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CURRENT AFFAIRS - January 2024

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Sub-categorisation of SCs

The Union government has formed a **five-member committee of Secretaries**, chaired by the Cabinet Secretary. The task of this committee is to assess and find a fair way to distribute benefits, programs, and initiatives to the most disadvantaged communities among the 1,200 Scheduled Castes in the country.

Debate Around Sub-Categorisation Within SCs

- **Arguments In Favour**
  - The principal argument for sub-categorisation of SCs has been the graded inequalities among SC communities.
  - Even among the marginalised, there are communities that have lesser access to basic facilities. As a result, the relatively more forward communities among them have managed to avail benefits consistently while crowding the more backward ones out.
  - The solution, therefore, is to sub-categorise and provide separate reservation to the more backward communities within the reservation meant for SCs.
- **Arguments Against**
  - It would not really address the root cause of the problem. The idea behind sub-categorisation was to ensure representation at all levels.
  - But given the disparity, even if posts were reserved at higher levels, these most backward SCs *would not have enough candidates* to be considered for it in the first place.
  - Hence, the **existing schemes and government benefits should first reach these sections before any sub-categorisation**.
  - Also, legal experts have pointed out the necessity to have concrete data to support sub-categorisation.
    - They present the case of a caste census of each community and sub-community and their respective socio-economic data.
    - As per them, caste census can be the only **empirical basis** on which the government can justify sub-categorisation of benefits and how much extra share of benefits each community is in need of.

Legality of Sub-categorisation Within Castes

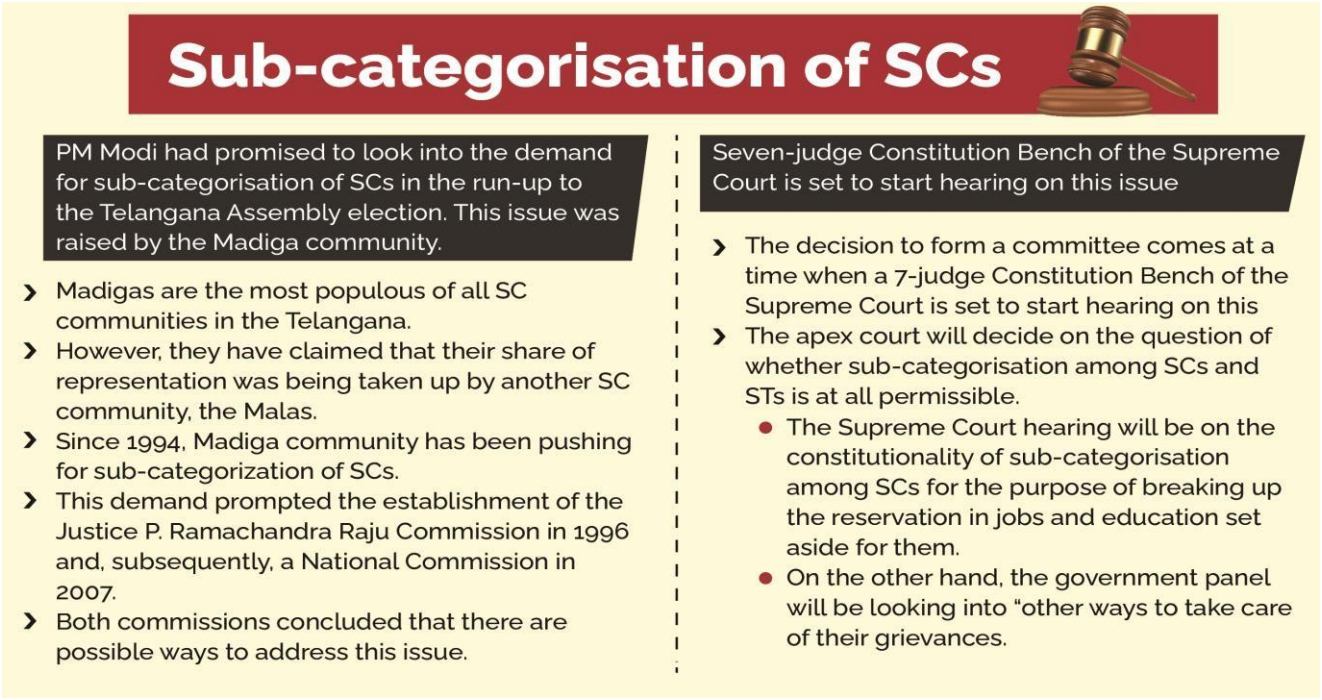
- In the last two decades, multiple States like Punjab, Bihar, and Tamil Nadu have tried to bring in reservation laws at the State level in a bid to sub-categorise SCs.
- However, all plans are held up in courts as the Supreme Court forms its larger Constitution Bench to decide the matter.
- ***E.V. Chinnaiah v State of Andhra Pradesh (2004)***:
  - Apex court held that once a community is included in the Presidential List for Scheduled Castes under **Article 341** of the Constitution, they become part of a single larger class of people, casting a wide net for the purposes of reservation.
  - The Bench held:
    - That the **State did not have the legislative power to create sub-classifications within this single class** and
    - That such an action would violate the Right to Equality.
  - The Constitution has provided that these lists can only be made by Parliament and notified by the President.
- In 2020, another five-member Supreme Court bench in the ***Davinder Singh case*** unanimously ruled that sub-categorisation is constitutionally valid and suggested a larger constitutional bench rule on the matter.

Union Government's Stand

- Union government had in 2005 considered legal options for sub-categorisation of SCs.

- At the time, the erstwhile Attorney General of India had opined that this could be possible but only if there was unimpeachable evidence to indicate a necessity.

- At the time, the National Commission for Scheduled Castes (NCSC) and the National Commission for Scheduled Tribes (NCST) had opined that a constitutional amendment was not necessary.
  - They said that **Article 16(4)** of the Constitution already provided for States to create special laws for any backward classes it felt was under-represented.
  - They also argued that just setting aside a quota within the quota would not be enough.
  - Making sure existing schemes and benefits reach them on priority basis was more urgent.



Key Highlights Of The Committee

- **Purpose:** The committee will only look at strategies like special initiatives, focusing existing schemes towards them, etc.
  - It has a strict mandate to not deviate into the questions of reservation, or what the break-up of SC quota should be for employment and education as this would be considered sub-judice.
- **Members:** Secretaries of Home Ministry, Law Ministry, Tribal Affairs Ministry, and Social Justice Ministry.

"State of Judiciary" Report

The Centre for Research and Planning (CRP) of the Supreme Court of India (SCI) released the "State of the Judiciary" report which dwells upon issues like vacancies, lack of diversity in the judiciary, lack of infrastructure for both judges and litigants, the sub-optimal working conditions of court staff etc.

About the Centre for Research and Planning (CRP)

It is the premier policy Centre of the Supreme Court (SC) serving as a bridge between academic research, legal and judicial education and the judicial systems and focuses on various transformational initiatives and programmes for judicial reforms to-

- Improve efficiency and sustainability of justice delivery system.
- Develop jurisprudence.
- Improve the quality of data collection using modern technology.

The Report Is Divided Into Four Parts:

Part	Name	Details
1	**Judicial Infrastructure**	Courtrooms, Residential Accommodation for Judges, facilities of drinking water, crèche, washrooms etc.
2	**Budgeting System for the District Judiciary**	Framework of Budget Allocation, Output and Outcome Budget Framework, Rationale in Fund Allocation etc.
3	**Human Resource Management**	Analysis of Requisite Judge Strength (The Demographic Method), Court Staff etc.
4	**ICT Enablement of Judiciary**	e-Courts Integrated Mission Mode Project, Major ICT Initiatives, Emergence of Future Technologies: Artificial Intelligence etc.

Key Highlights of the "State of the Judiciary" Report

Part 1: Judicial Infrastructure

1. Status of Courtrooms/Infrastructure Gap (Courtrooms) = Sanctioned Strength - (Courtrooms owned by the Judiciary + Courtrooms provided by the Government)

- For the sanctioned strength of 25,081 judges in the district judiciary, there is a shortage of 4,250 courtrooms and 6,021 residential units. For example, Maharashtra has adequate courtrooms and residential units whereas Jammu & Kashmir and Ladakh, and Tripura have the maximum shortage of courtrooms and residential units. Delayed Data Updation on Nyaya Vikas Portal about under construction projects further adds up to this gap.
  - ✓ Nyaya Vikas Portal was developed by the Department of Justice (DoJ) and Indian Space Research Organization (ISRO) in 2018 to monitor the progress of judicial infrastructure projects under the Centrally Sponsored Scheme (CSS) for Development of Infrastructure Facilities for the Judiciary by geo- tagging the projects.

2. Washrooms for all genders:

- High Courts reveals that District Courts generally do not have washrooms for the third gender.
- In Kerala, washrooms for the third gender are available on a shared basis with PwDs. In District Courts of Uttarakhand, there are 4 washrooms for the third gender across the State.
- In Tamil Nadu, washrooms for third genders are available only in 2 districts – Chennai & Coimbatore.

3. Inadequate Digital Case Display Boards- were reported in some of the District Courts also the locations where the display boards are installed are often inoperational due to the non-availability of sufficient staff for its maintenance.

4. Creche Facility- As per data on iJuris, 13.1% of District Court complexes have a childcare room/facility as there is no specified post for looking after children in the creche.

- ✓ iJuris(*Integrated Judicial Upgradation and Reforms on Infrastructure and Services)* is a system developed for collecting information from across the High Courts, Court Complexes and individual Judicial officers which is then integrated with the National Judicial Data Grid (NJDG).
- ✓ As per the Maternity Benefit Act, 1961, which reads as: Every establishment having fifty or more employees shall have the facility of crèche.

** The vision behind ensuring adequate infrastructure, sufficient number of judges, and support staff is to achieve 'five plus zero' pendency. This means that cases pending for more than five years, or more, are to be disposed of on a priority basis until such pendency is brought down to zero.

Part 2: Budgeting System for the District Judiciary

1. Rationale in Fund Allocation:

- The criterion of budget allocation is directly linked with the achievement of the end goal, i.e. providing

adequate judicial infrastructure.

- The States filling up more vacancies and disposing of more 10-year-old cases are given preference in terms of fund allocation under the Scheme.

2. Output and Outcome Budget Framework:

- For the year 2023-2024, output is the construction of court buildings, residential units, lawyers' halls, toilet complexes, and digital computer rooms sought to be built, whereas outcome is the reduction in the gap between the sanctioned strength of judges and the available judicial infrastructure.

3. Tardy process in Fund Release & Utilization:

- Addressing the issue of pendency in the district judiciary necessitates a holistic approach, of which budget allocation is a fundamental component.
- Considerable time has elapsed since the Central government spearheaded the Centrally Sponsored Scheme, but the infrastructural gaps persist.
- The Bombay High Court in New Bombay Advocates Welfare Association v. State of Maharashtra highlighted the need for fixing accountability for the delay caused in the process.

**The process of releasing funds for the district judiciary starts with the High Court requiring the District Judges to submit their consolidated budget estimates for all the courts in their unit in a financial year and, on receiving the same, the High Court submits the demand to the State Government for the release of funds.

** In 2005, 'Outcome Budget' became an integral part of the budgeting process, where expenditure is associated with specific goals by setting out measurable outputs & outcomes to be achieved in a financial year.

Part 3: Human Resource Management

- **Vacancy of Judges** - There is a shortage of 5,300 judges in district judiciary, with maximum vacancy in the States of Uttar Pradesh (1,204) and Bihar (460) and a vacancy of 347 judges against the sanctioned strength of 1,114 judges in the HCs. 70.9% of the advertised seats for District Judges (Direct Entry from Bar) in the 24 States examined in the Report remained vacant. The reasons attributed for this vacancy were litigations filed by candidates against recruitment examinations, different recruitment authorities for every state (State Public Service Commission), absence of central recruitment agency etc.
- **Representation of Marginalized Sections-** In Bihar, Gujarat, Madhya Pradesh, Rajasthan, Haryana and Uttar Pradesh (with the most vacancies of judicial officers) ,66.3% of the total unfilled posts are from the reserved category.
- **Support Staff Vacancy-** is 27% (74,524) as against the total vacancy of 21% of judicial officers in the district judiciary.
- **Use of Regressive Nomenclature -** The service rules for staff in District Courts in several States still use regressive terminology such as 'Subordinate Court Staff' and designations like 'Jamadar', reflecting a colonial mindset.

** The Demographic Method was the most commonly advocated method. It suggested increasing the ratio of judges of 10 judges per million population to 50 judges per million population. Currently, there are around 14.2 judges per million population in the country.

Part 4: ICT Enablement of Judiciary

- **Video Conferencing Facilities-** Only 57.4% of courtrooms in the district judiciary have VC-enabled computers on the judge's dais.
- **Emergence of Future Technologies: Artificial Intelligence:** The latest technologies like AI and its subsets like Machine Learning, Natural Language Processing (NLP) will be used in the e-Courts software applications to create a smart system. Some intended use cases of AI in the Indian judiciary are:
  - ✓ Translation of judgments/orders and other documents;
  - ✓ AI-assisted tools may also be used for categorization of voluminous documents in cases;

- ✓ AI technology can be used to analyze case pendency and forecast patterns in future litigation;
- ✓ NLP Model can be used to scan and extract legal provisions and earlier judgments automatically, expediting research.

Extra Mile: ICT Enablement of Judiciary

Digitization has bridged the gap between the court and the litigant, ensuring justice not only at the doorstep of the citizens but at their fingertipsby providing facilities like e-filing, virtual hearings etc.

1. **National Judicial Data Grid (NJDG)-** provides aggregate data on the institution, disposal, and pendency of cases on a near real-time basis in courts across the country to the public.
2. **e-Courts Services-** is a web portal which enables the litigant to obtain information on cases pending in District Courts and High Courts. The litigant can use its 'My Cases' feature to get automatic updates about multiple cases.
3. **e-filing**- allows lawyers to file documents online from any part of the country in any District Court or High Court.
4. **e-Payment**- This facility, being available round the clock, does away with the hassle of obtaining physical judicial stamps.
5. **Virtual Courts-** facilitate the adjudication of cases online, from filing to disposal, eliminating the need to visit court physically.
6. **National Service and Tracking of Electronic Processes (N-STEP)-** is an Android application that enables the electronic service of processes like summons, arrest warrants, notices etc.
7. **Fast and Secured Transmission of Electronic Records (FASTER)-** It allows crucial court decisions, including orders on bail and stay of arrest, to be communicated electronically to prison authorities and investigating agencies through a secure channel.
8. **Interoperable Criminal Justice System (ICJS)-** enables seamless transfer of data and information among different pillars of the criminal justice system, like courts, police, jails, forensic science laboratories etc., on one platform. Thus, it eliminates redundant data entry and promotes speed and transparency in the justice delivery system.
9. **SUVAS (Supreme Court VidhikAnuvaad Software)**- developed with technical support from MeitY and deployed by the Supreme Court. SUVAS is an AI machine-assisted translation tool to promote regional languages in judicial procedure. It has been specially designed for the judicial domain and currently has the capacity of translating English judicial documents, orders or judgments into eleven vernacular languages.
10. **e-Sewa Kendra:** A litigant who visits the court complex to file a case or to get information regarding their case status, free legal aid, or obtain a certified copy of an order/judgment need not go through the hustle bustle of areas where courts are functioning. They can use all these facilities at a one-stop center called the e- Sewa Kendra. Many High Courts also provide virtual e-Sewa Kendra through a website to provide citizen- centric services to lawyers and to ensure access to justice.
11. **SuSwagatam:** The CJI launched 'SuSwagatam', a web based and mobile friendly application to facilitate the visitors to have a smooth and simple process of getting online e-Pass required to visit the Supreme Court for official/case related purposes.

Minority Character of AMU

A seven-judge Bench of the Supreme Court (SC) is hearing a matter pertaining to Aligarh Muslim University's (AMU) minority character, a dispute which dates back to almost 57 years.

The Minority Concept As Per The Constitution

- Although there is no specific definition provided for the word "minority" in our Constitution, it has been used in Articles 29 (Protection of Interest of Minorities) and 30 (Right of minorities to establish and administer educational institutions).
  - ✓ Article 29 allows a section of citizens residing in any part of Indian territory to conserve their distinct language, script or culture. It also protects such citizens from denial of admission into any educational institution maintained by the State or receiving aid out of State funds on grounds only of religion, race, caste, language etc.
  - ✓ Article 30 empowers all minorities, whether based on religion or language to establish and administer educational institutions of their choice and directs the state not to discriminate against any educational institution if it is being managed by a minority while granting aid.

** The enactment of the National Commission for Minority Educational Institutions (NCMEI) Act aims to protect the educational rights of minorities as outlined in Article 30(1) of the Constitution.

**Minority Educational Institutions (MEIs) are colleges or institutions established by a minority group to protect and promote their culture and traditions. In case the property is taken over by the state, due compensation is to be provided to establish institutions elsewhere.

- Therefore, Article 30 defines two types of minorities-
  1. *Religious Minorities*- decided on the basis of the numerical strength of the community. Currently, there are six religious minorities in India as per the National Commission of Minorities Act- Muslims, Christians, Buddhists, Sikhs, Jains and Zoroastrians (Parsis).
  2. *Linguistic Minorities*: the ones whose mother language or mother tongue is different from that of the majority groups. For example, if a small group of people in the Punjab state speak Hindi whereas the majority population of the state speaks Punjabi then the Hindi-speaking group will be considered a linguistic minority in Punjab.
     - ✓ The word 'linguistic minorities' has not been defined in the Constitution and the language of the minority group need not be one of the twenty-two languages mentioned in the Eighth Schedule (deals with official languages of India) of the Constitution.
     - ✓ Article 350-A of the Indian Constitution imposes an obligation on the states to try to provide enough facilities for instruction in the mother language at the primary level of education to children belonging to the linguistic minority community.
     - ✓ Article 350-B empowers the President to appoint a Special Officer for protecting the interests of linguistic minorities.

Identification of Minorities

- The recognition of the minority community falls within the purview of the Concurrent List.
- Presently, the determination of minority community status in India is carried out by the central government in accordance with the National Commission for Minorities Act, 1992.
- In March 2022, the Supreme Court was informed by the central government that the determination of minority status for eligible communities *within their territorial jurisdiction* could be decided by the states also.

** Aligarh Muslim University and Banaras Hindu University have been included in the Union List within the Seventh Schedule of the Indian Constitution. Any institution listed in the Union List is ineligible to be classified as a minority institution.

Timeline Regarding AMU & Minority Related Cases

Background

- **About the AMU-**
  - It was established by Sir Syed Ahmad Khan in 1875 as the Muhammadan Anglo-Oriental (MOA) College to help Muslims overcome educational backwardness and prepare for government services.
  - In 1920, university status was conferred upon MOA and all its assets were transferred to Aligarh Muslim University following the Aligarh Muslim University (AMU) Act.

** In 1920, the institution gained University status through an Act of the Indian Legislative Council.

- **Two amendments to the law in 1951 and 1965:**
  - *1951*- As per the 1920 Act, the Governor General of India was the head of the University. It replaced the position of the 'Lord Rector' with a 'Visitor,' i.e. the President of India. It also removed the compulsory religious education provided to Only Muslim students by the University and allowed non- Muslims to join the university whereas earlier only Muslims could be a part of the University Court.
  - *1965*- The Court was no longer the supreme governing body of the AMU. It became a body whose members were nominated by the Visitor (the President of India). The powers were distributed among other bodies of the University like the Executive to democratize the management.

S. Azeez Basha and Another versus Union of India case (1967)

1) Legal Challenge & Case Scenario: The amendments in the AMU's structure were legally challenged in the SC in 1967 in *this case* on the ground that AMU was established by Muslims and, therefore they had the right to manage it.

2) SC Ruling:

- AMU was neither established nor administered by the Muslim minority.
- Although the Muslims established the university, they did not guarantee the degrees to be officially recognized by the Indian government and only the AMU Act of 1920 passed by the Centre ensured the government's recognition of university degrees.
- Also, the 1920 AMU Act did not imply that the University was established by the Muslim minority.
- The university administration was entrusted to the Lord Rector and other statutory bodies, and it was not solely operated by Muslims.
- The University Court, which had only Muslim members, was elected by an electorate which was not exclusively Muslim.

After 80's - Till Date

- **1981 Amendment**: The Muslims held nationwide protests against the SC ruling and in response the AMU Act was amended explicitly affirming its minority status.
- **2005 Reservation Policy**: In 2005, the AMU implemented a reservation policy, reserving 50% of seats in postgraduate medical courses for Muslim candidates. This was challenged in the Allahabad High Court (HC).
- **Allahabad HC Judgment**: The court overturned the reservation and nullified the 1981 Act stating that the AMU could not maintain an exclusive reservation because, as per the SC verdict in the S. Azeez Basha case, it did not qualify as a minority institution.
- **Challenge in SC**: In 2006, a set of eight petitions, including one from the Union government (later withdrawn in 2016), contested Allahabad HC's decision before the SC.

This case was referred to a seven-judge bench in 2019 and has been taken up for hearing now.

Similar Judgements

1. *State of Kerala v Reverend Mother Provincial,1970-*

   Case Scenario: Members of minority communities of Kerala challenged the constitutional validity of the Kerala University Act, 1969 (aimed at reorganizing the university according to the southern districts of the

state) alleging that it was violative of Article 30 of the Constitution and gave the University excessive powers of control over the administration of affairs of minority institutions.

Judicial Verdict: The SC held that the founders or even the minority community had no hand in the administration, the University of Kerala is vested with the complete administration of its institutions and were not answerable to the founders of minority colleges in this respect.

2. *Andhra Pradesh Christian Medical Association v State of Andhra Pradesh, 1986-*

   Case Scenario: The A.P. Christians Medical Educational Society when failed to meet the requirements for being affiliated with Osmania University, it approached the SC in a special leave petition, arguing that it has the right to found a University under Article 30 and any regulatory measures in the interests of uniformity, efficiency or excellence of education could not prevent an individual from founding an institution.

   Judicial Verdict: The SC while rejecting the arguments held that Article 30(1) gives the right to a minority community to protect and promote their interests and not to an individual member of the community.

3. *Yogendra Nath Singh &Anr. v State of U.P. &Ors, 1999-* In this case, SC overturned a 1985 government order designating the Bara Intermediate College (established by the National Association in 1972) as a minority institution and concluded that as the institution was not established as a minority institution, it cannot be granted minority status even though presently it was being managed by the minority community.

4. *T.M.A Pai Foundation v State of Karnataka, 2002-*

   Constitutional Interpretation of Minority Status: This famous SC judgment deliberated upon the scope of right of minorities to establish and administer educational institutions of their choice under Article 30(1) read with Article 29(2) of the Constitution.

   Judicial Verdict: Out of the seven-judge bench, the majority opinion delivered by 6 Judges held that only the State can determine the status of a religious or linguistic minorities, and they should be considered State- wise. But the right to establish educational institutions cannot override the national interest or prevent the Government from framing regulations for all educational institutions, whether run by the majority or the minority and government regulations cannot destroy the minority character of the institution or make the right to establish and administer a mere illusion.

5. *Bal Patil &Anr vs Union of India &Ors, 2005-* In this case, the SC referred to the TMA Pai ruling, and held that the unit for determining status of both linguistic and religious minorities would be state.

6. *P. A. Inamdar v State of Maharashtra, 2005* ***(Popularly known as Inamdar Case)***- The 7-judge bench ruled that minority whether linguistic or religious is to be determined by the demography of state and classified minority institutions into 3 categories:
   i. Those which do not seek aid or recognition
   ii. Those which want aid, and
   iii. Those which want only recognition and no aid.

Pradhan Mantri Anu Suchit Jaati Abhyuday Yojana (PM-AJAY)

Pradhan Mantri Anu Suchit Jati Abhyuday Yojana (PM- AJAY), an amalgamation of three Centrally Sponsored Schemes (CSS) namely Pradhan Mantri Adarsh Gram Yojana (PMAGY), Special Central Assistance to Scheduled Castes Sub Plan (SCA to SCSP) and Babu Jagjivan Ram Chhatrawas Yojana (BJRCY) was implemented in 2021-22.

- ✓ PMAGY launched during 2009-10, it aimed at integrated development of Scheduled Castes majority villages.
- ✓ SCA to SCSP aimed at giving a thrust to family-oriented schemes of economic development of SCs below the poverty line (BPL), by providing resources for filling the critical gaps.

✓ BJRCY was launched to attract implementing agencies (State Governments, Union Territory Administrations and the Central & State Universities/ Institutions) for undertaking construction of hostels, especially for SC girls, towards the broader vision of containment and reduction of their dropout rate.

Objective-To reduce poverty, improve socio-economic developmental indicators and increase literacy of SC by-

- Generating additional employment opportunities through Skill development, income generating schemes and other initiatives.
- Ensuring adequate infrastructure and requisite services in the SC dominated villages.
- Encourage their enrolment in schools and higher educational institutions and providing adequate residential facilities in quality institutions, as well as residential schools where required, especially in the aspirational districts/ SC dominated blocks and elsewhere in India.

About Scheduled Castes (SCs)

- The Constitution under Article 366(24) defines "Scheduled Castes" as the castes, races or tribes or parts of or groups within such castes, races or tribes as are deemed under Article 341 to be Scheduled Castes for the purposes of this Constitution.
  - ✓ Article 341empowersthe President to specify the castes, races or tribes (with respect to any State or Union territory) by public notification as Scheduled Castes.
- The SCs constitute 16.6% of India's population as per 2011 Census.
- Special provisions have been enshrined in the Constitution focusing specially on SC/STs for the advancement of their interests and bringing them at par with rest of the population like-
  - ✓ Article 38(2) directs the State to minimize inequities in income, and to endeavor to eliminate inequalities in status, facilities and opportunities, not only amongst individuals but also amongst groups of people residing in different areas or engaged in different vocations.
  - ✓ Article 46 directs the State to promote with special care the educational and economic interests of the weaker sections of the people of the SC/STs.
  - ✓ Article 338 provides for the creation of the National Commission for the Scheduled Castes (NCSC) to provide safeguards against the exploitation of Scheduled Castes and to promote and protect their social, educational, economic and cultural interests.

Components of PM-AJAY: Broadly, the Scheme has following three components:

1. Development of SC dominated villages into an "Adarsh Gram".
2. 'Grants-in-aid' for District/State-level Projects for socio-economic & overall betterment of SCs.
3. Construction of Hostels in higher educational institutions which are ranked top according to the National Institutional Ranking Framework (NIRF).

1. **Adarsh Grams-**
   - They are the villages with access to basic services to fulfil the minimum needs of the residents and reduce their disparities. The objective of this component of PM-AJAY is to ensure integrated development of SC majority villages by-
     - **Providing Adequate Infrastructure**: for their socio-economic development.
     - **Improving Socio-Economic Indicators (Monitorable Indicators)** to ensure-
       - **Equality:** The disparity between SCs and non-SCs population is eradicated.
       - **Standard of Living:** The level of indicators is raised to at least that of the National average.
       - **Zero Hunger:** Food & livelihood security to all BPL SC families & elimination of Malnutrition.

