after Malcha Marg, which houses the elite of the city, including diplomats, businessmen and authors.

**Feroz Shah Tughlaq was a Sultan of Delhi from the Tughlaq dynasty who ruled from 1351 to 1388.** He is more famous for commissioning buildings of architectural shapes that were seen as unconventional during his era. He was also considered the father of **the irrigation system in India by the British for channelizing rivers to provide water through canals** to a large part of the country.

Read More: **Malcha Mahal**

## Washington Declaration

The **Washington Declaration signed by South Korea and U.S** aims to reinforce the **strategic partnership** between the two countries against **regional aggression by North Korea**. Prompted by North Korea's successful launch of the **Hwasong-8 solid-fuel intercontinental ballistic missile (ICBM)**, the agreement outlines cooperation towards deterrence, including deploying an **American nuclear ballistic submarine** in the **Korean peninsula**, forming a **nuclear consultative group**, and providing South Korea with **intelligence regarding nuclear advancements**. However, South Korea has reaffirmed its commitment to the **non-proliferation Treaty** and would not **venture into creating its own nuclear capabilities**.

The U.S. has been reluctant to allow South Korea to develop their own nuclear arsenal due to concerns about controlling global nuclear arms production, and the assurance that the **U.S. and its nuclear weapons would protect its allies** aligns with the larger goal of non-proliferation.

China and North Korea have criticized the agreement, while the South Korean public is skeptical about U.S. support, with a majority wanting to build their own nuclear weapons as a deterrence measure.

Read more: **Non-Proliferation Treaty**

## World Pulmonary Hypertension Day

World Pulmonary Hypertension Day is an annual event observed on **May 5<sup>th</sup>** to **raise awareness about pulmonary hypertension (PH) and support those living with this condition**. The day originated in Madrid, Spain in 2012, where a program and scientific symposium were held to bring together patient associations, disease organizations, and scientific societies. May 5th was chosen because it marks the **anniversary of the first child's death in Spain from pulmonary hypertension caused by toxic rapeseed oil**.

This year's **World Pulmonary Hypertension Day 2023** theme is **"Together We Are Stronger,"** emphasizing the importance of coming together to raise awareness, support patients and their families, and advocate for increased access to care and treatments.

**PH is a type of high blood pressure** that affects the **arteries in the lungs and the right side of the heart**. PH can be caused by various factors, including **genetics, certain medical conditions, and exposure to toxins**. Symptoms of PH may include **shortness of breath, fatigue, chest pain, and fainting**.

## Cyclone Mocha

The **India Meteorological Department (IMD)** has issued a warning that a cyclonic circulation is likely to develop over the **southeast Bay of Bengal** around 6<sup>th</sup> May 2023. IMD has calculated that a **low-pressure area is expected to take shape**, which is usually a precursor to the development of a cyclone. According to IMD's preliminary analysis based on its weather models, the cyclone could potentially grow to a **'severe cyclonic storm'**. This would be the **first cyclone to form this year** and will be named **Cyclone Mocha**, proposed by Yemen after the **Yemini city Mocha (Mokha) located on the Red sea coast**. The naming of this cyclone was done as per the decree issued by the **World Meteorological Organisation (WMO)**, which states that each cyclone must be named to avoid confusion in instances where **multiple systems operate in one location**.

A cyclone is a weather phenomenon characterized by a **low-pressure center** and strong **winds circulating**

Note:



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around it. It can cause flooding, storm surges, and landslides, resulting in loss of life and damage to property. Cyclones can be classified as **tropical cyclones**, **extratropical cyclones**, and **polar lows**, depending on the location and weather conditions.



Read more: [Cyclone](#)

## New President of World Bank

The **World Bank** has announced that **Ajay Banga** has been selected as the **new President of the organization**, for a **five-year term starting 2<sup>nd</sup> June 2023**. The selection process for the new President of the World Bank is transparent and merit-based, allowing any national of the Bank's membership to be proposed for the position. In addition to being the President of the World Bank Group, Banga will also serve as the Chair of the Executive Directors Board of the **International Bank for Reconstruction and Development (IBRD)** and as the ex-officio Chair of the Board of Directors of the **International Development Association (IDA)**, **International Finance Corporation (IFC)**, **Multilateral Investment Guarantee Agency (MIGA)**, and **Administrative Council of the International Centre for Settlement of Investment Disputes (ICSID)**.

Read more: [World Bank](#)

## Ekatha Harbour

Recently, India and Maldives marked a major step in their growing defence cooperation by launching the construction of a harbour- 'Ekatha Harbour' for the Coast Guard of the Maldives National Defence Force (MNDF) at Sifavaru in Uthuru Thila Falhu (UTF) atoll (a few miles northwest of Male).

The development of the coast guard is **one of the biggest grant-in-aid projects of India**. The UTF Harbour Project was announced in 2021.

Maldives is among India's key maritime neighbours in the **Indian Ocean Region (IOR)** and New Delhi has been seeking to expand ties with Male including in areas of defence and security amid China's efforts to expand its influence in the IOR.



Read More: [India Maldives Relations](#)

## World Press Freedom Prize



Three imprisoned women journalists- **Niloofar Hamed, Elaheh Mohammadi and Narges Mohammadi** from Iran have been awarded the **UNESCO World Press Freedom Prize 2023** for their commitment to truth and accountability. **World Press Freedom Day** is observed on **3rd May**, every year.

Note:

UNESCO has a **mandate to ensure freedom of expression and the safety of journalists** around the world. Globally, women journalists and media workers face increasing attacks, whether in real life or online, including stigmatization, sexist hate speech, trolling, physical assault, rape and even murder. The **agency advocates for their safety and collaborates with partners to identify and implement good practices** and share recommendations aimed at countering these attacks.

The **UNESCO/Guillermo Cano World Press Freedom Prize** was established in 1997. It is presented annually to a person, organization or institution that has made an outstanding contribution to press freedom, and especially when this **has been achieved in the face of danger**.

Read More: **World Press Freedom Index 2023**

## ASEAN-India Maritime Exercise 2023

To expand **India-ASEAN (Association of South East Asian Nations)** military cooperation, the maiden ASEAN-India Maritime Exercise (AIME-2023) **is being conducted**. The harbour phase of the exercise is scheduled to be held in Singapore from 02 – 04 May 2023 and the Sea Phase will be conducted from 07 to 08 May 2023 in the **South China Sea**.

AIME 2023 will provide an opportunity for Indian Navy and ASEAN navies to work together closely and conduct seamless operations in the maritime domain.

INS Delhi, India's first indigenously built guided missile destroyer and INS Satpura, an indigenously built guided missile stealth frigate are a part of the Indian Navy's Eastern Fleet will also participate in International Maritime Defence Exhibition (IMDEX-23) and International Maritime Security Conference (IMSC), hosted by Singapore.

Read More: **ASEAN**

## Government to Ease Life for Gay Couples

The Centre informed **Supreme Court** that it is willing to **form a committee** headed by the **Cabinet Secretary** to consider administrative measures for **addressing "genuine, human concerns" faced by same-sex couples** in their daily lives in areas such as banking, insurance,

etc. The SC has suggested that **same-sex couples consider this as a building block for future changes**, rather than an all-or-none approach. However, the petitioners are seeking a **judicial declaration from the court legally recognizing same-sex marriage**, arguing that marriage gives meaning, purpose, and identity to a relationship. The court noted that even if it were to recognize same-sex marriage, **administrative and legislative changes** would still be required to address the human concerns arising out of these relationships. The government is willing to address these human concerns but is reluctant to give same-sex relationships the status of marriage.

Read more: **Same-Sex Marriage: Struggle for Equality**

## Organ Donation and Transplantation Manual

The **National Organ and Tissue Transplant Organisation (NOTTO)** in India is developing a **transplant manual and standard course for training transplant coordinators** to better implement **organ donation** and **transplantation programs** in hospitals. The NOTTO has also created verticals for coordination, training, and human resources/accounts.

The Indian government has granted Central Government employees who donate an organ **special casual leave of up to 42 days as a welfare measure**. The **Ministry of Health and Family Welfare** reported that the number of organ transplants in the country has **substantially increased from less than 5,000 in 2013 to over 15,000 in 2022** due to better coordination through the network of Organ & Tissues Transplant Organizations at national, state, and regional levels. In 2016, 2,265 organs were utilized from 930 deceased donors, while 2,765 could be utilized from 904 deceased donors in 2022.

Read more: **National Organ Transplantation Guidelines**

## RVNL Gets Navratna Status

**Rail Vikas Nigam Limited (RVNL)**, a Central Public Sector Enterprise under the Ministry of Railways, has been **granted Navratna status**. The company, incorporated in 2003, was established to **implement railway infrastructure projects and raise extra-budgetary resources** for **Special Purpose Vehicles (SPVs)**. RVNL

Note:



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began operations in 2005 and was granted **Mini-Ratna status in 2013**. RVNL is responsible for undertaking Rail project development and execution of works, creating project specific SPVs, and handing over completed railway projects to the relevant Zonal Railway for operation and maintenance.