Criteria for Selecting the SC Villages

- Villages having >40% SC population and a total population ≥ 500, as per the latest available Census data will be eligible for selection in descending order of their SC population.
- Once these villages are covered, villages having less than or equal to 40% SC population, but overall, a high number of persons belonging to SCs, shall be taken up.

- **Quality Education:** All SC children complete education at least up to the secondary level.
- **Health:** All factors leading to maternal and infant mortality are addressed.

At present, there are 50 monitorable indicators identified/selected under following 10 domains-

Drinking water and Sanitation	Education	Health and Nutrition	Social Security	Rural Roads and Housing
Electricity and Clean Fuel	Agricultural Practices etc.	Financial Inclusion	Digitization	Livelihood and Skill Development

- **Encouragement**- for implementation of this Scheme in a holistic manner in various States/UTs, up to 03 best performing Districts selected by a designated Selection Committee (constituted by the Ministry of Social Justice and Empowerment) are awarded with Rs. 10 lakh each.
- **Achievements**- A total of 1834 villages have been Declared as Adarsh Gram during the current FY2023-24.

2. **Grants-in-aid for District/State-level Projects for Socio-Economic betterment of SCs-**
   - It is granted with the aim of increasing the income of the target population through-
     - Comprehensive livelihood projects: having components of income generating schemes.
     - Skill development: and related infrastructure (hostels and residential schools) development thereby reducing the poverty among the target population and bringing them above the poverty lines.
     - Grants for creation/acquisition of assets for beneficiaries/households: There shall be stand-alone individual asset distribution under the scheme but if the project has a provision for acquisition/creation of assets for beneficiaries/households needed for livelihood generation or for financial assistance towards loans taken by the beneficiary then the grant would be up to Rs.50,000 or 50% of the asset cost, whichever is less, per beneficiary/household.
     - Projects for special tutoring of educationally backward children studying in class 9^{th} to $12^{th.}$
   - **Eligibility Criteria among SCs**- There is no fixed income limits of the beneficiaries. However, priority is given to the families having an annual income not more than Rs. 2.50 lakh per annum.
   - **Special Provisions**-
     - Only those activities/projects would be considered/taken up for funding under the scheme which could not be funded from any other scheme.
     - For Women: Up to 15% of the total Grants released to be utilized exclusively on viable income generating economic development schemes/ programmes for SC women, participation of at least 30% women candidates may be ensured in the skill development programmes, Promotion of SC Women Cooperatives engaged in production and marketing of consumer goods and services.
     - For Northeastern States: 2% of the total budget allocation for the scheme component to be earmarked for the Northeastern States which implement Scheduled Caste Sub Plan for SCs.
     - Infrastructure Development: to be allotted up to 30% of the total Grants.
     - Skill Development: to be allotted at least 10% of the total funds (the beneficiaries which are not covered under the Scheme of PM-DAKSH would be considered).
     - For Quality Education: Districts/States/Central Ministry may propose to set up residential Schools through the Jawahar Navodaya Vidyalaya Society/Eklavya Model Residential Schools Society and similar Government/autonomous bodies.
   - **Achievements**- Perspective plan for 17 States have been approved under Grant-in-aid component during the current financial year.

3. **Construction/Repair of Educational Hostels for SC students**-
   - **Aim**- To enable and encourage them to attain quality education and for containing and reducing their dropout rates especially girls. (Such hostels are immensely beneficial to the students hailing from rural and remote areas of the country.)

- **Eligibility**- Higher educational institutions of Government of India (top-ranked as per the National Institutional Ranking Framework (NIRF)) and schools fully or partially funded by the Centre/State/UT Governments.
- **Features**-
  - State Governments/UT Administrations/ Central and State Universities/Institutions provide admissible Central assistance under this scheme for construction of hostels.
  - It shall be mandatory for the educational institutions concerned to provide 70% reservation to SC students in the hostels created under the scheme. Priority should be given to SC students whose parents are either 'Safai Karam Charis' or engaged in unclean occupations.
  - No fee or charges of any kind will be collected from the SC students for making use of the hostel facilities.
- **Achievement**: A total of 15 new hostels have been sanctioned under the Hostel component of the scheme.

Appraisal, Monitoring, Evaluation & Social Audit of PM-AJAY

1. Advisory Committees at the Central and State level:

- The Central Advisory Committee would be headed by the Union Minister for Social Justice and Empowerment (SJ&E).
- These Committees will address broad policy issues and assess the socio-economic impact of the scheme.

2. Project Appraisal-cum-Convergence Committees (PACC) at Central, State and District level:

- The PACC will play a key role in successful implementation of the Scheme and will be responsible for appraisal of Action Plans, its implementation as well as its monitoring, including convergence at all levels.
- The Central level PACC will be headed by the Secretary, Department of SJ&E

3. Village Level Convergence Committee (VLCC):

- VLCC will be headed by the Sarpanch/Pradhan of the village and will have all SC members of the Panchayat.

4. Evaluation: NITI Aayog or the other designated agency of the Central or State Government such as NSSO may also undertake the independent survey/evaluation of the scheme implementation.

5. Social Audit: The Gram Sabha should undertake social audit of the scheme at least once a year to ensure greater transparency and better utilization, on the same lines as it is required to do under Section-17 of the National Rural Employment Guarantee Act, 2005.

Extra Mile: Government Initiatives for Upliftment of SCs

Educational:

1. **Scheme of Upgradation of Merit of SC Students-** by providing them remedial and special coaching in classes IX to XII.
2. **Scheme For Residential Education for Students in High Schools in Targeted Areas (SHRESHTA)**- to involve the voluntary sector and reputed training institutions to improve educational and socioeconomic conditions of Scheduled Castes with a view to upgrade their skills and help them become self-reliant and financially independent.
3. **Central Sector Scholarship of Top-Class Education for SC Students**- for recognizing and promoting quality education amongst students belonging to SCs for pursuing studies beyond 12th class by providing financial support.
4. **Pre-Matric & Post-Matric Scholarship Scheme for Scheduled Castes & Others**- to support, parents of children belonging to Schedules Caste and other disadvantaged categories for education of their wards studying at the pre-matric & post-matric stage so that their participation improves.

Financial:

1. **National Scheduled Castes Finance and Development Corporation (NSFDC)-** to promote prosperity among SCs by improving financial assistance through skill development & other innovative initiatives.
2. **Scheme of Assistance to Scheduled Castes Development Corporations (SCDCs)-** for identifying and motivating eligible SC families to undertake economic development schemes, providing credit support by sponsoring financial institutions and in the form of margin money at a low rate of interest, providing subsidy out of the funds.
3. **Credit Enhancement Guarantee Scheme for the Scheduled Castes (SCs)-** to support entrepreneurs and help them create wealth, jobs and value for society and at the same time promote profitable businesses.
4. **Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi (PM-DAKSH) Yojana:** The main objective of the scheme is to increase the skill levels of the target youth by providing for long term and short-term skills, followed by engagement in wage/self-employment to the target groups - Backward Classes, Scheduled Castes and Safai Karamcharis.

Social:

1. The Protection of Civil Rights Act, 1955: The Act extends provides punishment for the practice of untouchability. (In pursuance of Article 17 of the Constitution of India).

2. SCs & STs (Prevention of Atrocities) Act, 1989: Assistance is provided to the States/ UTs for implementation of these Acts, by way of relief to atrocity victims, incentive for inter-caste marriages, awareness generation, setting up of exclusive Special courts, etc.

3. The 'Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013' (MS Act, 2013): Eradication of dry latrines and manual scavenging and rehabilitation of manual scavengers in alternative occupation has been an area of high priority for the Government.

FCRA

Recently, the Union Home Ministry cancelled the license of the World Vision India (WVI) and Centre for Policy Research (CPR), a leading think tank focused on public policy research and advocacy.

✓ World Vision India (U.S.-based organization) is one of the country's largest child-focused humanitarian organizations (has been operational in India for the past 70 years).

Centre for Policy Research (CPR)

- Established in 1973 with its headquarters in New Delhi, CPR is country's premier public policy think tank and a non-profit, non-partisan, independent institution dedicated to conducting research that contributes to high quality scholarship, better policies.
- It is a member of the Indian Council of Social Science Research and is recognized by the Department of Science and Technology (DST).
- It receives its funding:
  - In the form of government grants from state governments and union ministries.
  - From a variety of domestic and international sources (75% of funding) which include the Bill and Melinda Gates Foundation (USA), William & Flora Hewlett Foundation (USA), Macarthur Foundation (USA), UNICEF, and the World Bank.

** All its fundings were tax-exempt as it has been recognized as a not-for-profit society by the Indian Government. Its tax-exemption status was cancelled.

Reasons for Cancellation of FCRA License

The cancellation of the CPR's FCRA registration marked the culmination of a series of events beginning from

2022, when the Income-Tax Department conducted "surveys" of its offices followed by the suspension of FCRA and the reasons cited for it were-

1. It was using foreign contributions for "purposes other than that for which it is registered" and "for undesirable purposes";
2. It "transferred foreign contributions to other entities" in violation of the Act;
3. It was "publishing news articles on current affairs programme using foreign funds is prohibited under Section 3 of the FCRA.

About FCRA (Under The Purview Of Ministry Of Home Affairs)

What?

- It regulates the acceptance and utilization of foreign contributions by certain organizations/individuals and prohibits its use for any activities detrimental to national interest.

**** 'Foreign Contribution' means the donation, or transfer made by any foreign source of any:

- ✓ Article (not being an article given to a person as a gift for his/her personal use, the market value of which is not more than Ten lakh rupees);
- ✓ Currency (whether Indian or foreign) or security.

** Donations originating from an Indian citizen residing abroad, such as a Non-Resident Indian (NRI), using their personal savings through standard banking channels, will not be classified as foreign contributions.

Historical Evolution

- *1976*- It was first introduced during the Emergency amid apprehensions that foreign powers were interfering in India's affairs by pumping money into the country through independent organizations.
- *2010*-An amended FCRA was enacted in 2010 to consolidate the law on utilization of foreign funds.
- *2015*- Ministry of Home Affairs (MHA) notified a new rule which required non-governmental organizations (NGOs) to mandatorily give an undertaking that accepting foreign funds will not affect the sovereignty and integrity of India or impact friendly relations with any foreign state or communal harmony.
- *2017*- The government through a finance act paved the way for political parties to receive foreign funding outside the ambit of FCRA.
- *2020*- It was amended again to strengthen the compliance mechanism, enhancing transparency and accountability in the receipt and utilization of foreign contribution and facilitate genuine NGOs or associations working for the welfare of the society.

Key Provisions

- Every person or NGO seeking to receive foreign donations must-
  - ✓ Register themselves under the act;
  - ✓ Open a bank account for the receipt of the foreign funds in State Bank of India, New Delhi and;
  - ✓ Utilize those funds only for the purpose for which they have been received and stipulated in the act.
  - ✓ File annual returns, and not transfer the funds to another person/NGO.
- It prohibits the receipt of foreign funds by candidates for elections, journalists or newspaper and media broadcast companies, judges and government servants, members of legislature and political parties or their office-bearers, and organizations of a political nature.
- Only 20% of foreign contributions could be used for administrative expenses(the limit was 50% prior to 2020 amendment).
- Bar on sub-granting: It barred sub-granting by NGOs to smaller NGOs who work at the grass roots level.
- Any organization seeking prior permission for receiving a specific amount from a specific donor for carrying out specific activities or projects will have to submit a specific commitment letter from the donor to MHA indicating the amount of foreign contribution & the purpose for which it is proposed to be given.

- If the value of foreign contribution is over Rs 1 crore, it may be given in installments. However, the second and subsequent installment shall be released after submission of proof of utilization of 75% of the foreign contribution received in the previous installment.

Eligibility for Registrations

- Registrations are granted to individuals (includes a Hindu Undivided Family (HUF)) or associations (Or a company registered under Section 8 of the Companies Act, 2013) that have definite cultural, economic, educational, religious, and social programmes.
- The applicant should not-
  - ✓ be fictitious or benami;
  - ✓ have been prosecuted or convicted for indulging in activities aimed at conversion through inducement or force, either directly or indirectly, from one religious' faith to another;
  - ✓ have been prosecuted for or convicted of creating communal tension or disharmony;
  - ✓ have been found guilty of diversion or misutilization of funds; and
  - ✓ be engaged or likely to be engaged in the propagation of sedition.
- Any organization seeking registration should have been in existence for three years and should have spent a minimum amount of ₹15 lakh on its core activities for the benefit of society for that duration.
- Political organizations can't receive foreign funds. However, student, farmer, worker and youth organizations are exempted unless they participate in "active politics or party politics".
- Aadhaar is mandatory for registration, while in case of a foreigner, a copy of the passport or the Overseas Citizen of India card for identification is required.

Registration Process

- NGOs that want to receive foreign funds must apply online in a prescribed format with the required documentation.
- Following the application by the NGO, the MHA makes inquiries through the Intelligence Bureau into the antecedents of the applicant, and accordingly processes the application.
- The MHA is required to approve or reject the application within 90 days. In case of failure to process the application in the given time, the MHA is expected to inform the NGO of the reasons for the same.

Validity of Registration

- Once granted, FCRA registration is valid for five years.
- NGOs are expected to apply for renewal within six months of the date of expiry of registration.
- In case of failure to apply for renewal, the registration is deemed to have expired, and the NGO is no longer entitled to receive foreign funds or utilize its existing funds without permission from MHA.
- NGOs failing to apply before the due date can petition the MHA with cogent reasons within four months of the expiry of registration, following which their applications can be reconsidered.
- NGOs are also allowed to surrender their registrations voluntarily.

Grounds for Cancelling the Registrations- The government reserves the right to cancel the FCRA registration of any NGO if:

- ✓ It finds it violates various legal provisions of the FCRA Act, PMLA (Prevention of Money Laundering Act), Income Tax Act etc.
- ✓ A false statement is found in the application during an inquiry.
- ✓ The NGO is found to have violated any of the terms and conditions of the certificate or renewal.
- ✓ It has not been engaged in any reasonable activity in its chosen field for the benefit of society for two consecutive years; or if it has become defunct.
- ✓ It is necessary in the public interest to cancel the certificate.
- ✓ Irregularities are found in the finances of an NGO in terms of misutilization of foreign funds.

** **Right to be heard:** No registration is cancelled unless the person or NGO concerned has been given a reasonable opportunity of being heard. Once the registration of an NGO is cancelled, it is not eligible for re-registration for three years.

**An NGO's registration can also be suspended during inquiry for 180 days (extendable to further 180 days) and its funds can be frozen by the government.

** **Right to Appeal:** All government orders can be challenged in the High Court.

Exemptions (As per FCRA 2022 Rules)

- The act allows Indian citizens to receive up to ₹ 10 lakh in a year(earlier it was ₹ 1 lakh as per 2010 amendment) from relatives staying abroad without informing the authorities. If the amount exceeds ₹ 10 lakh, the individuals will have to inform the government within 90 days (earlier it was 30 days).
- Political parties, legislature members, election candidates, judges, government servants, journalists and media houses among others will no longer be prosecutedif they receive foreign contribution from relatives abroad and fail to intimate the government within 90 days.

Miscellaneous

- **Which are the investigating agencies for investigating & prosecuting a person for violation of FCRA?**

Ans: CBI or the investigating agencies (Crime Branch) of the State Governments, cause of action which arises in their respective States, are the designated agencies for investigating and prosecuting a person for violation of FCRA.

- **Whether organizations under Central/State Governments are required to obtain registration or prior permission under FCRA, 2010 for accepting foreign contribution?**

Ans: All statutory bodies constituted or established by or under a Central Act or State Act requiring to have their accounts compulsorily audited by the Comptroller & Auditor General of India are exempted from all the provisions of FCRA, 2010.

- **Whether Government servants, Judges and employees of a government owned/controlled company/body can be on the executive committees/boards of an association?**

Ans: Yes. The legal entity of a 'person' under FCRA, 2010 is distinct from an individual person. Therefore, individuals who cannot receive foreign contributions may happen to be on the executive committees/boards of such an association.

- **Can foreign contributions be mixed with local receipts?**

Ans: No. Foreign contributions cannot be deposited or utilized from the bank account being used for domestic funds.

- **Can capital assets purchased with the help of foreign contributions be acquired in the name of the office bearers of the association?**

Ans: No. Every asset purchased with foreign contribution should be acquired and possessed in the name of the association since an association has a separate legal entity distinct from its members.

Challenges Associated With FCRA

- **Stringent Compliance Requirements:** The complex reporting procedures and documentation demands can pose challenges for smaller NGOs with limited administrative capacity.
- **Potential for Selective Enforcement:** There may be instances where regulatory actions are perceived as politically motivated, impacting the credibility and independence of NGOs.
- **Chilling Effect on Civil Society and Erosion of Civil Liberties:** The fear of *regulatory scrutiny and compliance challenges* may discourage organizations from engaging in critical or controversial issues which hampers the freedom of NGOs to operate independently.

Way Forward to Address The Concerns of FCRA

- **Streamline Compliance Procedures:** Simplify and streamline compliance procedures to reduce the administrative burden on NGOs. This includes minimizing paperwork, providing user-friendly guidelines, and leveraging technology for smoother reporting processes. A balanced approach can help organizations cover essential administrative costs without compromising transparency.
- **Promote Inclusive Consultations:** Encourage inclusive consultations with NGOs and other stakeholders during the formulation or amendment of FCRA regulations.
- **Regular Updates and Amendments** to the FCRA to address evolving challenges and align the regulatory framework with the changing needs of the sector. This ensures that the law remains relevant and effective.

Post Office Act, 2023

Indian President gave her assent to the Post Office Bill, 2023 which was passed by the Parliament in its winter session.

About the Post Office Act, 2023

It seeks to repeal the Indian Post Office Act, 1898 (Replacing 125-year-old Colonial Legislation) and to consolidate and amend the law relating to the Post Office in India and to provide for matters connected therewith or incidental thereto.

Objective: To ensure the effective functioning of the postal department as a messenger service as well as a provider of banking facilities.

Need

1. **Outdated Law**: The Indian Post Office Act, 1898 was enacted to govern the functioning of the Post Office and primarily addressed mail services provided through the Post Office. Over the years, services available through the Post Office have diversified beyond mail.
2. **Delivery of Citizen Centric Services**: A simple legislative framework is required to facilitate evolution of the post office into a network for delivery of citizen centric services.

Key Provisions

1. **Powers of Director General (To head India Post)**: The Director General to be appointed by the Central Government will have the power to make regulations-
   - for activities to provide postal services, to fix their charges and terms and conditions.
   - regarding the provisions of the Act with the prior approval of the Central Government.
   - relating to the supply and sale of postage stamps and postal stationery such as envelopes, letter cards, postcards, bearing imprinted stamps or inscriptions.
     - ✓ Post Offices will have the exclusive privilege of issuing postage stamps.

Analysis: This provision holds importance as it removes the requirement for parliamentary approval when adjusting the established fees for various services offered by post offices (including traditional mail services).

2. **Powers with Central Government**: The act empowers the Central Government to-
   - Prescribe the services to be provided by the Post Office.
   - Prescribe standards for addressing on the items, address identifiers and usage of postcodes.
   - Make rules to give effect to arrangements made with any foreign country or territory for services provided by the Post Office between India and the said foreign country or territory.
   - Prescribe the conditions for denoting the official marks on items to be used as *prima facie* evidence of the facts so denoted.

- Make provisions for removing any difficulty arising in implementing the Act provided that no such order is made after the expiry of two years from the date of commencement of this Act.
  - ✓ Every such order shall be laid before each House of Parliament for its approval.

3. **Power to Intercept, Open or Detain any Shipment:** It allows **any officer** (authorized by the Central Government) to intercept, open or detain any item in transit in the interest of the security of the State, friendly relations with foreign states, public order, emergency, or public safety or upon the occurrence of any contravention of any of the provisions of this Act or any other law and deliver it to customs authority.
   - ✓ Provision for interception was also introduced earlier in 1986 under Indian Post Office (Amendment) Bill, 1986 on similar grounds and was passed by both the houses of the Parliament and was sent to then President Giani Zail Singh for his assent but due to his reservations regarding the powers of interception he neither assented nor returned the bill until he vacated the office in 1987. As a result, the legislation remained in limbo and was finally withdrawn by the Vajpayee government in 2002.

Analysis: As per Central Government, this updated provision designed to deter the smuggling and illicit transportation of drugs and forbidden items through postal packages.

4. **Exemption from Liability**: It exempts the Post Office and any of its officers from any liability (*does not contain the punishment for theft, misappropriation or destruction of postal articles which was part of the original Act of 1898)* except such liability unless the officer has acted fraudulently or willfully caused loss, delay or mis-delivery of service.
5. **Laying Rules in Parliament:** It mandates every rule or regulation made under the Act to be laid before each House of Parliament as soon as it is made and if both Houses and will come into effect only after its approval.
6. **Recovery of Dues**: If any person refuses to pay the charges for any service availed under the Act, then such an amount will be recovered as arrears of land revenue.
7. **Removes Centre's exclusivity & Regulates Private Courier Services**: It brings under its ambit private courier services which earlier used to bypass the 1898 act by terming their couriers 'parcels' and 'documents' rather than 'letters'.
   - ✓ The present Act has removed Section 4 of the 1898 Act, which allowed the Centre the exclusive privilege of conveying all letters by post.

Concerns Raised (Mainly with respect to Provision of Interception)

1. **Liberalisation of Interception Powers: Encourages State Surveillance and Violates 'Right to Privacy' (Against the SC ruling in Puttaswamy Case)**: Powers with the post officer to exercise search and seizure operations, promotes state surveillance and compromises with the privacy of citizens using Indian postal services thus violating Article 21 of the Constitution (Right to Life and Personal Liberty) and the freedom of speech and expression Article 19 (1) (a).
2. **Vagueness of the Term 'Emergency' (Unbridled Power to Authorities):** As the word 'emergency' is not specifically defined under the provision containing 'grounds for interception', the act gives unbridled power to authorities who can use the 'term' to intercept any item in transit in the name of national security.
   - ✓ The 1898 act permitted interception on the grounds of 'public emergency' to which the Law Commission in its 38th report objected that as the term 'emergency' has not been explicitly defined, it is subjected to misuse as it provides a wide ground for interception. It highlighted that 'public emergency' should be such that it is not secretive and is apparent to the common man and thus, recommended amending the provisions related to interception in the 1898 law. This recommendation resulted in the enactment of the Telegraph (amendment) Act, 1981.
3. **Ambiguity Regarding the Authority in Charge:**There is no clarity provided on the selection process of officers who could be authorized by the government to open, detain or intercept the items in transit.
4. **Absence of Procedural Safeguards** in the process of interception makes the act arbitrary in nature and

violates the rule of law as the officer could do anything he wants to with an item just because of suspicion and misuse the power of interception. Also, there is no provision for written reasons to be provided along with an interception order.

5. **Exemption from Liability:**The exemption given to officers and the post office from incurring any liability regarding the service being rendered eliminates the burden of accountability. Whereas the previous act provided for two years of imprisonment for faulting authority.
6. **No Grievance Redressal Mechanism**: provided in the act violates the principle of natural justice and due process of law as the citizen being targeted through interception will have no option for raising his voice against the interception or any other action.
   - ✓ The Consumer Protection Act of 2019 does not extend its applicability to services provided by India Post; however, it does cover private courier services. The Post Office Act of 2023, intended to replace the 1898 Act, preserves these provisions.

Government's Response

The government clarified that the provision of interception has been included for the purpose of national security and soon a fair and transparent procedure will be formulated for intercepting under the act.

Extra Mile: Interception Under Central Acts

1. **Indian Telegraph Act, 1985**: It provided for lawful interception of messages in the interests of the sovereignty, and integrity of India, the security of the State, friendly relations with Foreign States or public order or for preventing incitement to the commission of an offence. An amendment to this act i.e., the Indian Telegraph (Amendment) Rules, 2007 made a specific order/authorization of the Government mandatory for any lawful interception of communications.
2. **Information and Technology (IT) Act, 2000**: provided for interception of electronic information, though the necessary requirement does not call for the occurrence of 'any public emergency' or any demand in 'the interest of public safety' as provided for in the Telegraph Act or in the Telecommunication Act. It permits snooping by following government agencies-

Intelligence Bureau	Narcotics Control Bureau	Enforcement Directorate	Central Board of Direct Taxes	Directorate of Revenue Intelligence
Central Bureau of Investigation	National Investigation Agency	Cabinet Secretariat (R&AW)	Directorate of Signal Intelligence (For Jammu & Kashmir, North-East and Assam)	Commissioner of Police, Delhi

3. **Telecommunications Act, 2023**: allows messages or a class of messages between two or more persons to be intercepted, monitored, or blocked on grounds of public safety or public emergency, security of the state, prevention of incitement of offences, or public order although these actions will be subject to procedure, safeguards, and duration as may be prescribed by the central government.

Supreme Court (SC) Rulings on Interception

1. People's Union for Civil Liberties (PUCL) v. Union of India (1996):

The Challenge: In this case, the constitutionality of Section 5(2) of the Telegraph Act was challenged for permitting telephonic interception without any due process guarantees.

The Verdict*:* The SC acknowledged that telephone tapping infringed upon the fundamental right to privacy and created safeguards against arbitrariness in the exercise of the state's surveillance powers. It held that it is not possible to safeguard the rights of citizens under Articles 19(1)(a) (freedom of speech and expression) and Article 21 (right to life and personal liberty) in the absence of a just and fair procedure to regulate the powers of interception of communication. It issued following guidelines to regulate interception orders which were later codified in 1999 under Rule 419A of the Indian Telegraph Rules:

i) *Written Orders*- for telephone tapping may only be issued by the Home Secretary of the Central government or a state government and may be delegated to an officer of the Home Department of the Central or State government in case of emergency, and a copy of the order must be sent to the Review Committee concerned within one week.

ii) *Exploring Other Options*- The authority making the order must consider whether the information that is considered necessary to acquire could reasonably be acquired by other means.

iii) *Maintenance of Records*: of the intercepted communications should be done by the authority issuing the interception order along with the extent to which material is disclosed; the number of persons to whom the material is disclosed and their identity.

2. *District Registrar and Collector, Hyderabad versus Canara Bank (2005):*

The Challenge: was to the Provision of Stamp Act 1899 which empowered the stamp authorities to enter any premises, inspect and seize agreements or documents, and compel persons to cede all documents in their custody for inspection, on the suspicion that some of them might be improperly stamped.

The Verdict: The SC in this case held that the right to privacy is not lost if some personal items are entrusted to the post office for correspondence.

3. *Pegasus Spyware Case (2021)*: The court held that the power of the state to snoop into the 'sacred private space' of individuals in the name of national security is not absolute and the gnawing fear 'of being spied on' can affect the way an individual decides to exercise his or her rights resulting in self-censorship.

Press & Registration of Periodicals Act, 2023

The Press and Registration of Periodicals Bill, 2023 received the President's assent. It seeks to replace the Press and Registration of Books Act, 1867 which governed the registration of print and publishing industryin the country since 1867.

- ✓ The Press & Registration of Books Act, 1867 was introduced by the British with the aim of regulating printing presses & newspaper for the preservation of copies of books and periodicals containing news printed in the whole of India and for the registration of such books and periodicals containing news.
- ✓ A periodical is any publication, barring books or journals, that is printed at regular intervals and contains public news or comments on public news.