The grant of Navratna status to RVNL provides it with more **operational freedom, financial autonomy, and enhanced delegation of powers**.

Navratna status is a recognition given by the Indian government to select public sector enterprises (PSEs) that have financial and operational autonomy. This status **enables PSEs to invest up to Rs. 1000 crore without any approval from the central government**, giving them more flexibility in decision making, personnel management, and joint ventures.

Read more: [Maharatna Status to REC](#)

## Successful Test Launch of StarBerrySense

The **Indian Space Research Organisation (ISRO)** recently launched a Low-cost star sensor called **StarBerrySense**, mounted on the **PSLV Orbital Experimental Module (POEM)**, which has **performed well during its first-ever space test**. StarBerrySense is a low-cost sensor designed to quickly **calculate the orientation of a spacecraft by identifying stars in its field of view**. Developed by the Space Payloads Group at the **Indian Institute of Astrophysics (IIA)**, StarBerrySense is built around the **Raspberry Pi** minicomputer and is cost-effective and simple to build.

POEM is a unique initiative by ISRO that utilizes the **spent 4<sup>th</sup> stage of the PSLV** as an orbital platform for carrying out scientific experiments. The initial results of the StarBerrySense test indicate that it **withstood the harsh conditions in space and is functioning as expected**, with the imaging equipment and onboard software capable of accurately calculating the pointing direction.

Read more: [StarBerrySense](#)

## Uganda Passes Anti-LGBTQ

The Ugandan parliament has passed **one of the world's strictest anti-LGBTQ bills**, retaining most of the

harshest measures despite international condemnation. The legislation includes **provisions for the death penalty for so-called "aggravated homosexuality"** and a **20-year sentence for promoting homosexuality**, which human rights activists say could criminalize any **advocacy for LGBTQ citizens**. The bill also includes measures to **"rehabilitate" gay people**. The legislation was amended to stipulate that merely identifying as **LGBTQ is not a crime** and that people are only obliged to report homosexual activity when a **child is involved**. However, activists have dismissed the amendments as "useless". The bill now awaits the approval of the President.

Read more: [LGBTQIA+ Rights and Acceptance in India](#)

## National Manufacturing Innovation Survey

Karnataka has emerged as the most innovative state in India according to the **National Manufacturing Innovation Survey (NMIS) 2021-22**, conducted jointly by the Department of Science and Technology and the **United Nations Industrial Development Organization**. Survey found that **Telangana, Karnataka, and Tamil Nadu had the highest share of innovative firms**, while **Odisha, Bihar, and Jharkhand had the lowest share**. The survey examined the **innovation processes, outcomes, and barriers in manufacturing firms**, and also studied the **innovation ecosystem that affects innovation outcomes in these firms**. The study showed that **nearly three-fourths of the firms surveyed did not make any innovative product or business process innovation during the survey period of financial year 2017-2020**. The most frequent barriers to innovation were a **lack of internal funds, high innovation costs, and a lack of financing from external sources**.

Read more: [Global Innovation Index 2022](#)

## Flash Floods in the Horn of Africa

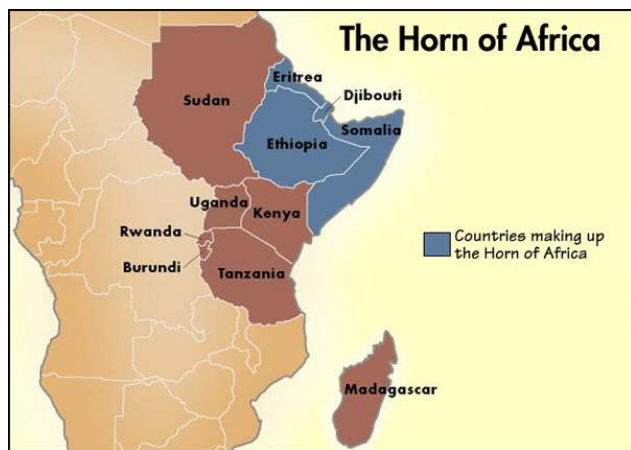
Reports from organizations like the **United Nations Office for the Coordination of Humanitarian Affairs (UN-OCHA)** and the **Kenya Red Cross** show dire cases of flash floods in Kenya, Tanzania, and parts of Horn of Africa. The Horn of Africa is a **peninsula in Northeast Africa** that includes countries like **Somalia, Ethiopia, Eritrea, and Djibouti**.