About The Press and Registration of Periodicals Act, 2023

What? It provides for the registration of newspapers and periodicals.

Need for New Act

1. **Colonial Era Act with Complex Provisions-** caused unnecessary hardships to publishers for running a newspaper.
2. **Promoting Ease of Doing Business-** as the involvement of multiple offices in the State and the Central Government resulted in delays and impediments at multiple levels.
3. **To Align it with today's Technology Driven Environment-** The previous act was out of sync with the changing media landscapeand the changing mode of governance emphasizes on faster and efficient service delivery through technology, and ease of access to citizens.
4. **Unburdening Publishers-** from furnishing a declaration before the District Magistrate (DM) and filing a revised declaration every time there's a change in its particulars.
5. **Removing Unnecessary Procedural Obstacles-** which made the registration process onerous and time consuming.

6. **Unfair Punishments:** The Act's stipulations regarding imprisonment, even for minor infractions, were inconsistent with the principles of independent India and its constitution.

Key Provisions

1. *Press Registrar General (PRG- a newly created position)*: to be appointed by the Central Government along with other officers to assist him in his duties. They will hold the office until removed or superannuated. PRG's functions and powers will include-
   a. Issuing a certificate of registration to a periodical and maintaining a register of registered ones;
   b. Making guidelines for admissibility and availability of title of a periodical;
   c. Collecting fees, as may be applicable, regarding applications received;
   d. Receiving funds from the Central Government and disbursing the same for implementation of the provisions of this Act;
   e. Preparing and publishing an annual report containing information in respect of the periodicals in India;
   f. Obtaining annual statements of a periodical;
   g. Verifying the circulation figure of a class of periodicals;
   h. Revising, suspending or cancelling registration of a periodical;
   i. Imposing a penalty.
2. *Furnishing Information*: Every printer of a periodical will have to furnish an intimation in the online portal to the PRG and the specified authority within whose local jurisdiction his printing press is situated.
3. *Right to Publish Periodicals*: Every citizen of India or a person, being an entity incorporated and registered in India under any law for the time being in force, may bring out a periodical except a person who has been convicted by any court for an offence involving terrorist act or unlawful activity; or for having done anything against the security of the State,
4. *Process of Registration*:
   a. Every publisher of a periodical can obtain a certificate of registration from the PRG by making an online application to the Press Registrar General and the specified authority within whose local jurisdiction such periodical is proposed to be published.
   b. Following which, the specified authority can either furnish its no-objection or comments on the application to the Press Registrar General within a period of sixty days.
      ✓ No-objection is not required if the registration of a periodical is proposed to be published by the Central Government or a State Government or any authority under such Government.
   c. The PRG can then issue the certificate if he finds it as per the guidelines prescribed or may refuse to issue the certificate after giving an opportunity of being heard and for reasons to be recorded in writing.
5. *Suspension or Cancellation of Registration*: The PRG may, by order, suspend the certificate of registration of a periodical for a period not less than 30 days but not exceeding 180 days.
   a. *Grounds for Suspension*- Registration obtained by furnishing false information, failure to publish periodicals continuously, and giving false particulars in annual statements.
   b. *Grounds for Cancellation*- If a periodical has the same or similar title as any other periodical or if the owner/ publisher has been convicted of a terrorist act or unlawful activity, or for acting against the security of the state.
6. *Penalties*: PRG can impose penalties for:
   a. publishing periodicals without registration of up to five lakh rupees.
   b. failing to furnish annual statement within the specified time of up to Rs 20,000 on first default.
   c. If a periodical is published without registration, the Press Registrar General may direct its publication to be stopped. Not complying with such direction within six months will be punishable with imprisonment of up to six months.
7. *Appeal*: can be made by any aggrieved person to the Press and Registration Appellate Board within 60 days

against the refusal to issue a registration certificate, suspension/ cancellation of registration, or imposition of penalty.

- ✓ The Press and Registration Appellate Board will consist of Chairperson, Press Council of India and two members to be nominated by the Press Council of India, from among its members.

2023 Act vs 1867 Act

Provision	2023 Act	1867 Act
Registration of Books and Periodicals	It removes the registration of books from its ambit as they are under the Human Resource Development (HRD) Ministry.	Provides for the registration of newspapers, periodicals, and books and cataloguing of books.
Foreign periodicals	Allows an exact reproduction of a foreign periodical to be printed in India with the prior approval of the central government.	No such provision.
No declaration for printing presses	Allows the publisher of a periodical to obtain a registration certificate by filing an online application with the Press Registrar General (PRG) and specified local authority without any need of a prior approval from DM.	Mandated declaration and authentication by the DM for publication. ✓ A declaration specifying the printer/publisher was to be sent by the District Magistrate (DM) to the Press Registrar, who would then issue a certificate of registration.
Registration of a printing press	Allows the Keeper of the Printing Press to furnish only an online intimation to the Press Registrar.	Required a printing press to be authenticated by the DM.
Appellate Board	It will comprise the Chairperson, Press Council of India (PCI), and two nominated members of PCI.	It consisted of a chairman and another member to be appointed by the Central Government.
Penalties	Replaces all penal provisions with fines except one which allows six-month imprisonment for anyone failing to cease publication even after six months of a warning or without a certificate.	Included up to 6 months imprisonment for offences like keeping a press without declaration, making false statements, and violating printing or publishing requirements.
Shift in Power	Shifts all the power from the DM's hands to the Press Registrar General, a newly created position. (envisages minimalistic role of the District Magistrate/local authority)	DM had all the powers. Although the act provided for a "Press Registrar" or a "Registrar of newspapers for India" appointed by the Centre, its powers were limited.
No Separate Applications	Processing of the title allotment and registration applications can occur simultaneously and there is no need to file separate applications for the above purposes.	Publishers and printers had to file separate applications for title allotment and registration requiring approvals and verifications from the DM Office and RNI Office multiple times.
Unlawful Activities Prevention Act (UAPA) Provision	It bars individuals or associations supporting any claim for secession, separatism, disruption of sovereignty or integrity, among others.	It barred persons from registration who intended to threaten or likely to threaten the unity, integrity, security, economic security, or sovereignty of India or with intent to strike terror or likely to strike terror among people by any of their acts.

Benefits

1. **Ease of access & Ease of Doing Business:** It removes the procedural obstacles involving multiple approvals at various stages for starting a newspaper/printed publication in India and decriminalizes minor violations thus, making the whole process citizen friendly.
2. **Transparent and Quick Registration Process**: Provisions for online applications and automated processing will enhance the speed of registration process, make the process easier and transparent and will allow time- bound processing. It will also help the publisher to track the status of the applications.
3. **Clarity** on various procedures/cases such as facsimile editions of a foreign publication, circulation verification of newspapers, ownership transfer, and others by removing obsolete and archaic provisions.

'Hit and Run' Law

Transporters and commercial drivers from Maharashtra, Chhattisgarh, West Bengal, and Punjab staged protests and demanded the withdrawal of the provision concerning hit-and-run incidents under Bharatiya Nyaya Sanhita, 2023 (BNS).

About the New 'Hit and Run' Law

What?

Section 106(2) of the BNS states that whoever causes death of any person by rash and negligent driving of vehicle not amounting to culpable homicide, and escapes without reporting it to a police officer or a Magistrate *soon after* the incident, will be punishable with imprisonment extendable up to ten years, and a ₹7 lakh fine.

- ✓ The colonial-era provision on causing of death due to rash or negligent driving under Section 304A of the Indian Penal Code, 1860 provided for an imprisonment for a term extendable up to two years, or fine, or both.

Need for Stringent Penalties for Hit-and-run Incidents

1. **Increasing Road Accidents-**
   - ✓ India registered the highest count of road crash fatalities in 2022 exceeding 1.68 lakh deaths translating to an average of 462 deaths daily, out of this, over half of all road fatalities occurred on national and State highways, which form less than 5% of the total road network.
   - ✓ With only 1% of the world's vehicles, India accounts for about 10% of crash-related deaths and incurs an economic loss of 5-7% of its GDP annually due to road crashes.
2. **Hit-and-Run Problem**- As per the data of National Crime Records Bureau (NCRB), 30% of road accident deaths were due to a rash or negligent driver who fled the scene after causing a lethal injury.
3. **Dual Challenge for Authorities**- posed by Hit-and-run cases as:
   - ✓ It becomes nearly impossible to identify and prosecute the perpetrator in these cases as over 55% of fatal accidents occur in isolated areas, usually void of human activity according to the Road Accidents Report 2022, Ministry of Road Transport and Highways.
   - ✓ Victims or their dependents remain uncompensated as the vehicle and its insurer often go unidentifiable.
4. **Need of Golden Hour**- The 201st Law Commission Report emphasized the need to provide swift medical aid to the victim in the critical "golden hour" as it could prevent 50% of fatalities. But in remote areas where public presence is scarce, the erring driver might be the sole responder and a strict law can discourage the driver from abandoning the victim and save victim's life.
5. **Punishing the Guilty**- Significant disparities witnessed in sentencing for road-related fatalities due to the poor demarcation between 304A cases and Section 304 has led to deaths caused by deliberate dangerous

driving being under-punished.

- ✓ *304A of IPC* provides for a punishment of either imprisonment extendable up to two years or a fine or both for causing any death because of any rash or negligent act not amounting to culpable homicide.
- ✓ 304 provides punishment for rash driving and vehicular homicide.

Concerns Raised

1. **Stringent Punishment for Unintentional Accidents:** The primary concern of the protesters is the severe punishment of 10 years imprisonment and ₹7 lakh fine for drivers who flee the scene of an accident without reporting the same. They protest that the government failed to consider their challenging work conditions, including long driving hours and difficult roads before finalizing the penalty.
2. **Fear of Mob Violence**: Accidents may be caused by factors beyond the driver's control, such as poor visibility due to fog combined with fears of mob violence against drivers if they stop to assist the injured at accident sites.
3. **Negative Impact on Transport Industry**: The law may be abused by law enforcement agencies to target the drivers and the fear of harsh penalties may deter many from joining or continuing in the transport profession.

Addressing the Concerns

1. **Reporting the Crime is must**- The term "soon after" in section 106(2) of BNS must be read in conjunction with a similar statutory duty imposed upon the motorist by Section 134 of the Motor Vehicles Act, 1988 which acknowledges that the law never forces someone to do the impossible (lex non-cogit ad impossibilia). Therefore, if the driver apprehends "mob fury", he is exempted from the duty to take the injured person to a doctor immediately and can instead report the accident to the nearest police station "as soon as possible", within 24 hours.
2. **Mob Lynching is punishable** under Section 103(2) of BNS, with a harsh penalty of life imprisonment or death.
3. **Acts of "rashness" and "negligence" must be established:** beyond a reasonable doubt by the prosecution to hold the driver criminally liable under Section 106(2) as the earlier contained the punishment for *'rash or negligent'*, thus proving either sufficed. But the *'or'* has been replaced by *'rash and negligent',* therefore, proving both is compulsory and the truckers need not worry that the occurrence of a fatal accident in itself would incur liability in a hit-and-run case.
4. **No conviction in case of no fault**: or minimum fault as the Supreme Court (SC) recently in *Nanjundappa &Anr vs the State of Karnataka (2022) case* provided an additional safeguard to prevent hasty conclusions based merely on circumstantial evidence in negligence cases by clarifying that "res ipsa loquitur" (the things speak for itself) doesn't strictly apply to any case and the prosecution must establish a direct link between the negligent act and the victim's death in such cases.

Legislations Across the World

- Countries across the world have enforced stricter laws mandating those involved in grave motor accidents to stay on the accident spot and intimate law enforcement agencies at the earliest.
- Failure to do so can result in penalties up to €75,000 (Rs 68,27,550) in France and imprisonment for up to 10 years in Virginia (the US).
- In the UK, death by dangerous driving is punishable for up to 14 years.

Way Forward

- **'One clause fitting all'** will serve as prejudice against drivers in different circumstances as negligent acts can be a result of the behavior of commuters, road conditions, lighting on the road, and other similar factors.
- **Different Scales of Punishment** may be prescribed according to the severity of the crime instead of 10 years of imprisonment for all cases. Road accidents resulting in minor injuries can be punished by community service or revoking of driving licenses or mandatory driving retests etc. This can help resolve

the concerns of the drivers.

- **Stricter Traffic Rules**: There should be a comprehensive plan to check over speeding, improve infrastructure, fix the responsibility of transporters for vehicular maintenance, and ensure efficient emergency medical to solve the problem of Hit-and-run.

Iran-Pakistan Strikes

Iran bombed two bases of militant group Jaish al-Adl in Pakistan's Balochistan province with missiles and drones. In retaliation Pakistan's army carried out precision strikes in Iran (in Siestan-Balochistan province) using killer drones and rockets.

- This attack by Pakistan struck terrorist groups Balochistan Liberation Army and the Balochistan Liberation Front.

India's Stand On Iran's Missile Strikes In Pakistan

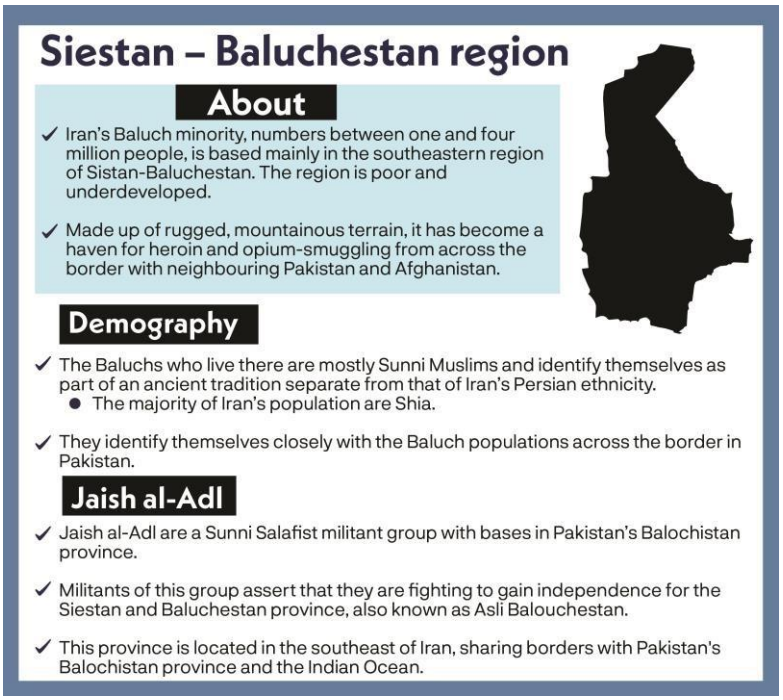
India said that this is a matter between Iran and Pakistan. However, India follows an uncompromising position of zero tolerance towards terrorism.

Security Trends Emerging in the Region after the Iran-Pakistan Strikes:

- **Fragility of Pakistan's western borderlands:** The ungoverned and under-governed spaces in the Baloch landsprovide fertile ground for smuggling, narcotics trafficking, and cross-border political militancy backed by third parties.
- **Regional power politics between Arabs, Israelis and Iranians:** The deepening conflict between Iran and its Arab neighbours on the one hand and Israel on the other breeds trans-border interventions.
- **Balochistan's geopolitical location**: It is located at the **mouth of the oil-rich Gulf and also makes it part of the new great game.**
- **Pakistan's dilemma:**
  - Pakistan's difficulties in dealing with Balochistan's long-standing unrest have been exacerbated by **Beijing's strategic presence in Gwadar.**
  - Gwadar is one of the critical nodes of the much-touted **China-Pakistan Economic Corridor** and a key Indian Ocean port for Chinese naval presence in the Arabian Sea.
- **Relations between Afghanistan and Iran:**
  - Afghanistan and Iran have long had their share of problems with each other. Some of them have sharpened under the **Taliban regimes.**
  - These include differences over religious ideology, minority rights, border management, and sharing transboundary rivers, etc.
- **The role of the Taliban government:**
  - The Taliban government in Kabul has been quite forceful in dealing with Pakistan.
  - It would be surprising if they did not take advantage of the opportunity to enter the Gulf in order to gain new allies and expand their influence.

- **Concerns for the Region:**
  - The tit-for-tat attacks have raised tensions in the volatile region, already engulfed by Israel's war on Hamas in the Gaza Strip and the targeting of the merchant ships in the Red Sea by Yemen's Houthis.
  - Whether they want it or not, **India, Pakistan, and Afghanistan** will now be drawn deeper into the unstable Middle East.

Deep Concerns for India



- **Delhi has traditionally stayed neutral** in the conflicts within the Middle East. But Delhi might find it increasingly hard to do as India's economic and security stakes rise in the volatile Middle East.
- The attacks on its shipping in the Arabian Sea threaten its commercial lifelines**,** and unsurprisingly, India has deployed ten warships to protect its interests.
- India's clear stand against terrorism, its close ties with Israel, and its deeper engagement with Saudi Arabia and the UAE are all **new elements of New Delhi's Middle East policy.**
- The cross-border attacks between Iran and Pakistan point to a changing region that **will demand India to rethink many of its past assumptions** about security in the Middle East.

Maldives Govt. Suspends 3 Ministers

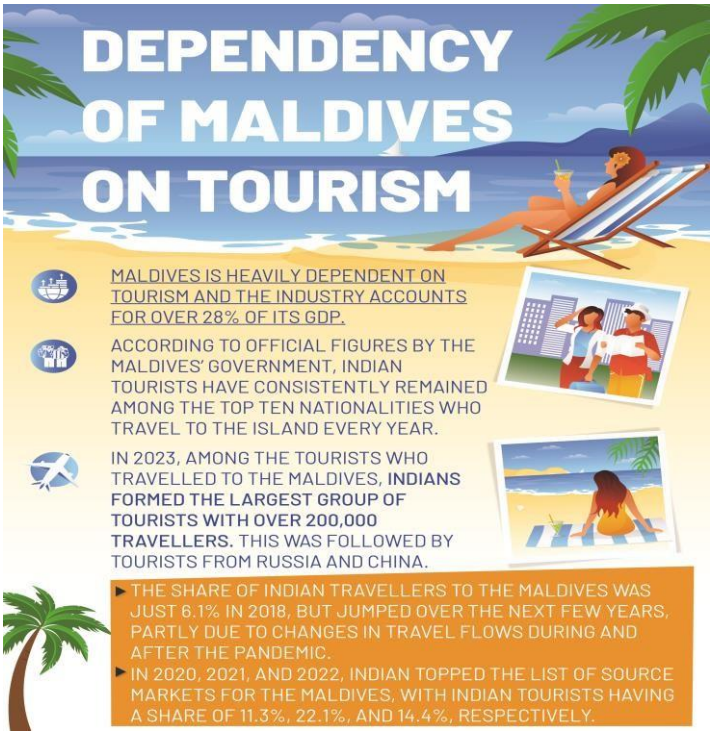
The Maldives government suspended three deputy ministers after they took to social media to make derogatory remarks against PM Modi.

Background

- **Social Media War**
  - It all started with a series of posts on X from Indian PM, promoting tourism in Lakshadweep islands.
  - Soon after PM Modi's post, some prominent Maldivian social media users responded to it with offensive, racist, xenophobic and derogatory comments.
    - These comments were targeted at Indians at large, as well as the Indian PM.
  - Among them were the three Maldivian Ministers.
- **Accusation against India by the social media users of Maldives**
  - Some Maldivian social media users began levelling accusations against India of attempting to compete with their country as a choice for a tropical vacation for travellers.
  - These posts also instigated other social media users into posting a wide range of racist remarks against Indians and Indian tourists who travel to the Maldives.

Anti-India Sentiments Among A Section Of The Maldives' Population

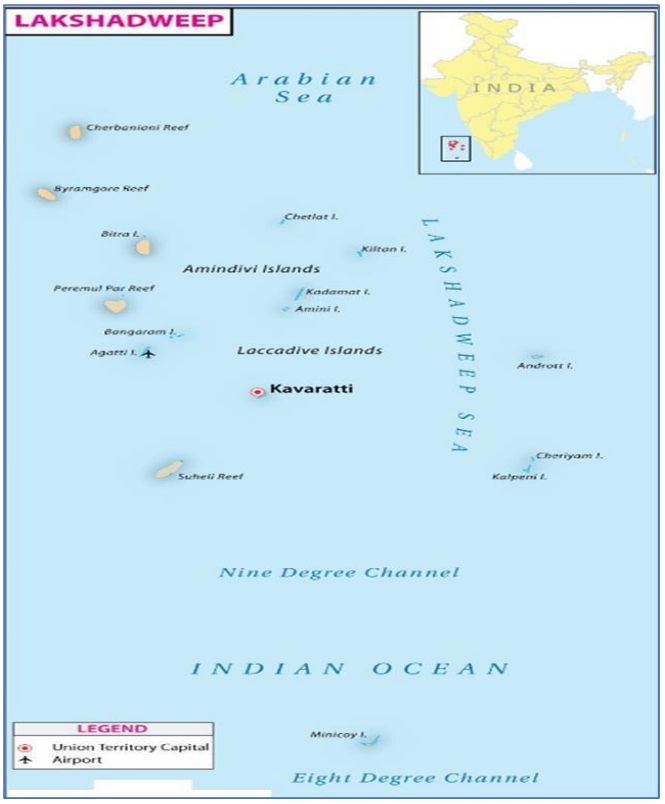
- Sometime in 2020, the **India Out campaign** started as on-ground protests in the Maldives which later spread widely across social media platforms.
- By the second half of 2021, it had developed into an active and visible political campaign.
- The supporters of the campaign had claimed that it had been started to protest against what they called Indian military presence in the country.
    - They had actively targeted all aspects of India-Maldives bilateral relations.
- In December 2023, on the sidelines of the COP28 climate summit, the President Muizzu said that India's government has agreed to withdraw its soldiers from the Maldives
    - These soldiers were in the country to operate and manage two helicopters and a Dornier aircraft given to the Maldives by India.



[Also refer the topic ***"India agrees to pull out soldiers from Maldives"*** from The Recitals – December 2023]

Lakshadweep

- **About**
    - India's smallest Union Territory Lakshadweep is an archipelago consisting of 36 islands with an area of 32 sq km.
    - It is a uni-district UT and is comprised of **12 atolls, three reefs**, five submerged banks and ten inhabited islands.
    - The capital is Kavaratti and it is also the principal town of the UT.
- **Geographical location**
    - It is located between 8º – 12º 13" North latitude and 71º – 74º East longitude, 220 to 440 Kms. away from the coastal city of Kochi in Kerala.
        - The maritime boundary between the Maldives and Minicoy (India) runs through the **Eight Degree Channel**.
        - **Nine Degree Channel** separates the island of Minicoy from the main Lakshadweep archipelago.
- **Coral Atolls**
    - The islands are predominantly coral atolls, formed by coral reefs that surround a lagoon.
- **Demography**
    - According to the 2011 Census, Lakshadweep



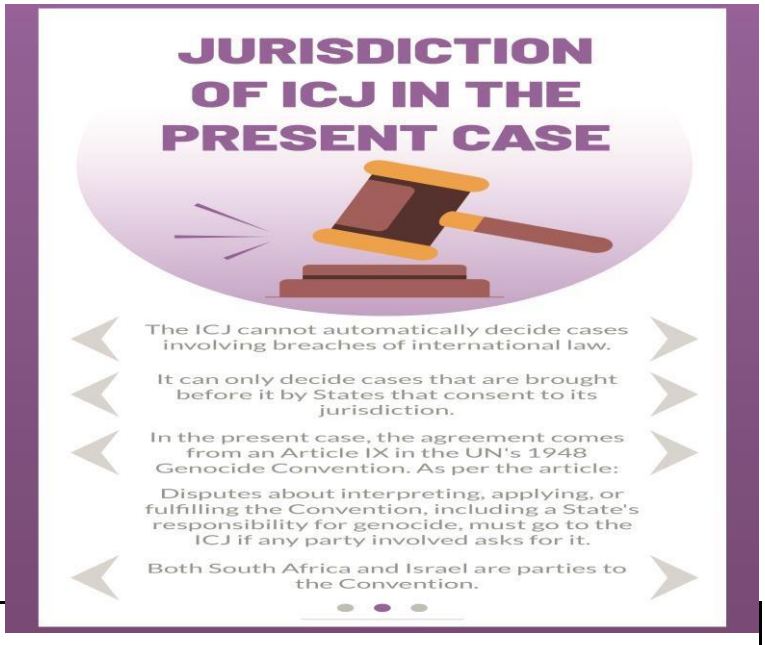
has a population of 64473 persons.
    - More than 93% of the population who are indigenous, are Muslims and majority of them belong to the Shafi School of the Sunni Sect.
    - **Malayalam** is spoken in all the islands **except Minicoy** where people speak Mahl which is written in Divehi script and is spoken in Maldives also.
    - The entire indigenous population has been classified as Scheduled Tribes.
        - There are no Scheduled Castes in this UT.
- **Climate: Tropical**, with a warm and humid climate throughout the year.

Significance of Lakshadweep for India

- **Strategically Located** in the Arabian Sea providing India with a presence in a crucial maritime region.
    - Its proximity to major international shipping routes enhances India's strategic maritime influence.
        - Nine Degree Channel is the important passage for shipping between Middle East, Europe and Western Asia with Southeast Asia.
- **Exclusive Economic Zone (EEZ):** The islands contribute to India's EEZ, granting the country rights over the exploration and use of marine resources in the surrounding waters.
        - Due to Maldives, India gets access to 20000 square kilometres of sea.
- **Maritime Security:** Indian Navy and Coast Guard use the islands as a base.
- **Economic significance:** Its picturesque beauty makes it a significant tourist destination.
    - This includes fisheries, oil and gas exploration, and other economic activities.
- **Biodiversity and Marine Life:** The coral atolls and surrounding waters of Lakshadweep are home to diverse marine life, including coral reefs and various fish species.

Genocide Case Against Israel at ICJ

- South Africa has brought a case to the International Court of Justice (ICJ) **accusing Israel of committing genocide** in its military response to the 7 October Hamas attack that killed hundreds of Israeli civilians.
- The South African case includes references to the Israeli use of blanket bombing and the cutting of food, water and medicine supplies to Gaza.
- If ICJ passes an order, it will have legal significance for all States that are parties to the ***Genocide Convention*** as such an order is binding on all States.



UN's 1948 Genocide Convention

- **About**
    - The **Convention on the Prevention and Punishment of the Crime of Genocide** is an international human rights treaty that codified the crime of genocide for the first time.
    - This was the first human rights treaty adopted by the UN General Assembly on December 9, 1948, and

has been in effect since January 12, 1951.

- **Claim of genocide:** There are two elements:
  - **The mental element** (specific intent to destroy, in whole or in part a specific group.)
  - **The physical element** includes the following five acts, enumerated exhaustively:
    - ✓ Killing members of the group
    - ✓ Causing serious bodily or mental harm to members of the group
    - ✓ Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part
    - ✓ Imposing measures intended to prevent births within the group
    - ✓ Forcibly transferring children of the group to another group
  - Committing these acts, however widespread, is not enough to make a claim of genocide.
  - The **specific intent** to destroy is what distinguishes genocide *from war crimes, ethnic cleansing, and crimes against humanity. Without provable intent, a group or individual can still be guilty of "crimes against humanity" or "ethnic cleansing" but not genocide.*
  - Also, the commission of war crimes, ethnic cleansing, and crimes against humanity *do not provide an avenue* for States to approach the ICJ because the court does not have automatic jurisdiction over those crimes.

International Court of Justice (ICJ)

- ICJ is the principal judicial organ of the United Nations (UN).
- It was established in June 1945 by the Charter of the United Nations and began work in April 1946.
- The seat of the Court is at the **Peace Palace in The Hague** (Netherlands).
- It is the only one of the six principal organs of the UN that is not located in New York City.
- **English and French** are the ICJ's official languages.
- **Role**
  - to settle, in accordance with international law, legal disputes submitted to it by States
  - to give advisory opinions on legal questions referred to it by authorized United Nations organs and specialized agencies.
- **Judges**
  - The ICJ has 15 judges who are elected to nine-year terms by the UN General Assembly and Security Council, which vote *simultaneously but separately.*
  - To be elected, a candidate must receive a majority of the votes in both bodies, a requirement that sometimes necessitates multiple rounds of voting.
    - A third of the court is elected every three years and elections are held at the UNHQ in New York during the annual UNGA meeting.
    - The judges elected at the **triennial election** commence their term of office on February 6 of the following year.
  - The president and vice-president of the court are elected for three-year terms by secret ballot. **Judges are eligible for re-election**.
- **Indian Judges at ICJ**
  - Four Indians have been members of the ICJ so far.
    - ✓ **Justice Dalveer Bhandari**, former judge of the Supreme Court, has been serving at the ICJ since 2012.
    - ✓ B. N. Rau (1952–1953),
    - ✓ Sri Nagendra Singh (1985 to 1988).

✓ R. S. Pathak (1989–1991), who served as India's 18th Chief Justice

- **Members and Jurisdiction**
  - All members of the UN are automatically parties to the ICJ statute. However, this does not automatically give the ICJ jurisdiction over disputes involving them.
    - **ICJ gets jurisdiction only if both parties consent to it**.
  - The judgment of the ***ICJ is final and technically binding*** on the parties to a case.
    - There is no provision of appeal. It can at the most, be subject to interpretation or, upon the discovery of a new fact, revision.
  - The ICJ has no way to ensure compliance of its orders, and its authority is derived from the willingness of countries to abide by them.

Indian Navy Thwarts Hijacking Attempt In Arabian Sea

- Indian warship INS Chennai and its marine commandos thwarted the attempted hijack of a Liberia-flagged merchant vessel named Lila Norfolk.
- The ship, Lila Norfolk sent a message via the UK Maritime Trade Operations portal when it was about 460 nautical miles off the coast of Eyl, Somalia.
- The message reported a possible boarding by five to six unknown armed individuals.
- In response, the Indian Navy diverted the INS Chennai, a destroyer on anti-piracy patrol nearby.
- It safely rescued its 21 crew members, including 15 Indians, in north Arabian Sea.

Recent Hijacking Incident In The Region

- This was the second hijacking incident in the region which has completely gone down from the peak a decade back.
- There have also been a series of attacks on merchant ships by Houthi rebels in Yemen in the Red Sea as well as the Arabian Sea.

Maritime Piracy

- As per the Article 101 of the UN Convention on the Law of the Sea (UNCLOS), maritime piracy is when people on a private boat or ship commit crimes like kidnapping, violence, or robbery for personal gain.
  - UNCLOS is an international treaty which was adopted and signed in 1982 in Montego Bay, Jamaica
  - It lays down a comprehensive regime of law and order in the world's oceans and seas establishing rules governing all uses of the oceans and their resources.

Threats Posed By Maritime Piracy

- **Physical Harm, Kidnapping and Associated Humanitarian Concerns**:
  - Crew members and passengers may experience trauma and psychological distress as a result of piracy incidents

- **Disruption of Trade routes** causing delays in the delivery of goods and impacting global trade.
- **Economic Losses:** Businesses may suffer financial losses due to stolen cargo, ransom payments, increased insurance premiums, and the cost of implementing anti-piracy measures.
- **Impact on Fishing Industry**: Pirates sometimes target fishing vessels, affecting the livelihoods of fishermen and the availability of seafood.
- **Environmental Risks:** Pirates may engage in illegal activities, such as oil theft or dumping pollutants, posing environmental threats to marine ecosystems.
- **Security Concerns:** The presence of piracy raises security concerns for coastal regions and international waters, requiring increased naval and maritime security efforts.
    - Piracy can be linked to broader security issues, such as terrorism and organized crime, creating challenges for international security.

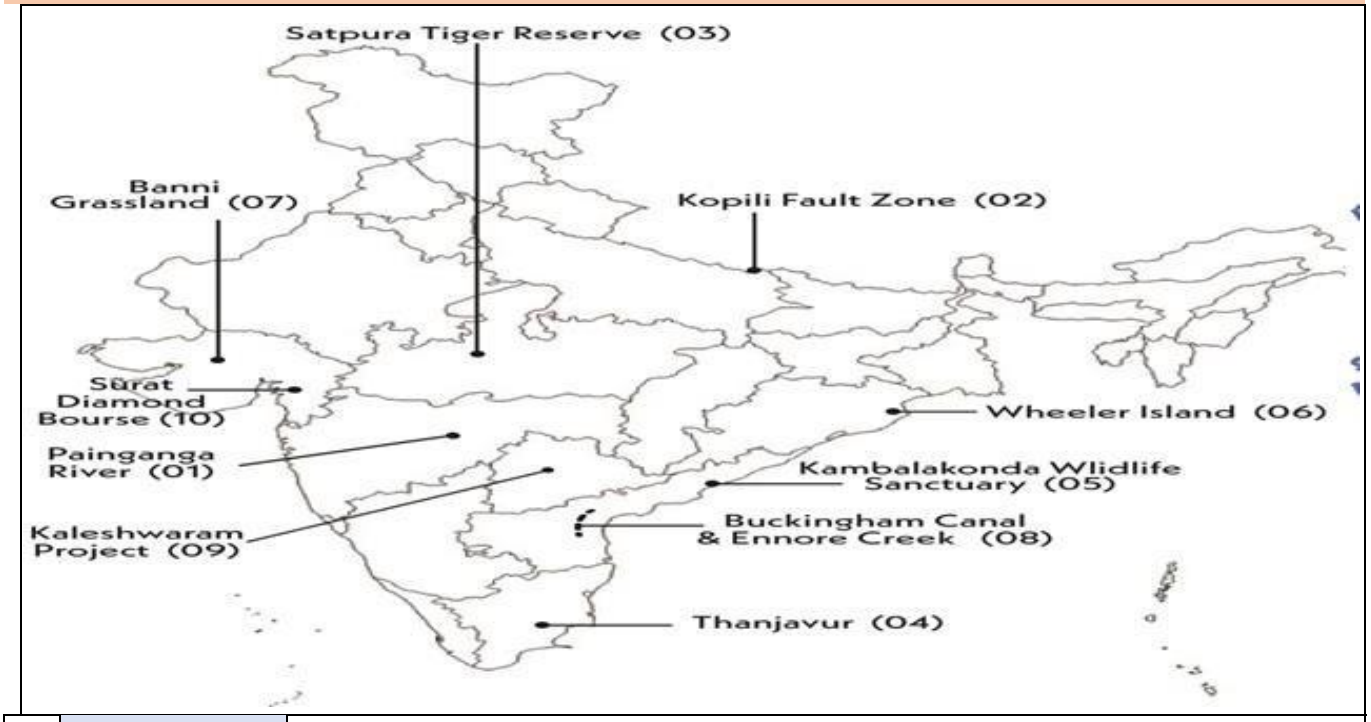
Steps Taken To Combat Maritime Piracy

Global Initiative	Initiatives by India
• UNCLOS • **Operation Prosperity Guardian** ○ It is a United States-led multinational military operation that began in December 2023 to respond to Houthi attacks on shipping in the Red Sea. • Convention for the Suppression of Unlawful Acts against the safety of Maritime Navigation (1988) • **Combined Maritime Forces (CMF)** ○ CMF is a partnership of 39 nations that work together to promote security,	• **Operational Steps** ○ Indian govt. has deployed naval ships with armed helicopters to patrol the piracy prone areas. ○ The Indian Navy commenced anti-piracy patrols in the Gulf of Aden from October 2008. ○ In recent years, task Groups comprising destroyers and frigates have been deployed to undertake maritime security operations and render assistance to merchant vessels in case of any incident. ○ Also, aerial surveillance by long-range maritime patrol aircraft and Unmanned Aerial Vehicles has been enhanced to have a complete maritime domain awareness. • **India participates in the various multilateral fora that have been set up to combat piracy** ○ The Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) is a government-to- government agreement that aims to enhance multilateral cooperation among 16 regional countries. ○ Regional Maritime Security Initiative (RMSI) is a partnership between regional nations with varying capabilities and capacities. • **Institutions created** ○ The Navy's Information Management and Analysis Centre (IMAC) and Information Fusion Centre for Indian Ocean Region (IFC-IOR) are

stability, and prosperity in international waters. ○ India is an associate member of the CMF.	institutions involved in maintaining maritime security. ○ Besides, Indian Navy also coordinates with Coast Guard to maintain enhanced surveillance within the Exclusive Economic Zone (EEZ). • **Legislative steps** ○ India enacted the **Maritime Anti-Piracy Act, 2022** to give effect to arrest and prosecute pirates and strengthen the fight against piracy. ○ Also, the government's SAGAR (Security and Growth For All in the Region) Doctrine provides a framework for maritime co-operation in the Indian Ocean region.

MAPS: PLACES IN NEWS

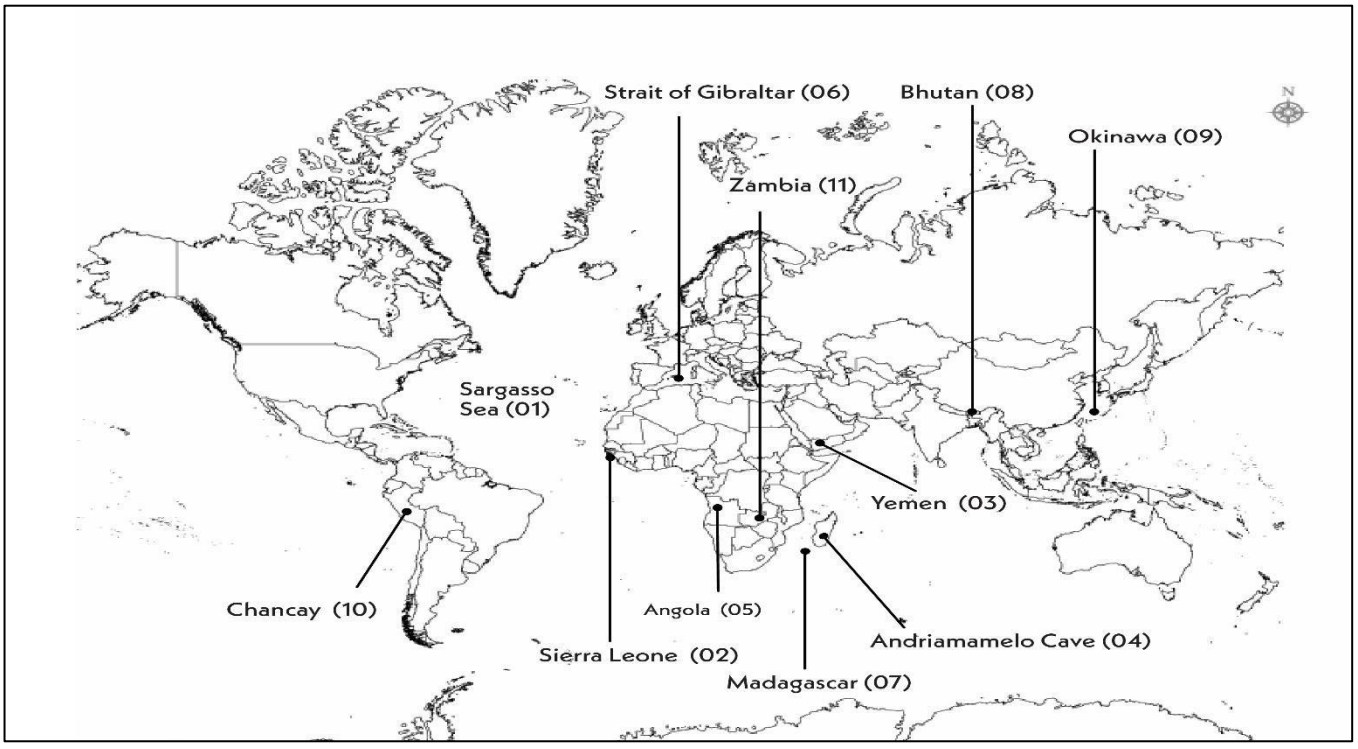
National Places In News



1.	**Painganga River**	Protests were staged against a proposed dam project on the Painganga river in the Vidarbha region of Maharashtra recently. It originates in the Ajanta ranges in Aurangabad district in Maharashtra. It is a major tributary of the Wardha River. The Wardha River flows into the Wain Ganga River to form the Pranhita River, which finally joins the Godavari River.
2.	**Kopili Fault Zone**	Recently, in a groundbreaking discovery, researchers from the Indian Institute of Geomagnetism (IIG) have identified seismogenic liquefaction features in the active Kopili Fault (KF) zone. It is a 300 km long and 50 km wide lineament situated in the northeastern region (NER).It extends from the western part of Manipur to the tri-junction of Bhutan, Arunachal Pradesh, and Assam.It is closer to Himalayan Frontal Thrust.This is a seismically active area falling in the highest Seismic Hazard Zone V.
3.	**Satpura Tiger Reserve**	The forest department of Satpura Tiger Reserve recently found a rock painting dating back 10,000 years in MP's Narmadapuram. It is located in the Hoshangabad district of Madhya Pradesh. The tiger reserve comprises three protected areas, Satpura National Park, Bori Wildlife Sanctuary, and Pachmarhi Sanctuary. It has Dhoopgarh peak as high as 1,350 metres. It is part of the Deccan bio-geographic zone of India.
4.	**Thanjavur**	Thanjavur (Tanjavur or Tanjore) is a temple site in the Tamil Nadu region of southern India. Thanjavur was the capital of the great Chola (Cola) king Rajaraja I. He commissioned the site's magnificent temple, the Brihadishvara, in the early 11th century CE. Thanjavur is listed by UNESCO as a World Heritage Site.
5.	**Kambalakonda Wlidlife Sanctuary**	The Eastern Ghats Nature Interpretation Centre is being opened in the Kambalakonda Wildlife Sanctuary (Andhra Pradesh). It aims to educate visitors about the rich biodiversity of the Eastern Ghats Mountain range from Odisha to Tamil Nadu. Dry evergreen tree forests are found here.
6.	**Wheeler Island**	As per reports, India's premier agency for military R&D, the Defence Research

		Development Organisation (DRDO), will pause missile testing at Wheeler Island off Odisha coast during the mass nesting season of Olive Ridley sea turtles. Abdul Kalam Island, formerly known as Wheeler Island, is an island off the coast of Odisha. The island was renamed to honour the late President Dr. APJ Abdul Kalam and also to encourage the youth to pursue a scientific temperament. It is the only place in India that has an integrated test range maintaining a missile testing facility.
7.	**Banni Grassland**	The central govt has approved a proposal to establish a cheetah conservation breeding centre in Gujarat's Kutch district's Banni grassland.Banni Grassland is situated near the Great Rann of Kutch in Gujarat. It is considered to be the largest Grassland in Asia.
8.	**Buckingham Canal and Ennore Creek**	During the recent Cyclone Michaung, an oil spill occurred from the Chennai Petroleum Corporation Limited (CPCL) into the Buckingham Canal and Ennore Creek in Tamil Nadu. The wetland has suffered from pollution caused by industries and neglect, as evidenced by the continuous presence of fly ash and hot water. Despite NGT directives, little progress has been made in restoring and protecting the fragile ecosystem of the Ennore wetlands. Ennore Creek in Chennai, situated along the Coromandel Coast. It is an arm of the Kosathalaiyar River.
9.	**Kaleshwaram Project**	The allegations of lapses in the completion of kaleshwaram Irrigation Project were raised. The Kaleshwaram Lift Irrigation Project (KLIP) is a multi-purpose irrigation project on the Godavari River in Kaleshwaram, Telangana.The project starts at the confluence point of Pranahita River and Godavari River.
10.	**Surat Diamond Bourse**	Prime Minister Narendra Modi inaugurated Surat Diamond Bourse (SDB), the world's largest and modern centre for international diamond and jewellery business.It is aimed at shifting the diamond trading business from Mumbai to Surat, which is the hub of diamond cutting and polishing with thousands of factories across the city.It will be a global centre for trading of both rough and polished diamonds as well as jewellery.

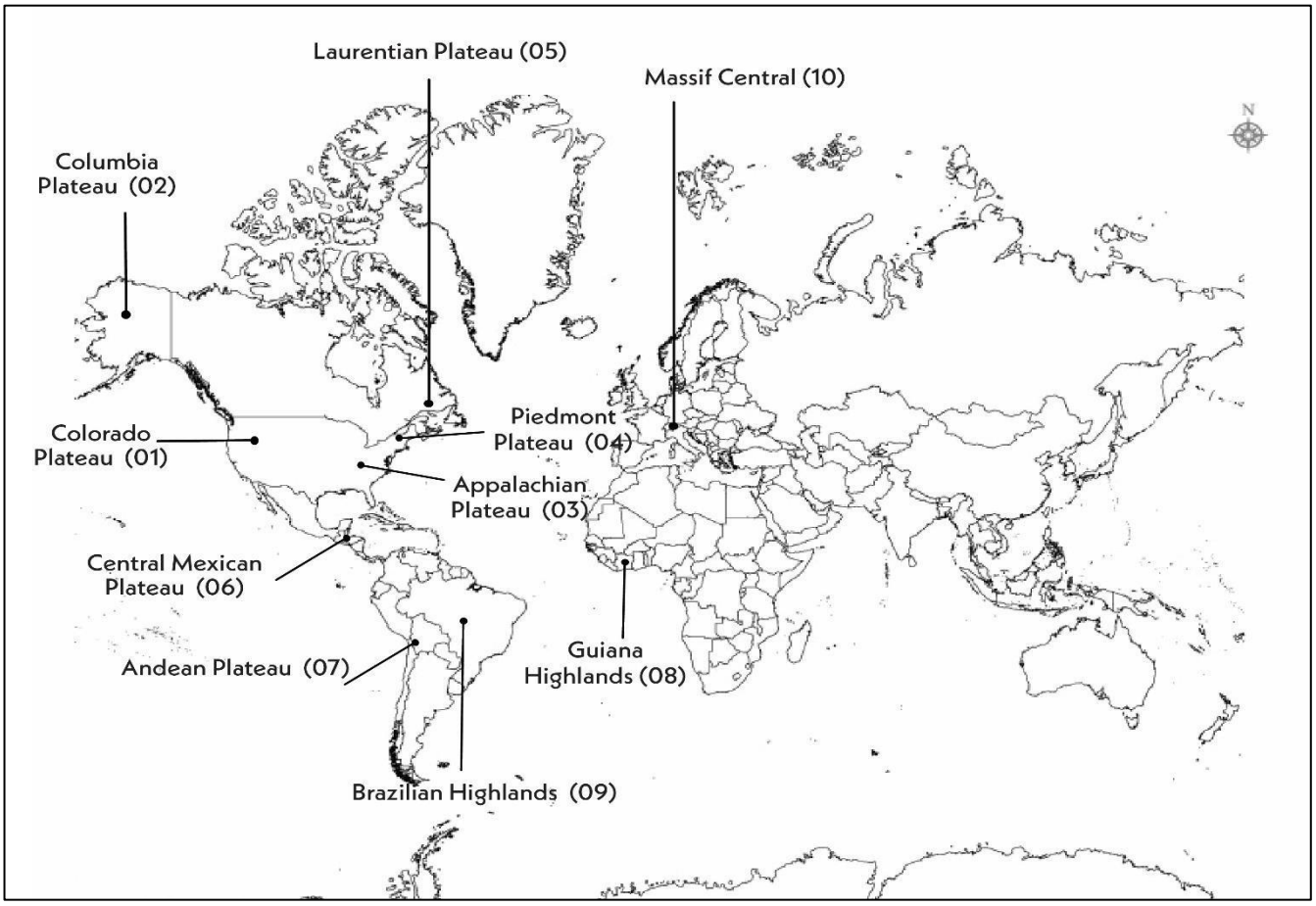
International Places In News



1.	**Sargasso Sea**	The Sargasso Sea near Bermuda is warmer, saltier and more acidic than it has ever been. The Sargasso Sea, located entirely within the Atlantic Ocean, is the only sea without a land boundary.It is named after Sargassum, a golden drift algae that can aggregate to form extensive floating mats on the surface of the ocean.
2.	**Sierra Leone**	The November 26 coup attempt in Sierra Leone was driven by political instability post-President Bio's contested re-election and economic challenges, including a high cost of living and poverty.Sierra Leone, located on West Africa's southwest coast, shares borders with Liberia and Guinea. Freetown serves as the capital and largest city.
3.	**Yemen**	Recently, Houthi militants from Yemen have attacked commercial ships 12 times. Yemen is a country in West Asia located at the southern end of the Arabian Peninsula. It shares borders with Saudi Arabia and Oman and maritime borders with Eritrea, Djibouti, and Somalia. Yemen is a member of the Arab League, the United Nations, the Non-Aligned Movement, and the Organisation of Islamic Cooperation
4.	**Andriamamelo Cave**	Recently, a unique, prehistoric rock art drawings have been discovered in the Andriamamelo Cave in western Madagascar.It is situated in the western Madagascar.It is located in karstified limestone of the PaysageHarmonieux Protégé de Beanka.This is part of an extensive karst region that includes the Parc National de Bemaraha to the south, a UNESCO World Heritage site, and the little-studied Antsingimavo karst area to the north.
5.	**Angola**	Africa's second-biggest oil producer 'Angola' is leaving OPEC after disagreements over production targets.Angola, is located in southwestern Africa. **Bordering Nations:** It is bordered by Namibia to the south, the Democratic Republic of the Congo to the northeast, Zambia to the east, and the Atlantic Ocean to the west.
6.	**Strait of Gibraltar**	Iran has recently threatened to close the Strait of Gibraltar and the Mediterranean Sea unless Israel stops bombing Gaza.It is a narrow waterway separating Europe from Africa and connecting the Mediterranean Sea to the Atlantic Ocean. Until the opening of the Suez Canal in 1869, the Strait of Gibraltar served as the only access point to the Mediterranean Sea.It is bordered by Spain and the British Overseas Territory of Gibraltar in the north, and by the African country of Morocco and the Spanish exclave of Ceuta in the south.
7.	**Madagascar**	Madagascar is being impacted by climate change, making life harder for millions of people. It is Located off the coast of East Africa in the Indian Ocean with the nearest mainland African country being Mozambique
8.	**Bhutan**	Bhutan's King Jigme Khesar Namgyel Wangchuck has unveiled the 'GelephuSmartcity Project,' a mega international city near the Indian border covering 1,000 square kilometres. The project is expected to be an "economic corridor connecting South Asia with Southeast Asia via India's northeastern States".
9.	**Okinawa**	Japan Resumed Landfill Work at New US Military Site on Okinawa.Okinawa Prefecture is located in the eastern part of the Asian continent. It is the southwestern most point of the Japanese archipelago. It is located between Taiwan and Kyushu, the southwestern-most of Japan's four main islands.It is the only region in Japan that is in the subtropical zone, and is blessed with a warm climate all year round.
10.	**Chancay**	China is expanding its trade influence in South America with a new mega port project in the Peruvian town of Chancay. The over $3 billion deep water port, majority-owned by

		Chinese state-owned firm Cosco Shipping, is set to start operations late this year. This port, part of China's 'Belt and Road' initiative, aims to enhance trade ties with South America by providing a direct gateway to the resource-rich region.
11.	**Zambia**	The Mines Ministry has proposed sending an Indian industry delegation to copper-rich Zambia to discuss potential copper exploration and mining projects in the southern African country. It is a large, landlocked, resource-rich country with sparsely populated land in the centre of Southern Africa.Lusaka is the capital city of the Republic of Zambia. It shares its border with eight countries (Angola, Botswana, Democratic Republic of Congo, Malawi, Mozambique, Namibia, Tanzania, and Zimbabwe)

Major Plateau In World



1.	**Colorado Plateau:**	Located in parts of Arizona, Utah, Colorado, and New Mexico.Known for its high elevation and diverse landscapes, including mesas, canyons, and plateaus. It was formed millions of years ago by various geological processes, including uplift, erosion, and volcanic activity. It is home to iconic geological features like the Grand Canyon, Bryce Canyon, and Monument Valley.
2.	**Columbia Plateau:**	The Columbia Plateau is a large, high-elevation region in the northwestern United States, covering parts of Washington, Oregon, and Idaho. It is known for its diverse landscapes, including canyons, mesas, rolling hills, and fertile valleys.Iconic features include the Columbia River Gorge, Hells Canyon, and the Snake River Plain. Geologically significant due to its volcanic history, with unique basalt formations and evidence of ancient eruptions.

3.	**Appalachian Plateau**:	The Appalachian Plateau, stretching from New York to Alabama, is a significant physiographic region within the Appalachian Mountains. Unlike the sharp ridges of the Blue Ridge, the Appalachian Plateau features relatively flat, elevated areas cut by rivers and streams. It is formed by layers of eroded materials deposited over millions of years, the plateau primarily consists of sandstones, shales, and conglomerates.
4.	**Piedmont Plateau:**	It is a plateau region located in the Eastern United States. It is situated between the Atlantic coastal plain and the main Appalachian Mountains, stretching from New York in the north to central Alabama in the south. The Piedmont Province is a physiographic province of the larger Appalachian division which consists of the Gettysburg-Newark Lowlands, the Piedmont Upland and the Piedmont Lowlands sections.
5.	**Laurentian Plateau:**	The Canadian Shield, also called the Laurentian Plateau, is a geologic shield, a large area of exposed Precambrian igneous and high-grade metamorphic rocks. It forms the North American Craton, the ancient geologic core of the North American continent.
6.	**Central Mexican Plateau:**	The Central Mexican Plateau, also known as the Mexican Altiplano, is a vast region encompassing most of northern and central Mexico. The plateau forms a significant portion of Mexico's landmass.
7.	**Andean Plateau:**	The Altiplano, Collao or Andean Plateau, in west-central South America, is the area where the Andes are the widest. It is an intermontane plateau which is located between two ranges of Andes Mountain. It is a major area of Tin reserves. Capital of Bolivia La Paz and Sucre are situated on this plateau.
8.	**Guiana Highlands:**	The Guiana Highlands, stretching across parts of Venezuela, Guyana, Suriname, French Guiana, and Brazil, offer a blend of geography, geology, and biology. Underlying the region is the Guiana Shield, one of the world's oldest and most stable cratons, composed of Precambrian bedrock.
9.	**Brazilian Highlands:**	The Brazilian Highlands or Brazilian Plateau are an extensive geographical region, covering most of the eastern, southern, and central portions of Brazil, in all approximately half of the country's land area. They are mostly covered with sedimentary and volcanic rocks.
10.	**Massif Central:**	The Massif Central is a highland region in the middle of southern France, consisting of mountains and plateaus. It covers about 15% of mainland France. It is famous for Grapes cultivation.