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Flash floods are **sudden and intense floods** that occur when **heavy rainfall exceeds the capacity of the soil and drainage systems to absorb it**. Flash floods can cause widespread damage to infrastructure, crops, livestock, and human lives.

Read more: **Landslide and Flash Floods**

## Underground Ammunition Storage Facility

The Centre of Fire, Explosive and Environment Safety (CFEES) an Indian defence laboratory of the **Defence Research and Development Organisation** has designed an **Underground Ammunition Storage Facility**, which **reduces the blast effect** on surrounding utilities during an explosion. The Design Validation Trial of this facility was successfully conducted recently, where 5,000 kgs of **TNT (trinitrotoluene)** was detonated in one of the chambers of the underground facility.

The unique design of the Underground Ammunition Storage Facility **reduces the required safety distances by up to 50%**, and the safety distance has been established up to 120 Metric Ton ammunition storage per chamber. The design ensures **higher safety of ammunition stored from any kind of aerial attack or sabotage**. This facility can be extensively used by the **Armed Forces for storage of all types of ammunition**, reducing the land footprint requirements, and providing enhanced safety of ammunition.

## Successful Trial of Air Droppable Container

The **Indian Navy** and the **Defence Research and Development Organisation (DRDO)** have **successfully**

**tested an air droppable container** with a payload capacity of 150 kg, the container was dropped from an **IL 38SD aircraft**. The trial aimed to improve the **naval operational logistics** capabilities by providing a quick response to meet the **critical engineering stores' requirements for ships deployed more than 2,000 kilometers from the coast**. It also aims to **reduce the need for ships to come closer to the coast to collect spares and stores**.

The container's development was a collaborative effort of three DRDO laboratories, including the **Naval Science and Technological Laboratory (NSTL)** in Visakhapatnam, the **Aerial Delivery Research & Development Establishment (ADRDE)** in Agra, and the **Aeronautical Development Establishment (ADE)** in Bengaluru. The successful test of the air droppable container will **enhance the Indian Navy's operational capabilities**, making it **easier and faster to provide critical supplies to ships** deployed far from the coast.

## India's First Undersea Tunnels

India's first undersea twin tunnels are set to open in Mumbai, after more than two years of work on the **Mumbai Coastal Road Project** by the Brihanmumbai Municipal Corporation. The tunnels are part of the **10.58-kilometer-long Coastal Road project that connects Marine Drive to the Bandra-Worli Sea Link**. The **2.07-kilometer-long tunnels are located 17-20 meters below sea level**, with a nearly 1-kilometer stretch running under the sea. The project **aims to reduce travel times** during peak hours from 45 minutes to just 10 minutes. **Six cross passages** will be provided in the tunnels, **four for pedestrians and two for motorists**, with each tunnel having three lanes. The tunnels were created with the help of the largest **tunnel-boring machine (TBM)**.

## Supreme Court Orders FIRs on Hate Speech

The **Supreme Court of India** has directed **all states** to **Suo motu register FIRs on hate speech** incidents and

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initiate legal proceedings against the offenders without waiting for a complaint to be filed. The court emphasized the need to book hate speech offenders under specific penal provisions, including **Sections 153A (promoting enmity between different groups on the ground of religion), 153B (imputations, assertions prejudicial to national integration), 505 (public mischief), 295A (deliberate and malicious acts intended to outrage religious feelings)** of the **Indian Penal Code (IPC)**.

The court passed a similar order in October 2022. While it was **argued that free speech should not be stifled under the guise of tackling hate speech**, the court reiterated that the Constitution envisages India as a **secular nation** where the **dignity of the individual and unity and integrity of the country must be assured**.

Read more: [Hate Speech](#)

## India's Core Sector Growth Slows

The output of India's **eight core sectors** saw a **3.6% growth** in March 2023, the **lowest in five months**, as per data from the Ministry of **Commerce and Industries**.

The core sector in India consists of eight industries that have a major impact on the overall economic and industrial activities. They are **coal, crude oil, natural gas, refinery products, fertilizers, steel, cement and electricity**. These industries have a combined weight of **40.27%** in the **Index of Industrial Production (IIP)**, which measures the **growth rate of different industry groups in the economy**. The core sector represents the capital base and infrastructure of the economy. The performance of these industries influences other sectors as well.

Read more: [Core Sectors Industries](#)



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