SOCIAL ISSUES

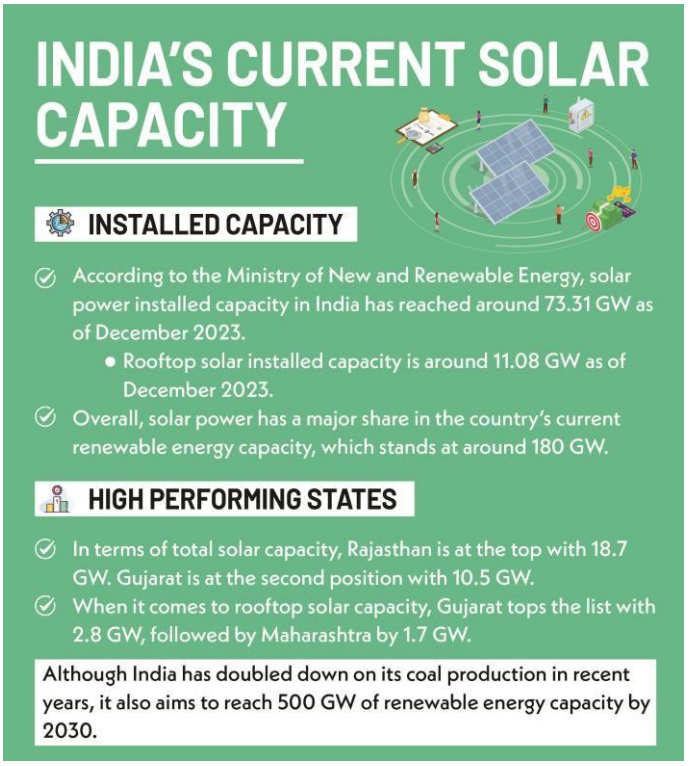
Pradhan Mantri Suryodaya Yojana

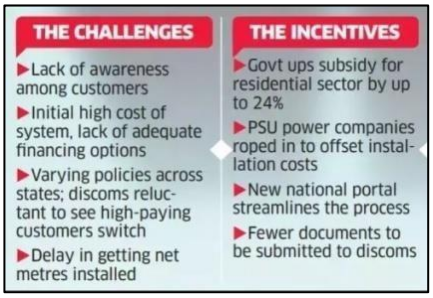
PM Modi announced the 'Pradhan Mantri Suryodaya Yojana', a government scheme under which one crore households will get rooftop solar power systems.

- This scheme is a **new attempt** to help reach the target of 40 GW rooftop solar capacity.
- The scheme would help not only reduce electricity bills of the poor and middle class, but also push India's goal of becoming self-reliant in the energy sector.

Previous Schemes To Promote Rooftop Solar System

- **About**
  - In 2014, the government launched the Rooftop Solar Programme.
  - This had aimed to achieve a cumulative installed capacity of 40 gigawatts (GW) by 2022.
  - The scheme aimed to expand India's rooftop solar installed capacity in the residential sector by providing Central Financial Assistance and incentives to DISCOMs
- **Achievement**
  - However, this target could not be achieved. But by the end of 2023, rooftop solar energy generation was just 11 GW.
    - And energy generated from residences was only about a fifth of that.
  - As a result, the government extended the deadline from 2022 to 2026.
- **Features**
  - A consumer can avail of benefits of the scheme through DISCOM tendered projects or through the National Portal (www.solarrooftop.gov.in)
  - The DISCOMs role is limited to issuing of technical feasibility approval, installation of **net-meter** and inspect the system.
    - Net metering is a billing mechanism that credits solar energy system owners for the electricity they add to the grid.
- Surplus solar power units generated from the rooftop solar plant can be exported to the grid. The consumer can receive monetary benefits for the same





Decline In China's Population and Its Impacts

The year 2023 saw 11.1 million deaths and 9 million births in China, **marking the second year in which the country's total population has reduced** to a recently released total figure of 1.4 billion.

- In the same year, **India overtook China** as the most populous country in the world.

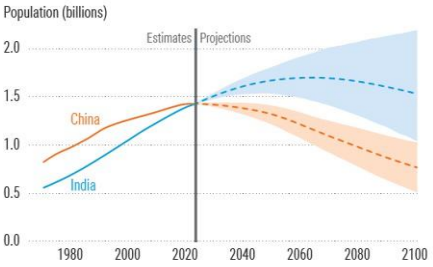
Recent Population Trends in China:

- **Since 2016**, the Total Fertility Rate or TFR (the number of children a woman, on average, is expected to bear in her lifetime) has been falling in China.

- According to the 2020 Census, **China's TFR was 1.3 births per woman** - marginally up from the 1.2 in the 2010 and 2000 censuses, **but way below the replacement rate of 2.1**.
- **The replacement rate** is the number of children a woman is to have to replace the present generation in the future.

Figure 1

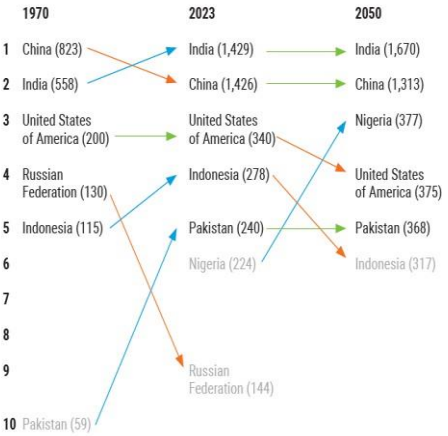
Trends in total population for China and India, estimates for 1970-2022 and projections for 2023-2100 *(with 95 per cent prediction intervals)*



Data source: United Nations, *World Population Prospects 2022*, https://population.un.org/wpp/.

Figure 2

Top five most populous countries, estimates for 1970 and projections for 2023 and 2050



Note: Numbers in parentheses refer to total population (in millions) on 1 July of the referenced year.

Data source: United Nations, *World Population Prospects 2022*, https://population.un.org/wpp/.

1 United Nations, Department of Economic and Social Affairs, Population Division (2022). *World Population Prospects 2022: Summary of Results*. UN DESA/POP/2022/TR/NO. 3.

How Could a Falling Population Impact China?

- **Working-age population between 15 to 59 years** has fallen to 61% of the total population.
- **The proportion of those aged 60 and older has increased**. Life expectancy has also increased for both men and women over time as a result of advanced healthcare systems.
- **In the short run**, the trend will result in the need for greater investments in elderly care, including palliative care, and hiring more medical professionals and nursing staff.
- **In the longer run**, it could lead to greater pressure on the young population to support the 'dependants' (those under the age of 15 and over the age of 59).
- It also comes at a time when **China's overall economic growth is lower** than expected

Ban On Commercial Release Of GM Crops Will Be Against National Interest

The Supreme Court has reserved its judgment on PILs challenging the government's decision to allow the commercial release of the GM mustard variant Dhara Mustard Hybrid-11 (DMH-11).

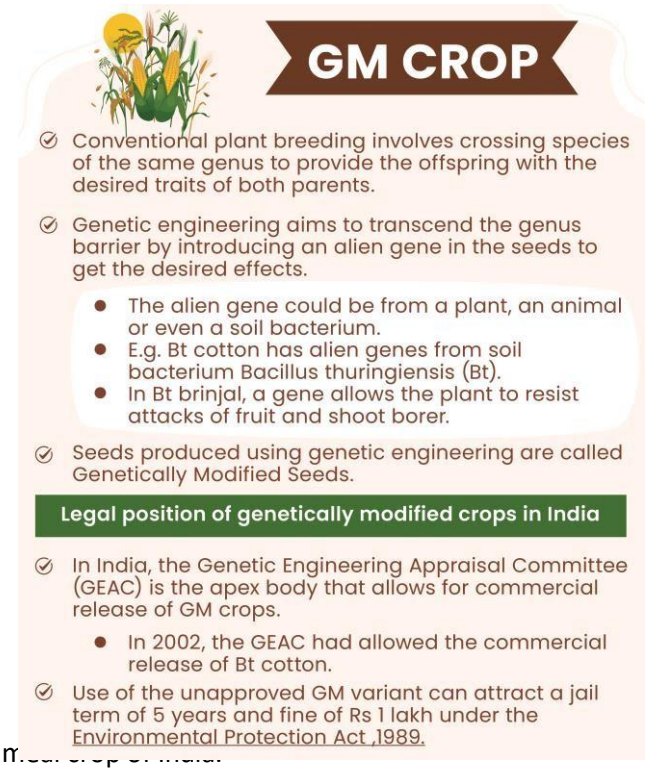
Background: Ban On Commercial Release Of GM Crops Will Be Against National Interest

- Earlier, in 2017, GEAC had cleared the proposal for commercial cultivation of GM mustard. However, the Union Environment Ministry vetoed it and suggested that the panel hold more studies on the GM crop.
- In October 2022, GEAC again cleared the proposal for commercial cultivation of GM mustard – also known as DMH-11.
- Later, the petitioners, Gene Campaign and activist Aruna Rodrigues, **challenged the government move** to commercially release DMH-11.

Stand of Govt. in SC

The **government told the Supreme Court** that India already brings in and uses oil **made from GM crops**. It stated that opposition to this technology, based on groundless fears of negative effects, harms farmers, consumers, and industry.

- **Production increased and so has consumption**
  - A total of 272.2 lakh hectares was under cultivation of oilseeds in 2010-11, this increased to 302.3 lakh hectares in 2022-23.
  - The average per capita oil consumption had also risen from 2.9 kg per year in 1950-1960 to 19.5 kg per year in 2022.
- **Increasing demand for edible oil**
  - In 2020-21, 13.45 million tonnes (54%) of the total edible oil demand was met through import worth about ₹1,15,000 crore.
    - This included palm oil (57%), soybean oil (22%), sunflower oil (15%) and small quantity of canola quality mustard oil.
  - In 2022-23, 15.533 million tonnes (55.76%) of the total edible oil demand was met through import.
- **Critical for food security of India** while reducing foreign dependency
  - Mustard is the most important edible oil and seed m[illegible]
  - Strengthening of plant breeding programmes, including use of new genetic technologies such as GE technology is critical for meeting emerging challenges.
- **India is already importing & consuming a large quantity of edible oil from GM oilseeds**
  - India imports about 55,000 MT of canola oil largely from GM canola seeds.
  - Similarly, nearly 2.8 lakh tonnes of soybean oil is being imported annually largely comprising GM soybean oil.
  - Most exporting countries such as Argentina, US, Brazil, and Canada cultivate GM soybean.
- **Economic losses of crops due to weeds**
  - India's annual economic losses of crops due to weeds is $11 billion (Rs 1 lakh crore).
  - It also highlighted that annual value of herbicide currently used in India is Rs 4,500 crore even without Herbicide Tolerant (HT) crops.
  - HT crops provide effective weed control and it will be detrimental to ban development of HT crops for Indian agriculture as labour is expensive and not available.
- **DMH-11 hybrid has shown increased per-hectare yield** by 25-30% over the traditional varieties
  - Mustard is one of the highest oil-bearing of oilseeds in India. Hence, domestic production of edible oils will rise considerably.



ASER 2023

For nearly two decades, ASER reports have consistently pointed to **deficiencies among children in elementary school** with regard to foundational skills like reading and basic arithmetic. But this year's focus on an older age group also points to a **similar gap in learning outcomes at higher levels.**

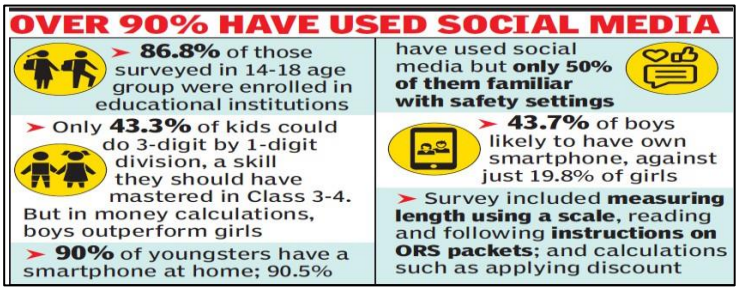
- The report reveals that children continue to struggle with basic reading and arithmetic skills well into their teenage years, even after reaching Class 10 and higher secondary levels of education (Classes 11 and 12).
- The findings point to **a huge skill deficit among adolescents**, many of them only a few years away from entering the job market.

About Annual Status of Education Report (ASER) 2023

- ASERs (by NGO Pratham) have been surveying children **aged 6 to 14 since 2005** to track trends in school enrollment, attendance and reading and arithmetic abilities.
- **The ASER 2023** is based on a survey conducted in 28 districts across 26 states, reaching out to 34,745 youths in the **14-18 age group**.
    - One rural district was surveyed in each major state with the exception of Uttar Pradesh and Madhya Pradesh, where two such districts were surveyed.
- **The youths were surveyed on 4 points** –
    - Basic reading, math and English abilities;
    - Application of basic skills to everyday calculations;
    - Reading and understanding written instructions; and
    - Financial calculations that need to be done in real life.

Findings of ASER 2023

- **Trends on basic learning:**
    - Overall (of those aged 14-18), a quarter (26.5%) could not read a Class 2-level textbook in their regional language, and a little less than half (42.7%) could not read sentences in English.
    - Of those who can read these sentences, over a quarter (26.5%) did not understand the meaning of what they were reading.



- **Arithmetic proficiency:**
    - 45% of youths in the surveyed group have basic arithmetic proficiency.
    - The rest need to 'catch up' as **low levels of foundational numeracy affect the ability of youth in tackling everyday calculations** (say, for financial computations).
- **Application of basic skills to everyday calculations:**
    - 85% of surveyed youths can measure length using a scale when the starting point is 0 cm but this drops sharply to 39% when the starting point is moved.
    - This showed a decline as compared with 2017 when it was 86% and 40%. **Males do better than females** across all everyday calculations.
- **Enrollment in different streams:**
    - More than half (55.7%) of the young people in this age group were enrolled in the Arts/Humanities stream, followed by STEM (31.7%) and Commerce (9.4%).
    - More males report enrolling in the STEM stream (36.3%) than females (28.1%).

AISHE Report

In the last eight years, more women have enrolled in higher education compared to men, according to the 2021-22 **All India Survey on Higher Education** (AISHE) released recently.

Key Highlights of the AISHE Report 2021-22

- A total of **1,168 Universities/University level Institutions**, **45,473 Colleges** and 12,002 Stand Alone Institutions were registered in AISHE 2021-22.
- Of them, 1,162 Universities, 42,825 colleges and 10,576 Stand Alone Institutions have responded in the survey.
- **Number of Institutions**:
    - 341 Universities/University level institutions have been established since 2014-15.

- Out of 1168 Universities registered, **685 are Government managed** (Central Govt. 240, State Govt. 445), **10 are Private Deemed** (Aided) and **473 are Private** (Un-aided).
- There are 17 Universities exclusively for Women. It was 11 in 2014-15.
- In 2021-22, there are 18 Open universities (1 Central University, 16 State Universities and 1 State Private University).

- **Student Enrolment in Higher Education**:
  - Total enrolment in higher education has **increased to nearly 4.33 crore in 2021-22** from 3.42 crores in 2014-15.
  - Female enrolment in Higher Education increases to 2.07 crore (32% increase since 2014- 15).
  - The total number of pass-outs has increased to 1.07 Crore in 2021-22 as against 95.4 Lakh in 2020-21.
- **Caste-wise Enrolment**
  - Caste breakdown of the total enrolled students in 2021-22:
    - 15.3% belong to Scheduled Caste,
    - 6.3% belong to Scheduled Tribe,
    - 37.8% are from Other Backward Class and
    - 40.6% students are from other communities.
  - SC: Enrolment has increased to 66.23 lakh in 2021-22 from 58.95 lakh in 2020-21.
  - ST: enrolment has increased to 27.1 lakh in 2021-22 from 24.12 lakh in 2020-21.
    - ✓ The enrolment of ST Female students has increased to 13.46 lakh in 2021- 22 from 12.21 lakh in 2020-21.
  - Minority enrolment has increased to 30.1 lakh in 2021-22 from 21.8 lakh in 2014-15.
- **Top 6 States in terms of Student Enrolment**
  - **UP**, **Maharashtra**, **TamilNadu**, **MP**, **WestBengal** and **Rajasthan**.
    - They constitute 53.3% of the total Student Enrolment.
- **Number of foreign students**
  - **Total number of foreign students enrolled in higher education is 46,878**. In 2021-22, highest share of foreign students is from **Nepal** (28%), followed by **Afghanistan** (6.7%), **United States** (6.2%), **Bangladesh** (5.6%), **UAE** (4.9%), and **Bhutan** (3.3%).
- **Teaching Staff in Higher Education:**
  - The total number of faculty/teachers in 2021-22 are **15.98 lakh**, of which about 56.6% are male and 43.4% are female.
  - Number of teachers has increased by 46,618 in 2021-22 over 2020-21.

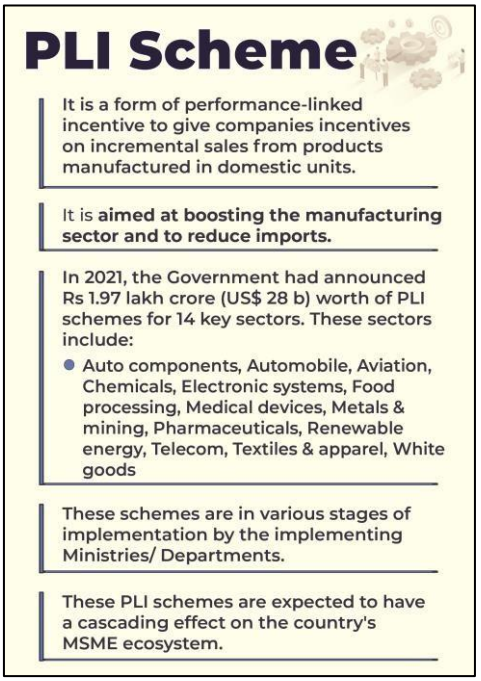
Reviewing PLI Schemes

The central government has disbursed incentive amount of Rs 4,415 crore under its flagship Production-Linked Incentive (PLI) schemes for as many as eight sectors till October this fiscal year.

- About Rs 1,515 crore was disbursed in FY24 till October, while it was Rs 2,900 crore in 2022-23, when payments under the scheme commenced.
  - By end of this fiscal, the disbursal target is Rs 11,000 crore.
- The govt. said that employment generation, both direct and indirect, is over 6.78 lakh.
- As on date, **746 applications have been approved in 14 sectors with expected investment of over Rs 3 lakh crore**.

- About 176 MSMEs are among the PLI beneficiaries in sectors such pharma, and telecom.

Performance of PLI Schemes



- **Boost in Exports**:
  - After doubling the value of mobile handset exports in FY22 to Rs 45,000 crore over FY21, India is estimated to have exported Rs 90,000 crore worth of mobile handsets in FY23.
  - Similarly, in the pharma industry, India is now making 35 active pharmaceutical ingredients (APIs), which we used to import from countries like China. As a result, India's imports have come down.
  - These schemes have witnessed exports surpassing Rs 3.2 lakh crore, with significant contributions from sectors such as electronics, pharma, food processing, and telecom.
- **Slow Implementation**:
  - Implementation of the PLI schemes has been slow so far.
  - In 2021-22, the government spent just Rs 10 crore in incentive payouts (for mobile handsets, white goods—ACs and LEDs—and food processing industries put together), reflecting marginal increase in production.
  - In 2022-23, as per DPIIT, this number rose to Rs 2,874 crore. That's a big improvement, sure, but a scale-down from the Rs 8,504 crore initially allocated across 7 sectors in the Union Budget for FY23, and even from the revised estimate of Rs 4,821 crore
  - Effectively, the **first two years of the seven-year exercise saw a mere 1.46% of the total Rs 1.97 lakh crore incentive outlay being paid out**.
  - Large-ticket industries are either yet to adopt the scheme or begin major activities under it.
- **Lower Number of Jobs Created**:
  - The slow start has also meant lower number of jobs created.
  - Against the projected 6 million new jobs over seven years, only some 300,000 jobs (or 5% of the total) have been created between 2020 and early-2023.

A WORK IN PROGRESS

BUDGET ALLOCATION UNDER THE PLI SCHEME REFLECTS SLOW PROGRESS IN MANY SECTORS

Nodal body	Segments covered	FY22 Actual	FY23 BE	FY23 RE	FY24 BE
Ministry of Electronics & Information Technology (Meity)	Mobile handsets, IT hardware, electronics	0	5,300	2,203	4,645
Dept of Commerce & Industry	White goods & LED	1	4	4	65
Dept of Communication	Telecom & Networking manufacturing	0	528	90	800
Dept of Heavy Industry	Auto, auto components & advanced chemical cell batteries	0	6	12	605
Dept of Civil Aviation	Drones & drone components	0	0	40	33
Ministry of Chemical & Fertilisers	Bulk drug, APIs, medical devices, pharma	0	1,629	1,663	1,200
Dept of Textile	Textile	0	15	8	5
Dept of Food Processing Industry	Food processing	9	1,022	801	1,530
Total		10	8,504	4,821	8,883

Figures in ₹ crore; **BE:** Budget Estimate; **RE:** Revised Estimate;
Source Budget documents FY24

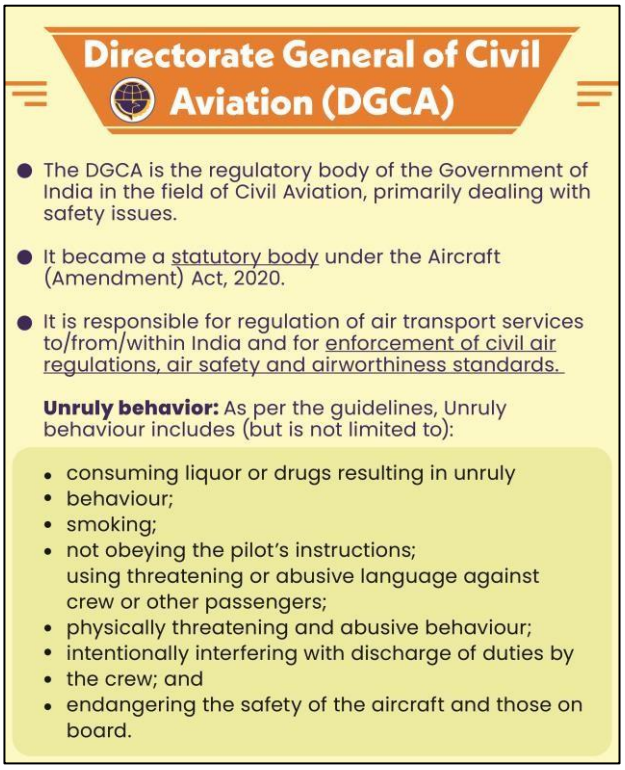
Passenger Assaults Pilot on IndiGo Flight

A passenger aboard an IndiGo flight physically assaulted the aircraft's pilot while he was making an announcement regarding delays. The airline declared the passenger unruly, and further action will be guided by the **Civil Aviation Requirements (CAR)** on "Handling of unruly passengers".

- CAR are issued by the aviation watchdog Directorate General of Civil Aviation (DGCA).
- The CAR lay down the procedure that airlines must follow with regard to unruly passenger behaviour of varying degrees at the time of the incident and subsequently.

Procedure To Be Followed After The Incident Is Over

- When an airline receives a complaint of unruly passenger behaviour from the pilot-in-command, it must refer the complaint to an internal committee.
- The committee must include:
  - a retired district and sessions judge as chairman,
  - a representative of a different airline and,
  - a representative of a passengers' association, or consumer association, or a retired officer of a consumer disputes redressal forum.
- The internal committee is required to decide the matter within 30 days, along with the categorisation of the incident in one of three defined category levels.
- The committee shall also decide the duration for which the unruly passenger will be banned from flying.
- The committee's decision shall be binding on the airline.



Category Levels Of Disruptive Passenger Behavior (ranging from verbal harassment to murderous assault)

- **Level 1:** Unruly behaviour, including physical gestures, verbal harassment, and unruly inebriation (intoxication)
- **Level 2:** Physically abusive behaviour, including pushing, kicking, hitting, and grabbing or inappropriate touching or sexual harassment.
- **Level 3:** Life-threatening behaviour, including damage to aircraft operating systems, physical violence such as choking, eye gouging, murderous assault, and attempted or actual breach of flight crew compartment.

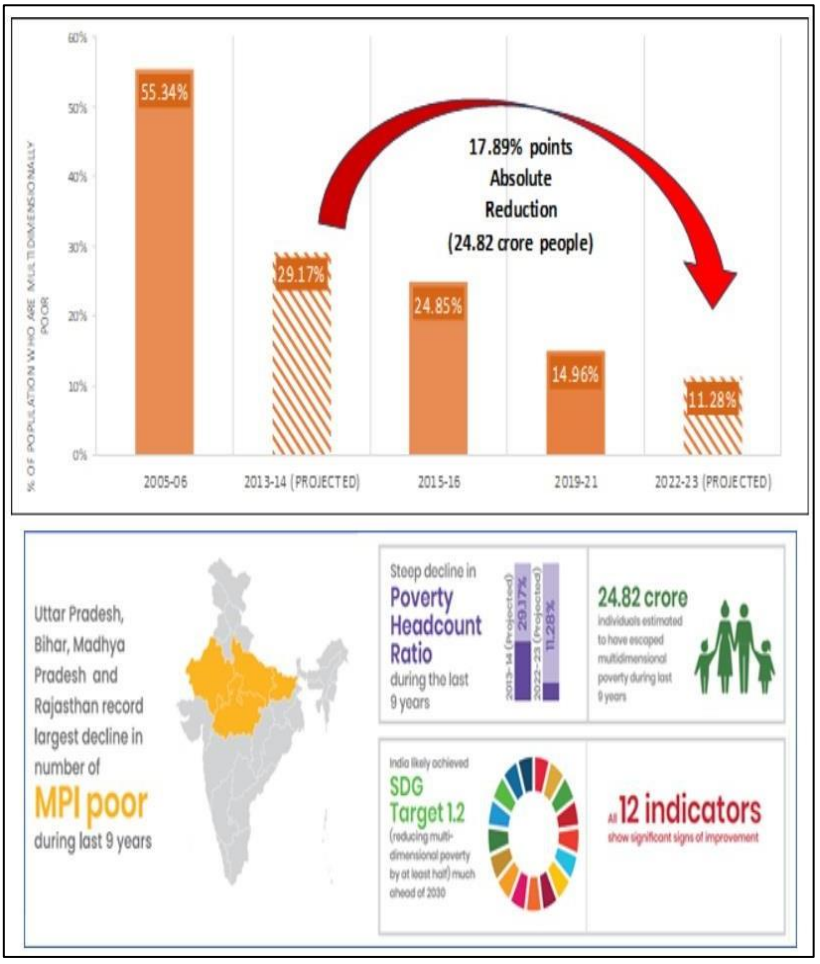
Penalties For Unruly Behaviour By A Flight Passenger

- **Concerned airline may ban such unruly passenger from flying**
  - Pending decision of the Committee, the concerned airline may ban such passenger from flying, but such period may not exceed a period of 30 days.
  - In case the Internal Committee fails to take a decision in 30 days, the passenger will be free to fly.
- **Database of unruly passengers**
  - Airlines are required to maintain a database of unruly passengers and share it with the DGCA and other airlines.
  - The DGCA maintains a **No-Fly List** based on the data shared by carriers.
- **Other carriers can also ban such passengers from flying**
  - In addition to the airline on whose aircraft the incident occurred, other carriers also have the option of banning such passengers from flying for varying durations based on offence levels.
  - For Level 1 and 2 offences, the ban on flying can extend to three months and six months respectively.
  - For a Level 3 offence, the minimum ban should be for 2 years, with no upper limit.
- **Banned individual can appeal within 60 days to an Appellate Committee.**
  - This committee will be constituted by the Ministry of Civil Aviation, and headed by a retired judge of a High Court.
  - An appeal against the appellate panel's decision shall be made to a High Court.

NITI Aayog's Discussion Paper - Multidimensional Poverty in India since 2005-06

As per the NITI Aayog's Discussion Paper **'Multidimensional Poverty in India since 2005-06'**, 24.82 crore people escaped multidimensional poverty in last nine years.

Key Highlights Of The Report



- **Significant decline in multidimensional poverty in India:** From 29.17% in 2013-14 to 11.28% in 2022-23 i.e. a reduction of 17.89% points.
- **States with largest decline**
  - Uttar Pradesh topped the list with 5.94 crore people escaping poverty followed by Bihar at 3.77 crore and Madhya Pradesh at 2.30 crore.
- **India likely to achieve SDG Target 1.2 (reducing multidimensional poverty by at least half) well before 2030.**
- **Government's goal:** Government has a goal to bring down multidimensional poverty to below 1% and all efforts are being made in that direction.
  - The report said India is all set to reach single-digit poverty levels during 2024.
- **Report highlighted noteworthy initiatives**
  - Initiatives like Poshan Abhiyan and Anemia Mukt Bharat have significantly enhanced access to healthcare facilities, leading to a substantial decrease in deprivation.
  - Operating one of the world's largest food security programs, the targeted public distribution system (PDS) under the National Food Security Act covers 81.35 crore beneficiaries, providing food grains to rural and urban populations.

{For more about MPI Please refer July 2023 Recitals}

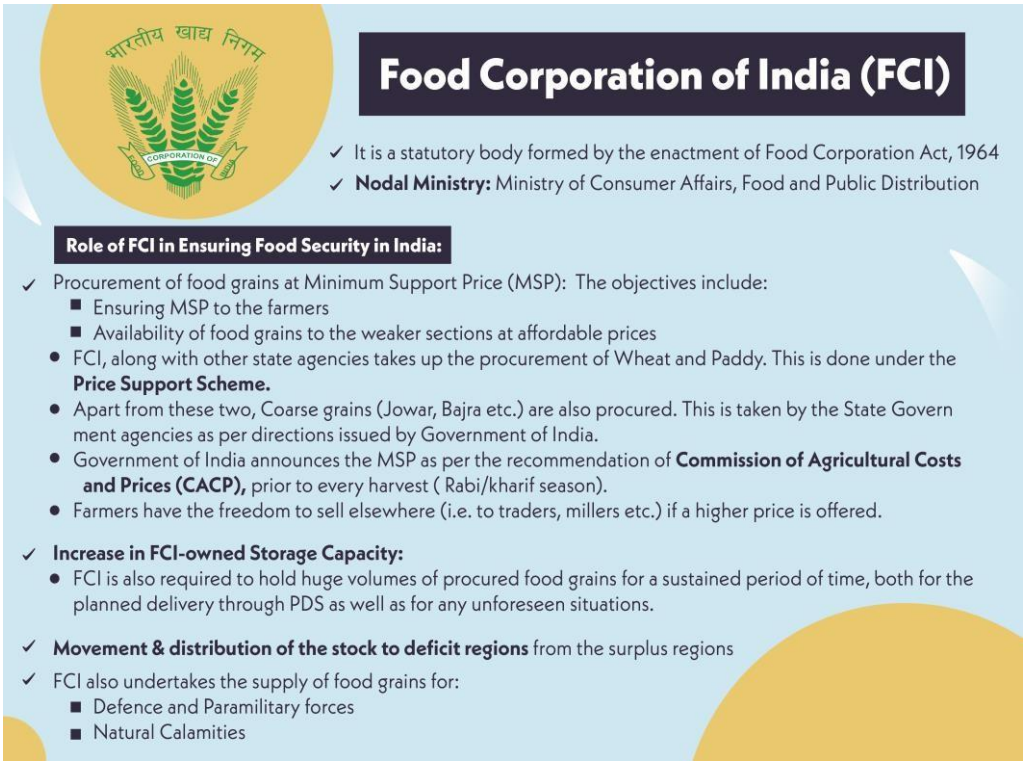
Role of Food Corporation of India (FCI)

Union Minister Piyush Goyal said that the role of the Food Corporation of India is not only to deliver ration, but also to instil confidence in farmers and beneficiaries by bringing in transparency, efficiency and accountability.

Shanta Kumar Committee Recommendations

- In August 2014, the Government set up a high-level committee to suggest restructuring or unbundling of FCI to improve its financial management and operational efficiency in procurement, storage and distribution of food grains.
- **Key Recommendations**
  - **Reduce the number of beneficiaries under the Food Security Act**-from the current 67 per cent to 40 per cent. Allow private players to procure and store food grains.

- **Stop bonuses on MSP paid by states to farmers**, and adopt cash transfer system so that MSP and food subsidy amounts can be directly transferred to the accounts of farmers and food security beneficiaries.



- **FCI should involve itself in full-fledged grains procurement only in those states which are poor in procurement**.
  - In the case of those states which are performing well (Haryana, Punjab, Andhra Pradesh, Chhattisgarh, Madhya Pradesh and Odisha), the states should do the procurement.
  - **Abolishing levy rice**: Under levy rice policy, govt. buys certain percentage of rice (varies from 25 to 75% in states) from the mills compulsorily. Mills are allowed to sell only the remainder in the open market.
- **Deregulate fertiliser sector & provide cash fertiliser subsidy** of Rs 7,000 per hectare to farmers.
- **Outsource of stocking of grains**: The committee calls for setting up of negotiable warehouse receipt (NWR) system.
  - In the new system, farmers can deposit their produce in these registered warehouses and get 80% of the advance from bank against their produce on the basis of MSP.
- **Clear and transparent liquidation policy for buffer stock**: FCI should be given greater flexibility in doing business; it should offload surplus stock in open market or export, as per need.

Pradhan Mantri Fasal Bima Yojana (PMFBY) Finds More Takers

The insured gross cropped area of non-loanee farmers under PMFBY has reached a new high. This indicates growing acceptance of Centre's crop insurance scheme.

Key Highlights

- **Jump in non-loanee area:** The non-loanee area has jumped to 180 lakh hectares during crop year 2022-23 under the PMFBY.
  - This is 70 per cent higher as compared to 106 lakh hectares during 2021-22.
  - The insured non-loanee area accounted for 36.07% of the total insured area under the PMFBY during 2022-23.
- **Loanee area has seen a decline** from 444 lakh hectares in 2019-20 to 320 lakh hectares in 2022-23.
- **Reason for this decline in the loanee area:** Initially, the scheme was compulsory for loanee farmers, who possess a crop loan account/Kisan Credit Card (KCC) account to whom credit limit is sanctioned/renewed for the notified crop during the crop season.

- However, from Kharif 2020, it was made voluntarily.

Pradhan Mantri Fasal Bima Yojana (PMFBY)

- **About:**
  - A scheme of the Ministry of Agriculture & Farmers Welfare, PMFBY is an insurance service for farmers for their yields, launched in 2016.
  - The PMFBY replaced the previous two schemes: the National Agricultural Insurance Scheme (NAIS) and the Modified NAIS.
- **Objectives:**
  - To provide insurance coverage and financial support to the farmers in the event of failure of any of the **notified crops** as a result of natural calamities, pests and diseases.

Key Features of PMFBY

- **Premium rates**
  - There will be a uniform premium of only 2% to be paid by farmers for all Kharif crops and 1.5% for all Rabi crops (winter sown).
  - In case of annual commercial and horticultural crops, the premium to be paid by farmers will be only 5%.
  - The balance premium will be paid by the Government (to be shared equally by central and state government).
  - The idea is to provide a fully insured amount to the farmers against crop loss.
- **Area based approach**
  - The Scheme is implemented on an 'Area Approach basis,' i.e., Defined Areas for each notified crop for widespread calamities,
  - The unit of insurance shall be *Village/Village Panchayat* level for major crops and for other crops it may be a unit of size above the level of Village/Village Panchayat.
  - It is assumed that all insured farmers in a unit of insurance, to be defined as a "Notified Area" for a crop, face similar risk exposures.
- **No upper limit to govt. subsidy:** This means, even if the balance premium is 90%, it will be borne by the Government.
- **Use of technology**
  - Crop Insurance App: Provides for easy enrollment of farmers. It facilitates easier reporting of crop loss within 72 hours of occurrence of any event.
  - Latest Technological Tools: To assess crop losses, satellite imagery, remote-sensing technology, drones, artificial intelligence and machine learning are used.
  - PMFBY Portal: For integration of land records.
- **Exemptions from service tax liabilities** of all the services involved in the implementation of the scheme.
- **Beneficiaries to be covered:** All farmers growing notified crops in a notified area during the season who have insurable interest in the crop are eligible.
  - To address the demand of farmers, the scheme has been made **voluntary** for all farmers from Kharif 2020.
    - Earlier, the enrolment was compulsory for farmers who possess a Crop Loan account or Kisan Credit Card (KCC) account, etc.
- **Risks covered under the scheme:**
  - Comprehensive risk insurance is provided to cover yield losses due to non-preventable risks, such as Natural Fire and Lightning, Storm, Hailstorm, Cyclone, Typhoon, Tempest, Hurricane, Tornado.
  - Risks due to Flood, Inundation and Landslide, Drought, Dry spells, Pests and Diseases

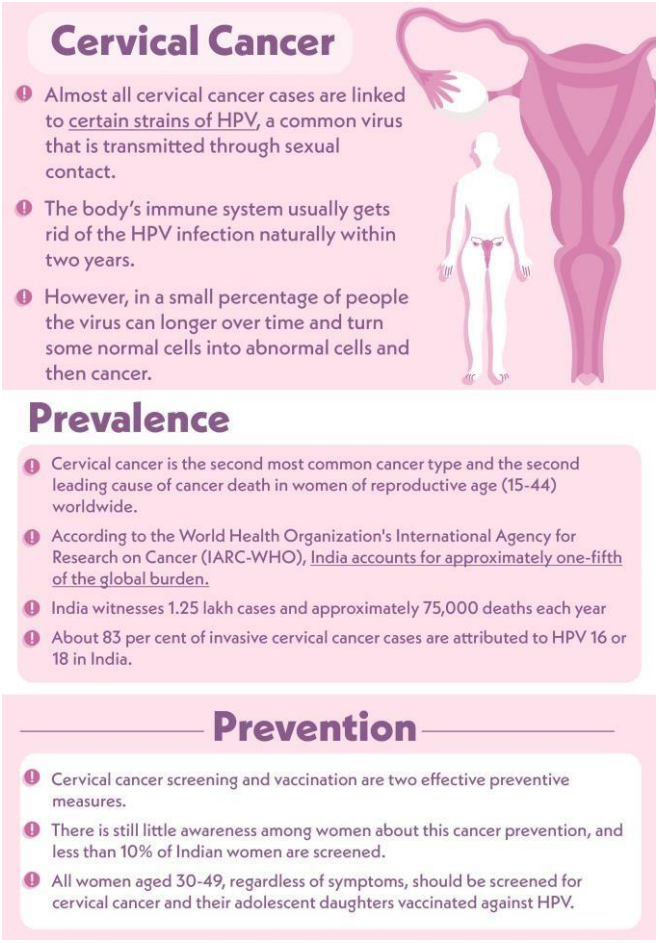
- In cases where the majority of insured farmers in a notified area have intent to sow or plant and have incurred expenditure for the purpose, but are prevented from sowing or planting the insured crop due to adverse weather conditions, indemnity claims up to a maximum of 25% of the sum-insured may be made**.**
- In post-harvest losses, coverage will be available up to a maximum period of 14 days from harvesting for those crops which are kept in "cut & spread" condition to dry in the field.
- **L**oss and damage resulting from occurrence of identified localised risks like hailstorm, landslide and Inundation affecting isolated farms in the notified area would also be covered.

Centre Set To Roll Out Vaccine Drive To Fight Cervical Cancer

The government is set to roll out a human papillomavirus (HPV) vaccination campaign for girls in the 9-14 years age group.

Key Highlights

- **Vaccination drive planned in three phases over three years**
  - The immunisation drive, planned in three phases over three years.
    - Every year for three years, one-third of girls aged 9 to 14 will get vaccinated.
    - Also, in states where this happens, each new group of 9-year-olds will receive the vaccine during these three years.
- **Vaccines to be available for free**
  - Currently, the two-dose HPV vaccine is available commercially for about Rs 2,000 per dose. But once the government includes it in its immunisationprogramme, it will be available for free.
- **Vaccine to be use in the immunisation drive**
  - **Cervavac**, an indigenously developed quadrivalent vaccine by the Serum Institute of India (SII) in Pune.
    - Cervavac offers protection against four HPV strains – 16, 18, 6 and 11.
  - Besides CERVAVAC, two vaccines licensed globally are available in India;
    - a quadrivalent vaccine (Gardasil, marketed by Merck) and
    - a bivalent vaccine (Cervarix, marketed by Glaxo Smith Kline).
    - These vaccines are costly & hence unaffordable for vast majority of Indians.
- **Place of vaccination:** schools and existing vaccination points.
- **Single dose vaccination drive:** While none of the HPV vaccines available globally recommend a single-dose schedule, WHO says that a single-dose regimen can be followed for public health programmes.



Challenges

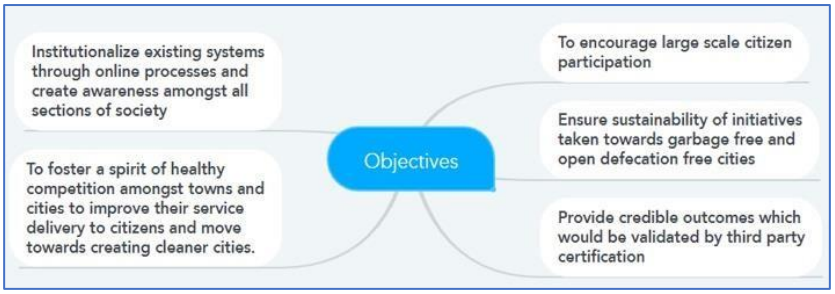
- **Production for public vaccination:** At present, SII has a production capacity of about 2-3 million doses of Cervavac per year. However, it needs to increase this capacity, with a target of 60-70 million doses.

- **Allocation of resources** and manpower
- **Awareness:** There is an urgent need to have a communication strategy in place and to ensure that any myths circulating online are promptly busted.

Swachh Survekshan Awards 2023

- **Surat in Gujarat and Indore in Madhya Pradesh** were jointly declared cleanest cities of the country at the annual clean city awards 2023 of the Union Urban Affairs Ministry.
- This was for the seventh year in a row that Indore has been ranked as the cleanest city in India.
- The **theme** for the year 2023 was -**"Waste to Wealth"**.
    - For 2024, the theme is "**Reduce, Reuse and Recycle".**

Swachh Survekshan



- It is an annual survey of cleanliness, hygiene and sanitation in cities and towns across India, launched as part of the **Swachh Bharat Abhiyan** (specifically under SBA-Urban)**.**
- It was launched by the Ministry of Housing and Urban Affairs (MoHUA) with Quality Council of India (**QCI**) as its implementation partner.
    - The SBA was launched (on 2nd October 2014) to make India clean and free of open defecation by 2nd October 2019.
    - The SBA was split into two - rural (**SBA-Gramin**, monitored by the Department of Drinking Water and Sanitation under the **Ministry of Jal Shakti**) and urban (**SBA-Urban**, overseen by the **MoHUA**).
    - **SBM-U 2.0** was launched on 1st October, 2021, focused on ensuring complete access to sanitation facilities for all.
        - The vision of a **Garbage Free India** is an initiative under SB

- **The first survey was undertaken in 2016** (covering 73 cities), which had grown to cover 4242 (by the 2020 survey).
    - The methodology for measuring cleanliness rests on two main criteria – citizen feedback and field assessment.

Performance of cities in Swachh Surveskshan 2023

- **Mhow Cantonment Board in Madhya Pradesh** was adjudged the cleanest cantonment board.
- **Varanasi and Prayagraj**, won the top two awards amongst the cleanest Ganga towns.
- Best SafaimitraSurakshit Sheher (safest city for sanitation workers): **Chandigarh**

Schedule M of Drugs and Cosmetics Rules

Aimed at ensuring robust quality control for pharma and biopharmaceutical products, the Union Health Ministry notified revised rules under Schedule M of the Drugs and Cosmetics Rules, 1945.

- Schedule M prescribes the Good Manufacturing Practices (GMP) for pharmaceutical products and the revised Schedule M rules ensures that GMP is followed.

Need for the Revised Rules of the Schedule M of Drugs:

- **To keep pace with fast-changing manufacturing and quality domain**, there was a necessity to revisit and revise the principles and concept of GMP mentioned in current Schedule M.
- This would bring **India's GMP recommendations at par with global standards**, especially to those of WHO, and ensure production of globally acceptable quality of drug.
- Earlier, the Ministry had set a 6-month deadline for small manufacturers and 12 months for large units to get their WHO-GMP certification.

Changes Introduced in the Revised Schedule M Drug Rules:

- It includes introduction of a -
  - **Pharmaceutical quality system (PQS)**,
  - Quality risk management (QRM),
  - Product quality review (PQR),
  - Qualification and validation of equipment, and
  - Computerised storage system for all drug products.
- **The notification states** that manufacturers must assume responsibility for the quality of the pharmaceutical products to ensure that they -
  - Are fit for their intended use,
  - Comply with the requirements of the licence, and
  - Do not place patients at risk due to inadequate safety, quality, or efficacy.
- **Companies must market a finished product** only after getting "satisfactory results" on tests of the ingredients; and
  - **Retain a sufficient quantity of the samples** of intermediate and final products to allow repeated testing or verification of a batch.

- **The revised Schedule M has 13 parts** which provide GMP guidelines for the specific requirements for manufacturing pharmaceutical drugs.
- **The revised rules have five new categories** of drugs including pharmaceutical products containing hazardous substances such as

Sex hormones | Steroids (anabolic and androgenic) | Cytotoxic substances | Biological products | Radiopharmaceuticals

- The revised rules are to be implemented **on the basis of company turnovers** where -
  - **Medium & small manufacturers** (with an annual turnover < ₹250 crore) will have to implement the revised rules within 12 months from its date of publication.
  - **Whereas large manufacturers** with an annual turnover > ₹250 crore will be given six months to do so.

Prerana Programme

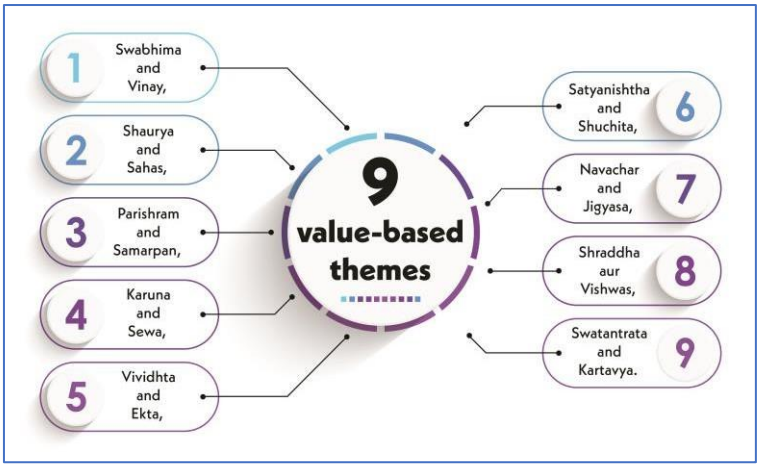
The Ministry of Education launched '**Prerana**', an experiential learning programme. This programme will operate from the vernacular school in Prime Minister Narendra Modi's birthplace **Vadnagar, Gujarat** where he studied.

About 'Prerana' Programme:

- Department of School Education & Literacy, Ministry of Education, has launched '**Prerana: An Experiential Learning Program**'.
- **Objective**: To offer a meaningful, unique, and inspiring experience to all participants, thereby empowering them with leadership qualities.
- Prerana is driven by a strong commitment to integrate principles of Indian education system and the philosophy of **value-based education** which is a corner stone of the **National Education Policy (NEP) 2020**.

Features of 'Prerana' Programme:

- **Duration, number of participants and nature of the programme**
  - Prerana is a **week-long residential program** for selected students of class IX to XII.
  - A batch of 20 selected students (10 boys and 10 girls) will attend the program, every week from various parts of the country.
  - It is an experiential and inspirational learning program for students with the best-in-class technology where heritage meets innovation.



- **Theme:** C**urriculum of Prerana School prepared by IIT-Gandhinagar is rooted in 9 value-based themes**.
  - This will inspire the youth and foster respect for Bharat's unity in diversity, embodying the spirit of ***"VasudhaivaKutumbakam".***
  - It will **contribute by making the youth of today, a flame holder for Viksit Bharat**.
- **Participants will be guided by mentors from prestigious institutions**.
- **Other features**
  - The day-wise program schedule will feature yoga, mindfulness, and meditation sessions, followed by experiential learning, thematic sessions, and hands on interesting learning activities.
  - Evening activities will include visits to ancient and heritage sites, inspirational film screenings, mission life creative activities, talent shows etc. ensuring a holistic learning approach.
  - Students will also engage in diverse activities, embracing indigenous knowledge systems, State-of-Art technologies, & learnings from inspirational personalities.
  - Students can register through the portal, wherein applicants can fill the requisite details to be a part of the Prerana program.
- **Institution from where this programme will run**
  - Prerana program will run from a Vernacular School, established in 1888, in one of the oldest living cities of India, **Vadnagar, district Mehsana, Gujarat**.

Hattees Get ST Tag

The state government of Himachal Pradesh gave green signal for the inclusion of 'Hattees' in the Scheduled Tribes (ST) list of the state, months after the President gave his nod for the same.

About the Hattee Tribe

- Hattees are a close-knit community residing around the Himachal-Uttarakhand border in the basin of the Giri and Tons rivers, both tributaries of the Yamuna which cut off their area from Sirmaur.
- The Tons marks the border between the two states, and the Hattis living in the Trans-Giri area in today's Himachal Pradesh and Jaunsar Bawar in Uttarakhand were once part of the royal estate of Sirmaur. Jaunsar Bawar was conquered by the British in 1814.
- Parts of the Trans-Giri region, where most of the Hatti community lives, also come under the Assembly Constituencies of Renukaji, Shillai, and Pachhad.
- They derive their name from their tradition of selling homegrown vegetables, crops, meat and wool etc. at small markets called 'haat' in towns.
- They are governed by a traditional council called Khumbli and the men from this community generally wear a distinctive white headgear during ceremonies.
- The two Hattee clans, in Trans-Giri and Jaunsar Bawar, have similar traditions, and inter-marriages are common.

Reasons for Delay By the State Government

- The State government was confused about the status of the Hattees of the Trans-Giri area of Sirmour district.
- As a "Hattee" group was already classified as Scheduled Castes (SC) in the state and the issue was whether these communities were to be included in the ST list as Hattees or not.
- This confusion was clarified by the Union government recently according to which the Hattees included in the SC list were to be excluded from the ST list.

Opposition To The Move

- The Gujjar community of Sirmaur district- the only other ST community in the area strongly opposed the move arguing that adding a relatively forward community like Hattees to the ST list would crowd them out of benefits.
- The move was opposed by the SC communities of the area claiming that the Hattees are largely forward caste communities that allegedly perpetrate atrocities against them adding them to the ST list would embolden them.

{Kindly refer Recitals -August 2023, For more details on Procedure for Inclusion of a Tribe in The List}

Supreme Court Legal Services Committee

Justice BR Gavai, a Supreme Court (SC) judge was recently appointed as the Chairman of the Supreme Court Legal Services Committee (SCLSC).

About the Supreme Court Legal Services Committee (SCLSC)

What?	About the Legal Services Authority Act, 1987
• It is a committee constituted by the SC under Section 3A of the Legal Services Authorities Act, 1987 to provide free and competent legal services to the weaker sections of society. ✓ Section 3A of the Act directs the Central Authority (the National Legal Services Authority or NALSA) to	• It aims to provide free and competent legal services to- ✓ SC/ST/EWS persons; ✓ victims of human trafficking or beggar; ✓ Women or child;

constitute a committee consisting of a Chairman (a sitting SC judge) along with other members nominated by the Chief Justice of India (CJI) based on the qualifications and experience prescribed by the Centre.
  - ✓ Secretary to the Committee is to be appointed by CJI.

Composition

- It consists of a chairperson and nine members nominated by the CJI.
- The appointment of officers and other employees is done on the criteria as prescribed by the Centre, in consultation with the CJI.

How did the system of providing free legal aid evolve?

Constitutional Provisions- Articles 14 (right to equality), Article 22(1) (rights to be informed of grounds for arrest) and Article 39-A (free legal aid) make it obligatory for the State to ensure equality before the law and a legal system that promotes justice based on equal opportunity.

Historical Evolution-

- ➢ 1952- The Central government started addressing the question of legal aid for the poor in various conferences of Law Ministers and Law Commissions.
- ➢ 1960- Some guidelines were drawn up by the Govt. for legal aid schemes and legal aid schemes were floated in different states through Legal Aid Boards, Societies and Law Departments.
- ➢ 1980- The Committee for Implementing Legal Aid Schemes (CILAS) was constituted under the Chairmanship of SC Judge P.N. Bhagwati to oversee & supervise legal aid programmes throughout the country.
- ➢ 1982- The introduction of Lok Adalat (held first in Gujarat) added a new chapter to the justice dispensation system of this country and succeeded in providing a supplementary forum to the litigants for conciliatory settlement of their disputes.
- ➢ 1987- The Legal Services Authorities Act (enforced in 1995) was enacted to give a statutory basis to legal aid programmes (like Lok Adalats) throughout the country on a uniform pattern.
  - ✓ Mentally ill or otherwise disabled persons;
  - ✓ Victims of mass disaster, ethnic violence, caste atrocity, flood, drought, etc.;
  - ✓ Industrial workers;
  - ✓ Persons in judicial custody/juvenile home.
- National Legal Services Authority (NALSA) is the apex body constituted under this act to-
  - ✓ Lay down policies and principles for making legal services available to eligible people.
  - ✓ To frame the most effective and economical schemes for legal services.
  - ✓ To disburse funds and grants to State Legal Services Authorities and NGOs for implementing legal aid schemes and programmes.
- The State Legal Services Authority is constituted in every state to give effect to the policies and directions of NALSA and to give legal services to the people and conduct Lok Adalats in the State. It is headed by the Chief Justice of the State High Court (HC) and a serving or retired HC Judge is nominated as its Executive Chairman.
- The **District Legal Services Authority** is constituted in every District to implement Legal Aid Programmes and Schemes on District level. District Judge is its ex-officio Chairman.
- **Taluk Legal Services Committees** are constituted for each of the Taluk or Mandal or for their groups to coordinate their activities of legal services and to organize Lok Adalats. It is headed by a senior Civil Judge operating within the jurisdiction of the Committee.

Tableau Selection

The Centre and Opposition-ruled states are at loggerheads over the rejection of their states' tableaux for the Republic Day Parade.

About the Republic Day Tableaux

What? Various tableaux from different states and Union Ministries showcasing their achievements in the form of cutting-edge technology are showcased in the Republic Day parade each year.

Who can Participate?

State Governments, Union Territory Administrations, Central Ministries and Departments.

Are they Theme-Based?

- Yes, they are usually based on an overarching theme decided by the Ministry of Defense (MoD)- the Tableaux Selecting Authority under which participants can showcase elements relevant to their respective state/UT/department.
- This year's theme is "Viksit Bharat" (Developed India) and "Bharat: Lok Tantra ki Matrika" (India: the mother of Democracy).

Selection Process

- Each year, a selected number of participants send their tableaux to the Republic Day parade by submitting a concept note, along with design blueprints to the MoD.
- The selection of States/UTs tableaux for Republic Day parade has been made on zonal basis, categorizing States/UTs into six zones, namely Northern Zone, Central Zone, Eastern Zone, Western Zone, Southern Zone and Northeastern Zone.
- Normally, ***approximately 15 tableaux from States/UTs are selected for Republic Day parade, based on proportionate ratio of each zone.***
- A State can pitch multiple proposals to the committee, but only one is chosen for the final parade due to time constraints and to ensure the participation of the best ones.
- A committee of experts appointed by the **MoD (**Ministry of Defense), comprising prominent persons in the field of art, culture, painting, sculpture, music, architecture, choreography, etc. evaluates the received proposals in two stages-
  1. *Stage 1*- The initial proposals and design sketch/blueprints are assessed by the committee along with official representatives of the participants and if required modifications are suggested. Several proposals may be rejected in this stage itself.
  2. *Stage 2*- The Committee assesses three-dimensional models of the proposals and if satisfied, the tableau is selected and further sent for fabrication. The Committee has the final say on which tableaux are chosen and can order any modifications they feel are required.
- The selected models are then moved into the custody of the Ministry of Defense, at a "safe location". The evaluation process typically extends over five to six rounds of meetings.

** After conducting four rounds of meetings, the expert committee, composed of distinguished artists recommended by IGNCA (Indira Gandhi National Centre for the Arts) and ICCR (Indian Council for Cultural Relations), has chosen the tableaux of 16 States and Union Territories for the 2024 parade.

Basis of Selection

- It depends upon a combination of factors including but not limited to visual appeal, impact on the masses, idea/theme of the tableaux, degree of detailing involved in the tableaux, music accompanying the tableaux, local artists used etc.
- The basic guidelines by MoD state that the participating entities must engage-
  - ✓ young, qualified designers from renowned institutions,
  - ✓ electronic display walls for a bright display of images or content,
  - ✓ moving elements using robotics or mechatronics,
  - ✓ 3D printing could be used for certain elements,
  - ✓ use of augmented or virtual reality,
  - ✓ special effects to improve the optics and visual effects of the tableau, and
  - ✓ no logos on the tableaux except for the name of State/UT presenting, which can be in Hindi in the front, English at the back and in the regional language on the sides of the tableau.

- Tableaux of two different states/ UTs must not be too similar, and eco-friendly material must be used for their construction.

Controversy Around Tableaux Selection

- Tableau proposals by Punjab, Delhi and West Bengal (all non-BJP ruled States) failed to make the final cut this year. These states hit out at the Union government alleging discrimination. But the Centre dismissed the charges and clarified that their proposals didn't align with the broader theme.

Solution to Controversy

- This rotational scheme will ensure that every State and UT gets an opportunity within three years. The states who won't get the chance to showcase their tableaux at the Republic Day parades will get a chance at the Bharat Parv celebrations.
  - ✓ The Indian government has been hosting the extensive six-day celebration known as "Bharat Parv" since 2016 as a part of Republic Day festivities. This alternative event takes place at the historic Red Fort and is organized by the Ministry of Tourism.
  - ✓ Its highlights are the Republic Day Parade tableaux, dynamic cultural performances by the Zonal Cultural Centre's and engaging presentations by cultural troupes from various States and Union Territories, food stall representing all the States and UTs, handicraft and handloom display and enthusiastic performances by the Armed Forces Band.
  - ✓ This year, it is being celebrated from 23rd- 31st January 2024 and has participation from 26 Central Ministries and Departments showcasing citizen centric schemes and initiatives of the Government such as Mission Life, One District One Product, Viksit Bharat, Nari Shakti, Ek Bharat Shreshtha Bharat.
  - ✓ Key Highlights include-
    - ➢ An experiential zone through the latest technology to promote Dekho Apna Desh.
    - ➢ Food Court with stalls representing the diverse culinary traditions of different states and UTs in India.
    - ➢ Pan-India Crafts Bazaar featuring handicraft and handloom stalls.
    - ➢ Thematic Pavilions of more than 30 States/UTs showcasing diverse tourist attractions.
    - ➢ Cultural performances by various Delhi based regional cultural associations.

MPLADS e-SAKSHI Application

The MPLADS e-SAKSHI Mobile Application was launched by the Ministry of Statistics and Programme Implementation (MoSPI) for *revised fund flow procedure* under Members of Parliament Local Area Development Scheme (MPLAD) Scheme.

About the e-SAKSHI Application

What?

This application will allow Members of Parliament (MPs) to engage with and manage development projects in their constituencies by allowing them to propose, track, and oversee the projects at their fingertips.

Objective- To enhance transparency, accessibility, and efficiency in the execution of MPLAD scheme.

Benefits

1. Convenience and Accessibility: As it will allow the MPs to propose, track, and oversee the projects at their fingertips.
2. Counter Red-tapism: Real-time access to projects will enhance decision-making processes, enabling swift responses to emerging needs or issues.
3. Efficient Exchange of Information: between MPs and relevant authorities as communication between them will be streamlined through the application.
4. Promote Transparency and Accountability by Monitoring expenditures: by providing MPs with instant updates on the status and progress of their proposed projects as it will instill public trust in the allocation and

utilization of MPLADS funds.

About the MPLAD Scheme

- **About**- Introduced in 1993, the MPLAD scheme is completely funded by the Central Government of India (Central Sector Scheme).
- **Objective**- To enable each Member of Parliament to recommend works of developmental nature with emphasis on the creation of durable community assets based on the locally felt needs of the people.
- **Implemented By**- MPLAD division of Ministry of Statistics and Programme Implementation
- **Funds**- Under the scheme, each MP can suggest to the District Collector for works to the tune of Rs.5 Crores per annum (non-lapsable) to be taken up in his/her constituency.
  - ✓ Rajya Sabha MPs can recommend works in one or more districts in the State from where he/she has been elected.
  - ✓ The Nominated Members of the Lok Sabha and Rajya Sabha may select any one or more Districts from any one State in the Country for implementation of their choice of work under the scheme.
  - ✓ The entitlement of funds not released in a particular year is carried forward to the subsequent years, subject to eligibility.
  - ✓ In wake of the COVID pandemic, MPLADS was suspended from 2020-21, and no funds were allocated to the scheme for that financial year.
- **Role of MPs**- It is limited to only recommending works. Thereafter, it is the responsibility of the district authority to sanction, execute and complete the works recommended within the stipulated time.
- **Implementation Area**- works can be implemented in areas affected by natural calamities like floods, cyclone, hailstorm, avalanche, cloudburst, pest attack, landslides, tornado, earthquake, drought, tsunami, fire and biological, chemical, radiological hazards, etc.

Bureau of Police Research and Development

The Bureau of Police Research and Development (BPRD) warned WhatsApp users of different scams perpetrated through the messaging platform's new 'screen share' feature.

About Bureau of Police Research and Development (BPRD)

It was set up in 1970 under the Ministry of Home Affairs to modernize the police forces of India by replacing the Police Research and Advisory Council (established in 1966).

Evolution of BPRD

- The Bureau was initially started with two Divisions, i.e., 1) Research, Publication & Statistics Division and 2) Development Division.
- In 1973, the Training Division was added on the recommendation of the Gore Committee on Police training.
- Directorate of Forensic Sciences under the BPR&D came into existence in 1983 for forensic science services.
- In 1995, the Correctional Division started to study the issues of Prisons and Prison Reforms.
- In 2008, the National Police Mission was added to transform the police forces in the country into an effective instrument for the maintenance of internal security.
- In December 2022, the latest Central Detective Training Institute (CDTI) in Bengaluru was established. Two additional CDTIs are being considered for establishment—one in Srinagar and another in Agartala.

Over the years, BPR&D has transformed through several additions of responsibilities into the present role. Now, with the raising of a new unit, Central Academy for Police Training at Bhopal, specialized as Centre of Excellence for Police & Correctional Administration, BPR&D has 6 outlying units.

Functions

- To identify the needs and problems of the Police and to suggest modalities to overcome problems and challenges and meet the needs and requirements of the police;
- To undertake research projects and studies;
- To assist States in modernization of the State Police Forces and Correctional Administration.
- To assist the Ministry of Home Affairs and the CPFs, etc., in the development of Standards, Quality Requirements (QRs), etc.
- To anchor and coordinate the work of the National Police Mission.

** The BPR&D publishes Data on Police Organizations (DoPO), which provides insights into various aspects of policing in the country. This includes information on police expenditure, constabulary ratio, transport and communication facilities, and representation of various castes.

Extra Mile: Research & Development Initiatives regarding Police Force Modernization

- **Kavach:** The Centre launched a national level 'hackathon' in 2023 with the aim to address cyber security challenges and cybercrimes in the country. It is jointly conducted by the Ministry of Education's Innovation Cell and BPR&D

Digi Yatra

Recently, air travellers expressed their shock and anger on social media platforms about their privacy infringement at various airports through the Digi Yatra initiative being aggressively promoted by the Union government.

Background

- CISF personnel at entry gate of passenger buildings are asking travellers to scan their boarding pass & capturing their photos, following which they would provide consent on behalf of the passengers for registering for Digi Yatra without seeking the passenger's permission or even informing them.
- This "coercive and deceptive" way in which both private staff and CISF personnel are enrolling passengers for Digi Yatra has irked the travellers.

About the Digi Yatra Initiative

What is Digi Yatra?

- Unveiled by the Ministry of Civil Aviation in 2018 as an entirely voluntary programme, this initiative is *Biometric Enabled Seamless Travel experience (BEST)* based on Facial Recognition Technique (FRT) to promote paper-less and seamless movement of passengers through various checkpoints at airports such as the entry gate, security check area and boarding gate.
- It provides Touchless Passenger Validation through FRT which results in saving time at various touch points like entry to airport, Security Hold Area (SHA) & Boarding Area with no CISF intervention.

Who is the implementing authority?

- It is being implemented by Digi Yatra Foundation (DYF), a not- for- profit company under Companies Act 2013 set up with initial shareholding of Airport Authority of India (AAI), Cochin International Airport (CIAL), Bangalore International Airport (BIAL), Delhi International Airport Ltd. (DIAL), Hyderabad International Airport Ltd (HIAL) & Mumbai International Airport Ltd (MIAL).
- It is the custodian of the passenger ID validation process and also defines the criteria for compliance and guidelines for the local airport systems.

Objectives

- Digitizing manual operations and minimizing the time spent in queues.
- Providing a unique Digi Yatra ID to air travellers like AADHAAR, Driving License, Passport & Others, enabling Biometric Boarding Process for all Airports (Tier1, 2 & 3) across India.

- Providing seamless navigation through the airport using digital guidance systems, interactive kiosks and augmented reality apps.
- Enhancing security standards using "Digi Yatra ID" based Identification with real-time biometrics.

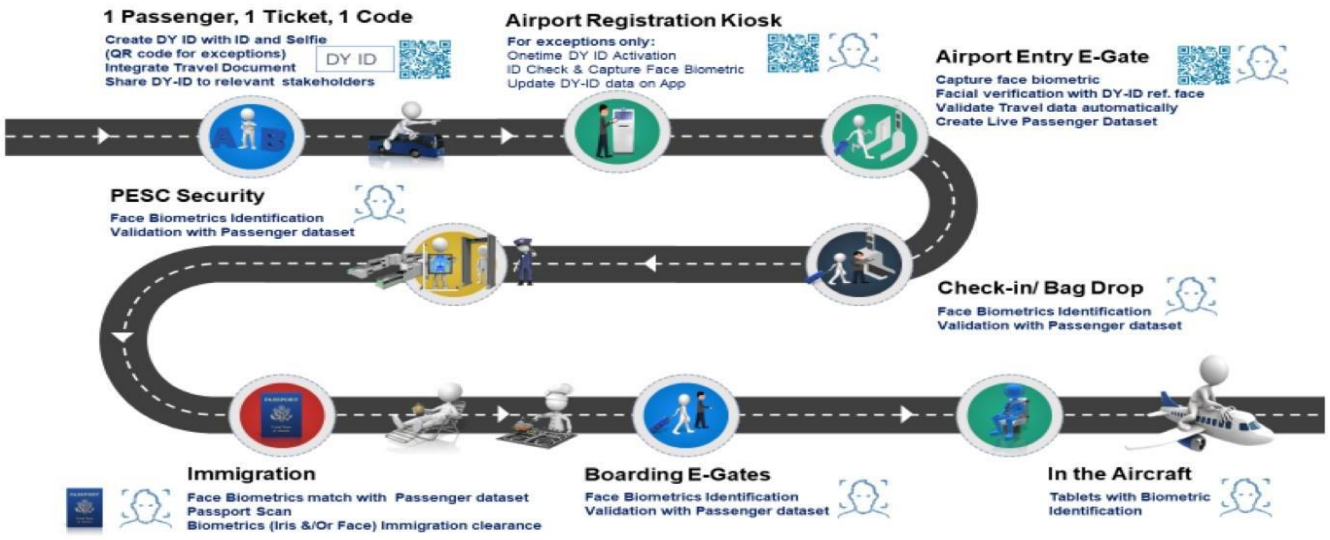
Is This Facility Available At All The Airports?

It was initially rolled out at Delhi, Varanasi and Bangalore airport in 2022, is presently available at 13 airports and will be expanded to 24 more airports in 2024.

How Can One Avail This Facility?

- Passengers first need to download the Digi Yatra app and register themselves using their mobile number. They can then add their credentials using their Aadhaar details.
- Next step is to take a selfie to record their facial features in the app.
- A Digi Yatra ID will be generated post registration which can be used for making bookings.
- Then, whenever a registered person needs to travel, he just needs to scan his or her boarding pass at the airport e-gate with the QR code or Bar code, and his credentials will be directly shared with the airport.
- The facial recognition system installed at the e-gate will validate the passenger's identity and travel document. Once this process is done, the passenger can enter the airport through the e-gate.
- Since the Digi Yatra Biometric Boarding System is integrated with the identity document, passengers will no longer need to show their boarding passes and their physical Identity cards at the Airport checkpoints.

THE DIGI YATRA JOURNEY: CONCEPT



Is It Safe And Mandatory For All Air Travellers?

- Yes, it is safe as the passenger's biometric details are stored on Passenger's mobile itself and cannot be shared with anyone.
- Using Digi Yatra is purely voluntary, and the normal non-biometric process shall continue to function.

Benefits

1. **Ease of Access**- as passengers' entry would be automatically processed based on the facial recognition system at all checkpoints including entry into the airport, security check areas, and aircraft boarding, etc. without the need of presenting physical ID proofs. The facial recognition system at various airports across the globe, including Dubai, Singapore, Atlanta and Narita (Japan), have helped bring in efficiency.
2. **Real-Time Notifications:** will be available to passengersabout congestion & delays to have greater visibility at the next step of the journey.
3. **Saves Time:** The technology will make the boarding process significantly faster and more seamless as each passenger would need less than three seconds at every touchpoint.

4. **Enhanced Security**: as the passenger data will already be validated with Airlines Departure control System using their "Digi Yatra ID", thereby only designated passengers can enter the terminal.
5. **Optimization of Security Staff & lower cost operations**: The entire process is non-intrusive and automatic leading to optimization of staff for stakeholders like CISF, airlines and others.

Concerns Raised

1. **Privacy violations-** Concerns have been raised as the government will have access to all the information about citizen's travel patterns.
2. **Data Security-** Thefacial biometric data being collected by registered users poses security risks. As per a 2023 report of the U.S.-based cybersecurity firm Security, personal information of over 81.5 crore Indians sourced from the Indian Council of Medical Research's database, including Aadhaar and passport details, was being sold on the dark web.
3. **Data Access to Government Agencies-** As per the Digi Yatra policy,any security agency, Bureau of Immigration (BIM) or other government agency may be given access to the passenger data based on the current/existing protocols prevalent at that time.
4. **Power to change Purge settings:** The Digi Yatra policy empowers theBiometric Boarding System to change the data purge settings based on security requirements on a need basis.

Concerns Addressed

The Digi Yatra Foundation maintains that biometric data or any other personally identifiable information is not stored in any database permanently, but in a secure wallet inside the app on the user's mobile device and the Biometric Boarding System of the local airport has access to this data only till the day of travel and then it is automatically purged within 24 hours.

D.K.Basu Guidelines for Arrest and Detention

The Supreme Court (SC) recently held that the incident of- "four police officers publicly flogging Muslim men after tying them to a pole for disrupting a garba event in Gujarat's Kheda district" amounted to 'atrocity'.

- ✓ The four Police Officers were sentenced to 14 days imprisonment by the Gujarat High Court (HC) after which they appealed in the SC against the HC order.

SC Observations

The SC found the conduct of the police officers in contempt of the guidelines issued by the D.K. Basu judgment of 1996 against police abuse and custodial violence.

It observed that although the Police was performing its legal duty under which it has the legitimate right to arrest a criminal and to interrogate him, but the law doesn't allow them to use third-degree methods or torture the accused in custody.

The D.K.Basu vs State of West Bengal Case

- The Supreme Court in this case ruled that custodial violence or extra-judicial killings violate the dignity of any human being. The fundamental right to life as outlined in Article 21 (Protection of life and personal liberty) cannot be deprived from convicts, undertrials, detenus, and other prisoners in custody, except the procedure established by law.
- Hence, The SC laid down elaborate guidelines to be followed by the police and other investigative agencies mandatorily in cases of arrest, detention and interrogation. The guidelines were:

1. **Duties of Police making Arrest**: The officer carrying out the arrest should wear name tags indicating their name and designation to the person being arrested and the particulars of the officer conducting interrogation should be recorded in the station diary.
2. **Arrest Memo**: should be prepared by the arresting police officer at the time of arrest containing details such as date, time and place of arrest and be attested by at least one person related to the arrestee or a respectable person of the locality and countersigned by the arrestee.

3. **Inspection Memo**: be used to record major/minor injuries on the body of the arrestee on the request of arrestee. Such a memorandum should be signed by the arrestee and the arresting officer, and its copy should be given to the arrestee.
4. **Details of Arrest & Detention**: should be shared with the relative/friend/known person of the arrestee at the earliest. Such details should contain time, place of arrest & the location of detention.
5. **Maintaining a Daily Dairy**: containing details of every arrest made in the police station. The diary should also include the name of the relative/friend who was informed about the arrest along with the name of the police officer in whose custody the arrestee has been detained.
6. **Medical Examination**: The arrestee has the right to be medically examined every 48 hours during his/her detention by a doctor from a panel chosen by Director, Health Services of the State or Union Territory. A panel is prepared for all Tehsils and district headquarters.
7. **Right to Meet a Lawyer**: The police cannot deny the arrestee to meet a lawyer of his choice during the interrogation.
8. **Informing the Magistrate**: Copies of all records related to the arrest and detention must be sent to the magistrate concerned.
9. **Police Control Room**: Particulars of the arrest (in case of every arrest) must be shared (within 12 hours of the arrest) by the arresting officer with the police control rooms situated in all the districts and state headquarters. The shared information must be displayed on the notice board of control rooms.

{For more information on Police Reforms, please refer to The Recitals- November 2023 edition}

The Bilkis Bano Case

The Supreme Court recently struck down the remission granted by the Gujarat government to the convicts who were serving life imprisonment for the gangrape of Bilkis Bano during the communal riots in Gujarat in 2002.

About Remission

Remission of a sentence means reducing the duration of the sentence imposed.

Related Constitutional Provisions

The Constitution of India empowers the President (Article 72) and the Governor (Article 161) to grant pardon, suspend, remit or commute sentences in certain cases.

Related Statutory Powers

The Criminal Procedure Code, 1973 (CRPC) empowers the government to suspend or remit or commute a sentence awarded by any court under the following provisions: -

- *Section 432-*
  - As per this provision, an 'appropriate government' may suspend or remit a sentence, in whole or in part, with or without conditions.
    - ✓ As per the ruling in *Union of India vs V Sriharan case*, the expression 'appropriate government' will refer to-
      - *Central Government* if the sentence imposed is under any of the sections of the IPC for which the executive power of the central government is specifically provided for, under a parliamentary enactment or prescribed in the Constitution itself.
      - *State Government* if the sentence is imposed under the provisions of CrPC, within the territorial jurisdiction of the state concerned.
  - For this purpose, whenever an application for remission is made to the government, it may seek the opinion (along with reasons) of the judge (who gave the conviction judgement) as to whether the application should be granted or refused.
  - **Applicability**: The provisions of remission are applicable to all the orders passed by a criminal court under CrPC or of any other law which restricts the liberty of any person or imposes any liability on him or his

property.

- **Revocation**: The remission can be cancelled by the governor if any of the conditions imposed are not fulfilled.

- *Section 433A (restriction on powers of remission or commutation)*: If a person has been sentenced to life imprisonment for an offence where death is one punishment provided, or where the death sentence has been commuted to life imprisonment, then he can be released only after serving at least fourteen years of imprisonment.

Landmark Judgements of Supreme Court on Remission

1. *Laxman Naskar v. Union of India, 2000:* SC laid down five grounds on which remission is to be considered:
   - ✓ Whether the offence is an individual act of crime that does not affect the society;
   - ✓ Whether there is a chance of the crime being repeated in future;
   - ✓ Whether the convict has lost the potentiality to commit crime;
   - ✓ Whether any purpose is being served in keeping the convict in prison; and
   - ✓ Socio-economic conditions of the convict's family.

   It also laid down the condition of a minimum of 14 years of time spent in the prison for the convicts serving life sentences to seek.
2. *Epuru Sudhakar v. Government of Andhra Pradesh, 2006*: It was held that the clemency power of the President and Governor under Article 72 and Article 161 is subject to judicial review.
3. *State of Haryana vs Mahender Singh, 2007:* Apex court held that-
   - ✓ Right to remission or shortening of sentences of a convict under Articles 20 and 21 of the Constitution, is not a fundamental right but a legal one.
   - ✓ The state in the exercise of its executive power of remission must consider each individual's case, keeping in view the relevant factors so that no discrimination is made.
4. *Swamy Shraddananda v. State of Karnataka, 2008:* The court concluded that pre-mature release after a minimum incarceration for a period of 14 years as envisaged under Section 433A CrPC could not be acceded if a death sentence has already been stepped down to that of life imprisonment.
5. *Sangeet versus State of Haryana, 2012:* It was concluded that a convict serving life imprisonment does not have a right to be prematurely released on completion of 14 years in jail and that remission should be considered only on a case-by-case basis.
6. *Union of India vs V. Sriharan & Others* (2015): It was held that the cases where the offender is sentenced or the sentence or order is passed within the territorial jurisdiction of the State concerned, that State government would be the appropriate government.
7. *State of Haryana vs Raj Kumar, 2021*: The court stated that-
   - ✓ The power under Article 161 can be exercised by the state governments, not by the Governor on his own and the Governor is bound by the opinion of state government.
   - ✓ The policies of the State Government are composite policies encompassing both situations under Article 161 of the Constitution and Sections 432, 433 and 433-A of the Code.
   - ✓ Remission under Article 161 will override Section 433A of CrPC, if the State Government decides to be governed by its constitutional power.

Recent Government Initiatives on Remission

The Central Government as part of the 'Azadi ka Amrit Mahotsav', granted special remission to certain categories of prisoners and ordered their release in three phases- 15th August 2022 (75 years of Independence), 26th January 2023 (Republic Day), and 15th August 2023.

Guidelines for release of prisoners:

Eligibility-

- ✓ Women and transgender convicts of 50 years of age and above who have completed 50% of the total

sentence period;

- ✓ Male convicts of 60 years of age and above;
- ✓ Physically challenged/disabled convicts with certified 70% disability who have completed 50% of their total sentence period, etc.

Exclusions-

- ✓ Special remission was not granted to persons convicted of a death sentence or where the death sentence had been commuted to life imprisonment or persons convicted for an offence for which the punishment of death had been specified as one of the punishments;
- ✓ Persons convicted with a sentence of life imprisonment; convicted for terrorist activities, dowry death, rape, human trafficking, POCSO, NDPS Act, etc.

About Bilkis Bano Case

- **Background & Timeline**
  - ***The Crime (2002):*** In the aftermath of the Godhra riots in Gujarat in 2002, Bikinis Bano and her family were attacked by a group of people who brutally gangraped then pregnant Bilkis and killed seven of her family members.
  - ***Initial Court Case***: The case was closed by the court on the request of state police in the absence of valid proof against the convicts.
  - ***Intervention by SC (2003)***: After intervention from National Human Rights Commission (NHRC) and the SC, the investigation was transferred to CBI. CBI filed its charge sheet in 2004 in Gujarat trial court. But the case was transferred by SC to Mumbai after Bilkis started receiving death threats and a special prosecutor was appointed in the case.
  - ***Verdict (2008):*** Special Judge in Mumbai convicted 11 and sentenced them to life imprisonment for murder, rape.
  - ***Appeal (2011)***: The CBI sought enhancement of the sentence for three convicts to death and appealed against the acquittals of other accused. Bombay HC upheld conviction of the 11 by trial court, refused to enhance punishment from life imprisonment; set aside trial court's acquittal of 5 police officers and 2 doctors.
  - ***Release of Convicts (Aug 2022)*****:** One of the convicts named Radheshyam Shah, after completing 15 years and four months of his life term, moved to the SC for early release. SC passed this case to the Gujarat government and asked it to consider the application for premature release, as per the state's 1992 remission policy. Therefore, the Gujarat government released all 11 convicts in the gangrape case under its remission policy.
  - ***Review petition by Bilkis Bano (Sep 2022)*****:** was filed to review the decision of the Gujarat government ordering the release of the convicts.
  - ***Remission Quashed (2024)*****:** SC quashed Gujarat government's decision to grant remission to 11 convicts.
- **Supreme Court's Judgement-** The court while quashing the remission order of the convicts by the Gujarat government answered following key-questions: -

1. **Whether the petition filed by one of the victims in the case maintainable under Article 32 of the Constitution?**
   - The court held that the object and purpose of Article 32 is the enforcement of other Fundamental Rights.
   - As, Bilkis had filed her petition under Article 32 for the enforcement of her fundamental rights under Article 21 (right to life and personal liberty) and Article 14 (right to equality and equal protection of the laws).
   - Therefore, the plea filed by Bilkis under Article 32 was clearly maintainable.
2. **Whether the PILs challenging the August, 2022, remission orders were maintainable?**

- The court did not find it necessary to answer this question because Bilkis Bano (one of the victims) had already invoked Article 32, which was held to be maintainable.
- This question has been kept open to be considered in any other appropriate case.

** The SC in previously decided cases held that a total stranger in a criminal case cannot be permitted to question the correctness of a decision.

3. Whether the Gujarat government was competent to pass the remission orders?

- The court held that the Government of Gujarat had no jurisdiction to entertain the prayers seeking remission as it was not the appropriate Government within the meaning of Section 432 of CrPC.
- It was the state of Maharashtra who passed the conviction orders therefore the appropriate government as per the definition of Section 432 here will be Maharashtra government

4. Whether the remission orders passed by the state government were in accordance with the law?

The answer to this question was NO based on four reasons:

1. The Gujarat government had "usurped the powers of the State of Maharashtra" since the latter was the only state which could have considered the applications seeking remission.
2. The 1992 remission policy of Gujarat (*allowed remission post completion of 14 years in prison)* used to pass the remission order, did not, in fact, apply to the case of the 11 convicts as it had been replaced by 2014 remission policy (enacted following the *Sangeet versus State of Haryana, 2012* which restricted the release of a prisoner on remission after completing 14 years in prison).
   - ✓ 2014 remission policy of Gujarat categorically barred prisoners convicted of certain crimes like multiple murders or rape or gang rape from being considered for pre-mature release.
3. The opinion of the presiding judge of the Special Court, Mumbai (who gave a negative report on the remission application) or the court before which the conviction of the 11 convicts happened was rendered ineffective by the Gujarat government which in had no jurisdiction to entertain such plea.
4. The convicts had not paid the fine levied on them along with the prison sentence awarded by the Mumbai court during their conviction. This fact was ignored by the jail authorities while considering the remission application.This also vitiated exercise of discretion in the instant case.

5. After the remission has been quashed, should the convicts be sent back to prison, or given the benefit of liberty?

- The court held that on the question of choosing between personal liberty and rule of law, the rule of law "must prevail" and as the convicts had been granted liberty and were released from imprisonment by virtue of the orders of remission.
- Therefore, the orders of remission under challenge must be set aside and their natural consequences must follow. Hence, the court directed the convicts to report to the jail authorities concerned within two weeks from the date of the ruling.

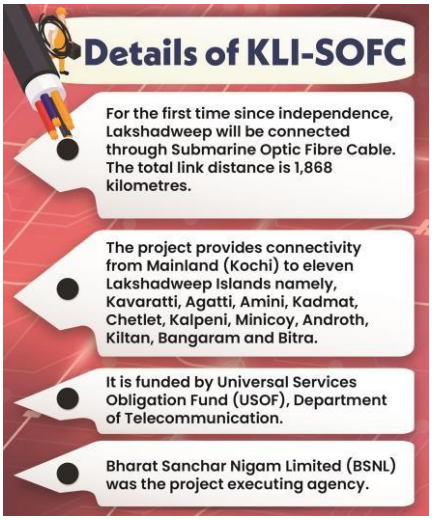
6. **What next for the convicts? Can they apply for remission again?**

- The court held that there are competing interests between- the rights of the victim or her family to justice, and that of a convict's claim to a second chance.
- But going with the prior judgments, the top court expressed skepticism over the latter in case of a heinous crime.
- But it also held that the right of a convict for second chance cannot be annulled.
- Therefore, the convicts can approach the Maharashtra government for remission in the future. Whether remission is granted will, however, depends on remission policy of the state.

**The 2008 remission policy of Maharashtra mandates for a minimum imprisonment of 28 years for a convict found guilty of offences related to crimes against women and minors with exceptional violence, before they can apply for remission.

Kochi-Lakshadweep Islands Submarine Optical Fibre Connection

The Prime Minister recently inaugurated the **Kochi-Lakshadweep Islands Submarine Optical Fibre Connection (KLI-SOFC)** among various developmental projects worth more than Rs 1,150 crore.



- Earlier, the only means of communication with the Islands was through Satellite medium, which had limited bandwidth capacity and was not able to meet the growing bandwidth demand.

Benefits

- The project will play a significant role in achieving the objective of **Digital India** and **National Broadband Mission** and for rolling out of various e-governance projects of the government in Lakshadweep Islands.
- The bandwidth created under this project will be available to all Telecom Service Providers (TSPs) to strengthen their telecom services in the Lakshadweep Islands.
- Population of Lakshadweep Islands will be provided high speed wireline broadband connectivity.
- E-Governance, tourism, education, health, commerce, telemedicine, digital banking and industries will get a boost.
- The potential of developing Lakshadweep as a **logistics hub** will get strength
- Further improvement in standards of living of the people in island and will accelerate overall social and economic development in these areas.

Open Acreage Licensing Policy (OALP)

- The Ministry of Petroleum and Natural Gas (MoPNG) recently launched the ninth round of bids under the Open Acreage Licensing Policy (OALP).
- In this bid round, 28 blocks, with an area of approximately 1,36,596 Sq. Km., are on offer for bidding.

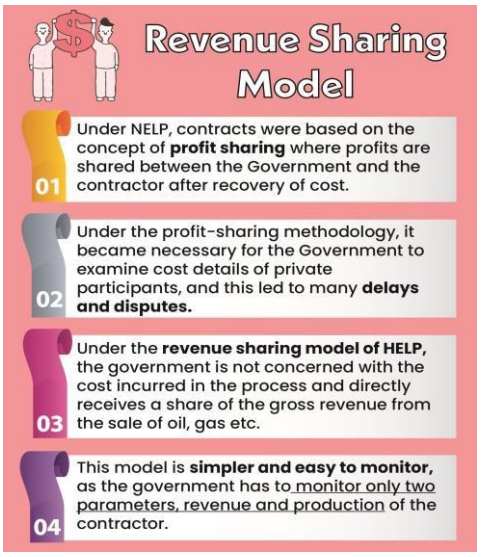
Hydrocarbon Exploration and Licensing Policy (HELP)

- India imports more than 80% of its crude oil requirements, which makes the country heavily dependent on foreign sources of supply.
- This leads to a huge financial burden on the country, apart from subjecting the country to global swings in crude oil price.
- To address these concerns, the HELP was launched in **2016.** HELP replaced the New Exploration Licensing Policy (NELP) of 1997-1998. HELP had **2 key drivers;** both were launched in 2017:
  - **The Open Acreage Licensing Programme (OALP)**
  - **The National Data Repository (NDR)**
- HELP's objective is to increase India's indigenous oil and gas production by maximising the potential of hydrocarbon resources in India.
- It aims to increase investment in the energy and petroleum sector and provide operational flexibility to the investors.

Provisions Under HELP

- **Single license** that covers exploration and production of all types of hydrocarbons viz. conventional & unconventional resources eg oil and gas, coal-bed methane, shale oil, gas hydrates, etc.

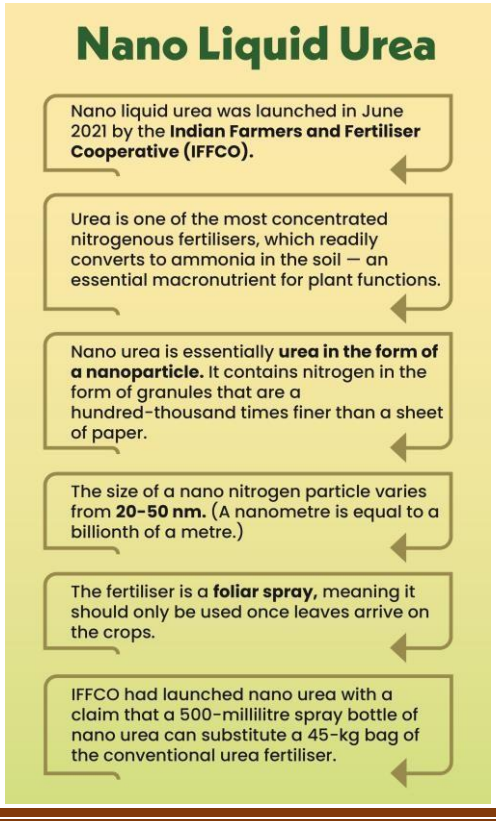
- **Open Acreage Licensing Programme (OALP)**
  - ✓ Under NELP, the bidders could choose only from the blocks offered by the government and had to wait for the government to undertake bidding for blocks which were of interest to the bidders.
  - ✓ OALP gives investors the freedom to carve out blocks of their choice after assessing Exploration & Production data available at **National Data Repository** and submit an **Expression of Interest** (EoI). EoI can be submitted thrice a year without waiting for a formal bid round from the government.
  - ✓ These blocks are later offered through a biannual (twice a year) formal bidding process. The entity offering the maximum share of oil and gas to the government is awarded the block.
- **Revenue Sharing Model**



Benefits of OALP	Concerns Related to OALP
•*Removing red-tapism:* It has reduced multiple licences for extracting different hydrocarbons even from the same well. •Brought in a quantum jump in the Exploration & Production sector by the successful roll-out of the HELP regime, followed by OALP Bid Rounds	•Lesser involvement of Private Players: Public Sector Companies like ONGC and Oil India (OIL) are the major winners of the bidding rounds. •Less Participation of Foreign Companies: Indian attempts to attract Foreign Energy Giants are not yielding expected results.

Financial Incentives under HELP

- To encourage exploration in deep water and ultra-deep water areas, **royalty rates have been reduced** and a **graded system of royalty** has been introduced, in which *royalty rates decrease from shallow water to deep water and ultra-deep water.*
- Exemptions: The royalty is **exempted for the first seven years** and subsequently royalty of 5% and 2% is applicable in deep water and ultra-deep water areas.
- Exemption of custom duty applicable on equipment/ services for exploration and production activities.
- Marketing and pricing freedom for crude oil and natural gas produced from these blocks.



Issues With Nano Liquid Urea

A two-year field experiment on the efficacy of nano urea by the Punjab Agricultural University (PAU) has found a **substantial decrease in rice and wheat yields** when compared to conventional nitrogen (N) fertiliser application.

Findings Of The Experiment

- There was a **21.6% decrease in wheat yield** and a **13% decrease in rice yield** with the use of nano urea.
- In terms of yield, the magnitude of its reduction increased in the second year, indicating that the decrease in yield can be sequential, meaning the production may lower year after year if

the application of nano urea is continued.

- There was also a 17 and 11.5%**decrease in grain Nitrogen content** of rice and wheat, respectively. A decrease in grain Nitrogen content reflected a lowered protein content.
- This is worrisome for India where these two cereals form the staple food source for protein and carbohydrates and low protein content will deplete the protein energy requirements of the population.
- Moreover, the **cost** of nano urea formulation was 10 times higher than that of granular urea and will add to the cost of cultivation for farmers.
- Moreover, the above ground biomass and root volume were reduced after nano urea application, thus resulting in less root biomass addition after the crop harvest.
  - ✓ The lower root volume indicated a decreased available root-surface area that can culminate to lowered Nitrogen and other nutrient uptake processes by the root.

1st National Highway Steel Slag Road

- India's first National Highway (NH) steel slag road section on **NH- 66 Mumbai-Goa** was recently inaugurated.
- The steel slag road technology is developed by **Council of Scientific and Industrial Research-Central Road Research Institute (CSIR-CRRI)**.
- CSIR-CRRI in collaboration with Ministry of Steel, is also developing national guidelines for utilization of *processed steel slag* in steel slag road construction.
- **JSW Steel**, under the CSIR-CRRI technological guidance, has constructed above mentioned 1 km long four lane steel slag road section
- For this, around 80,000 tons of CONARC Steel slag were converted as processed steel slag aggregates.
  - ✓ The processed steel slag aggregates are **superior** to natural aggregates in terms of various mechanical properties and are utilized for steel slag road construction in all layers of the road in place of natural aggregates.
- The bituminous steel slag road on NH-66 is built with **28% less thickness** in comparison to conventional bituminous road on NH-66.
- Both road sections are approximately **32% more economical** than conventional roads and have demonstrated better durability.
- CSIR-CRRI has implemented steel slag in road construction projects in **Gujarat, Jharkhand and Arunachal Pradesh**.
- The first road made with steel slag road interpretation technology in Surat (Gujarat), has become famous for its technological excellence.
- **Border Roads Organization (BRO)** has also constructed a steel slag road in Arunachal Pradesh.

Significance

- The development will help in realising the **Waste (of steel) to Wealth** mantra
- It marks a significant step towards **sustainable, cost-effective and eco-friendly highway construction** in the country.
- It also addresses the problem of environmental degradation caused by waste steel slag and unsustainable mining and quarrying of natural aggregates.

Coal Controller Organisation

- **The Ministry of Finance** recently approved the restructuring of the Coal Controller Organisation (CCO).
- In order to align the organization with the current scenario in the coal sector reforms, Ministry of Coal had formed a **four-member Committee** under the Chairmanship of **A.N.Sahay** to review the functions of CCO.

- The Committee proposed restructuring of CCO with the aim to regulate the commercial mining and increase domestic coal production to achieve 1 billion Tonnes with zero import.
- CCO is a **subordinate office of Ministry of Coal**, having its offices at Kolkata, Delhi and field Offices at Dhanbad, Ranchi, Bilaspur, Nagpur, Sambalpur and Kothagudem.
- CCO is the nodal office for collection, compilation and dissemination of coal statistics in Government of India.
- It performs various functions under different statutes/rules to ensure fair production and commercial transactions of coal including quality surveillance.

Atal Setu

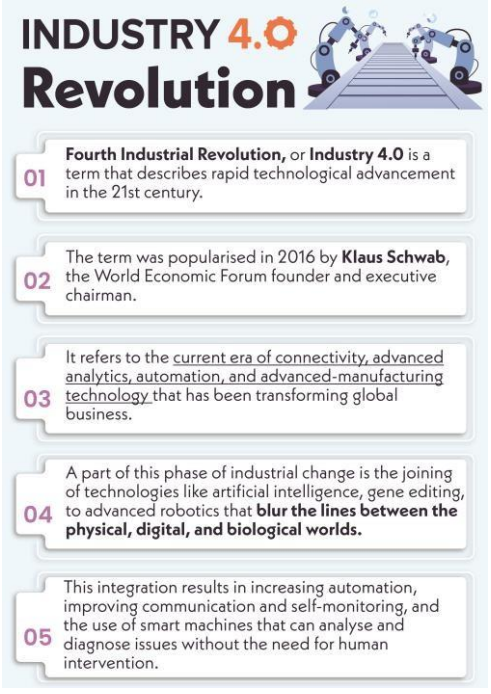
- India's longest sea bridge (and world's 12th longest sea bridge) , Atal Setu, was inaugurated by the PM in Mumbai.
- The Mumbai Trans Harbour Link (MTHL) is a **22-km-long bridge** over the Thane Creek in the Arabian Sea, connecting Sewri in Mumbai to Chirle near Nhava Sheva in Navi Mumbai.
- Constructed by the **Mumbai Metropolitan Region Development Authority (MMRDA)**, it is a six-lane bridge comprising a 16.5 km stretch over the sea and an additional 5.5 km on the land.
- The objective of the project is to **improve connectivity** in the Mumbai Metropolitan Region which comprises the districts of Mumbai, Thane, Palghar, and Raigad, and **promote the region's economic development**.

Benefits

- The MTHL will bring down the average travel time between Sewri and Chirle from 61 minutes currently to around 16 minutes and travel distance from 42 kms to 22 kms.
- The placement of interchanges at strategic locations allows easier connectivity within Mumbai, and to Goa, Pune and parts of Southern India.
- It would lead to **economic growth**, in and around Mumbai and Navi Mumbai, across various fields that would augment **employment opportunities**.
- It is also expected to facilitate greater **economic integration of Navi Mumbai with Mumbai**, with benefits extending to Panvel, Alibaug, Pune, and Goa.
- Decrease in fuel consumption will also help in the **preservation of the environment**.

Centre for the Fourth Industrial Revolution

- **Telangana and the World Economic Forum**(WEF) have signed an agreement to set up a *Centre for the Fourth Industrial Revolution (C4IR Telangana)* in Hyderabad.
- C4IR is a global initiative of the WEF to collaborate with governments, businesses, academia, and civil society to address the challenges and opportunities associated with the Fourth Industrial Revolution (4IR).
- C4IR Telangana will be the **19th centre**of WEF's Fourth Industrial



Revolution Network (4IR) and **second centre in India**. The first C4IR in India was set up in **Maharashtra**.

- The proposed centre will also be the world' s **first centre with a focus on health tech and life sciences** and will act as a '**Life Sciences' Hot Spot'** in the entire Asia.
- The **not-for-profit, autonomous centre** is expected to take lead in formulation of policies pertaining to healthcare and their implementation.
- It plans to facilitate, advance and accelerate the development and adoption of technologies in genomics, personalized medicine and healthcare manufacturing, with a focus on the intersection of life sciences and technology in the region and globally.
- It will leverage on the State's strengths such as abundant availability of talent pool, world class infrastructure and cluster-based approach besides the progressive industrial policies of the government.

Other Industrial Revolutions

1st (1800s)	It used *water and steam power* to mechanise production. eg Steam engine.
2nd (early 1900s)	It used electric power to create mass production. Eg: Electricity.
3rd (late 1900s)	It used electronics & IT to automate production. Eg: Computer and Internet

Momentum Investing

- Momentum investing refers to a style of investing wherein investors purchase assets such as stocks or bonds that are consistently rising in price while selling assets whose prices are falling.
- It is based on the philosophy that there can be noticeable trends in asset prices and that these trends tend to persist over time.

Counter logic

- The **"buy high, sell higher"** philosophy of momentum investing is in contrast to the traditional "buy low, sell high" advice given to investors.
- Traditionally, experts have advised investors to buy assets when they are selling at low prices, such as during times of a financial crisis when most investors are scared and hence assets could be found selling at prices well below their intrinsic value.
- It was believed that investors could later sell these undervalued assets at higher prices when the general market enters a bull phase.
- Momentum investors often invest money in assets whose prices have scaled new all-time highs, even if these assets are trading at prices that are far above their intrinsic value.
- Many academic studies have shown that momentum investing can generate high returns that comfortably beat the benchmark indices.
- Momentum investors generally do not conduct a deep analysis of the fundamental or intrinsic value of the assets in which they invest their money.
- They invest purely based on whether the price of an asset is showing a strong trend, either upward or downward.
- For this reason, many critics believe that momentum investing can cause an unsustainable rise or fall in prices as momentum investors are blind to the actual value of these assets.
- This can eventually **lead to heavy losses for investors** who are late to sell when the prices of these momentum-driven assets correct suddenly to catch up with the assets' intrinsic value.

Methodology

- Momentum investors, however, use a variety of methods to gauge an asset's price momentum.
- The simplest method is to buy assets whose prices have shown the highest percentage gains over the last three to six months while selling assets whose prices have witnessed the steepest percentage losses.
  - ✓ An asset's price momentum can also be gauged by analysing how well the asset's price has performed compared to the benchmark indices.
- More sophisticated momentum investors might look into the price chart of an asset and try to gauge the strength of the upward or downward trend exhibited by the asset's price.

Parvatmala Pariyojana

- Recently, the '**Ropeway: Symposium-Cum-Exhibition**' was held in New Delhi.
- The Ministry of Road Transport and Highways announced that **more than 200 ropeway projects at a cost of Rs 1.25 lakh crore** have been identified in coming five years under **National Ropeways Development Programme (NRDP)**, "**Parvatmala Pariyojana**".

- Announced in the **Union Budget 2022-23**, the NRDP is being taken up in the Public Private Partnership (PPP) mode.
- Developing an efficient transport network is a big challenge in hilly areas. The rail and air transport networks are limited in these areas, while the development of road network has technical challenges.
- In this backdrop, ropeways have emerged as a convenient & safe alternate transport mode.
- The priority of the government is to make ropeways economically viable and encourage PPP to develop the ropeway network in the country
- **Construction support of 60%** is provided under Hybrid Annuity Mode (HAM for Ropeways) as compared to 40% support provided under National Highways to attract more private players for development of ropeways under Parvatmala Pariyojana.

- Apart from **facilitating tourism and job creation** in the hilly areas, the ropeway also offers huge potential in the urban public transport.
- Thus, the focus is on developing indigenous, time-bound, cost-efficient, qualitative and sustainable infrastructure development.

Major Factors Driving Ropeway Infrastructure

- **Economical mode of transportation**: Being an aerial mode, building ropeways involves *lower land acquisition costs*.
  - ✓ Hence, despite having a higher cost of construction **per km** than roadways, construction cost of ropeway projects happens to be more economical
- **Faster mode of transportation**: Ropeways have an advantage of getting built in a straight line over a hilly terrain, thus taking minimum time to cover distance.
- **Environment-friendly**: It involves low dust emissions. Material containers can be designed to rule out any soiling of the environment.

Global Economic Prospects Report

The World Bank recently released the **Global Economic Prospects Report**.

Highlights Of The Report

- The global economy may witness a poor performance by the end of 2024 — the **slowest half-decade of GDP growth in 30 years**.
- Global growth is expected to slow for the third consecutive year, from 2.6% last year to **2.4% in 2024**, nearly three-quarters of a percentage point lower than the average of the 2010s.
- **Developing economies** are expected to grow at a rate of 3.9%, more than a percentage point lower than the previous decade's average.
- Following a disappointing performance last year, **low-income countries** are expected to grow by 5.5%, which is lower than previously expected.
- In **advanced economies** growth is set to slow to 1.2% this year from 1.5% in 2023.
- By the end of 2024, people in about one out of every four developing countries and about 40 per cent of low-income countries will still be poorer than they were on the eve of the COVID pandemic in 2019.

- The global economy is in a better place than it was a year ago and the risk of a global recession has reduced, largely because of the strength of the United States' economy.
- However, the medium-term outlook has deteriorated for many developing economies. Most major economies report slowing growth, sluggish global trade and the tightest financial conditions in decades.
- **Global trade growth** in 2024 is expected to be half the average in the decade preceding the pandemic.
- Meanwhile, borrowing costs for developing economies, particularly those with low credit ratings, are expected to remain high, with global interest rates stuck at four-decade highs in inflation-adjusted terms.
- Moreover, mounting geopolitical tensions could pose new near-term risks to the global economy**.**

Recommendations

- A transformation can be achieved if governments act now to accelerate investment and strengthen fiscal policy frameworks.
- There is a need for a **formidable increase in investment** by developing countries — approximately **$2.4 trillion per year** — to address climate change and achieve other key global development goals by 2030.
- Investment booms have the potential to transform developing economies and help them speed up the energy transition and achieve a wide variety of development objectives.
- To spark such booms, developing economies need to implement comprehensive policy packages to improve fiscal and monetary frameworks, expand cross-border trade and financial flows, improve the investment climate, and strengthen the quality of institutions.

India's Toy Industry

Recently, a case study on "Success Story of Made in India Toys" has been conducted by the Indian Institute of Management (IIM) Lucknow at the behest of Department for Promotion of Industry and Internal Trade (DPIIT).

Initiatives Taken

- Formulation of a comprehensive **National Action Plan for Toys** having 21 specific action points, and implemented by 14 Central Ministries/Departments, with DPIIT as the coordinating body.
- **Basic Customs Duty (BCD)** on toys was **increased from 20% to 60%** in February 2020, and **subsequently to 70%** in March 2023.
- Directorate General of Foreign Trade (DGFT) has **mandated sample testing** of each import consignment to curb the import of sub-standards toys.
- A **Quality Control Order (QCO)** for toys came into effect from January 2021.
- **Special provisions** were notified by Bureau of Indian Standards (BIS) in 2020 to grant licences to micro sale units manufacturing toys without testing facility for one year and without establishing in-house testing facility, which was further extended by three years.
    - ✓ BIS has granted more than 1200 licences to domestic manufacturers and more than 30 licences to foreign manufacturers for manufacture of toys with BIS standard marks.

- **Cluster-based approach** adopted to support domestic toy industry.
- The Ministry of MSME is supporting 19 toy clusters under the Scheme of Funds for the Regeneration of Traditional Industries (SFURTI), and the Ministry of Textiles is providing designing and tooling support to 13 toy clusters.
- Several promotional initiatives have also been undertaken to promote indigenous toys and encourage innovation, including The Indian Toy Fair 2021, Toycathon, etc.

Analysis

- The trade balance was negative ₹1,500 crore in 2014-15, which turned positive from 2020-21 after a gap of 23 years. Thus in 2020-21, imports fell and the net exports turned positive.
    - ✓ However, as this was the COVID-19 pandemic times, with disrupted supply chains globally, imports were adversely affected.
- As the global supply chain was restored in 2022-23, net exports were reduced to ₹1,319 crore, from ₹1,614 crore in the previous year as exports moderated and imports increased.
- Data from the Annual Survey of Industries (ASI) show that in 2015–16:
    - ✓ The factory or organised sector accounted for 1% of the total number of the factories and enterprises.
    - ✓ Employed 20% of workers, used 63% of fixed capital, and produced 77% of the value of output.
    - ✓ During six years since 2014-15, the ASI data in real terms show there is hardly a steady rise in fixed capital per worker and gross value of output.
    - ✓ More seriously, labour productivity has steadily declined from ₹7.5 lakh per worker in 2014-15 to ₹5 lakh in 2019-20.
- Based on this, it can be inferred that India did not turn into a net toys' exporter only due to improved domestic supply and its competitiveness, but it is largely an outcome of rising protectionism.

Way Ahead

- To position India as a viable alternative to current toy hubs of the world, (i.e., China and Vietnam), consistent collaborative efforts of the toy industry and the Government are essential.
- There is a need for advancements in technology, embracing e-commerce, encouraging partnerships and exports, investing in brand-building.
- Moreover, it is important to engage with educators and parents to communicate with children, value cultural diversity and collaborate with regional artisans.
- Protectionism for a limited period — as per the infant industry argument — may enable the domestic industry to make adequate investments, allow for learning by doing and enhance productivity to compete globally.
- However, such protectionism needs to be complemented with investment policies, and provision of localised, industry/cluster-specific public infrastructure to stimulate a virtuous circle of expanding domestic capabilities to face international competition.

Investment Forum for Advancing Climate Resilient Agrifood Systems

- NITI Aayog, Ministry of Agriculture and Farmers' Welfare (MoA&FW), and Food and Agriculture Organization (FAO) jointly launched the 'Investment Forum for Advancing Climate Resilient Agrifood Systems in India'.
- The initiative aims to **develop an investment and partnership strategy to advance climate resilient agrifood systems** among the government, private sectors, and farmers' organizations and financial institutions in India.
- The Forum facilitated discussions and deliberations on six key areas:
    - Climate resilient agriculture (experiences and pathways);
    - Digital infrastructure and solutions;

- Financing climate resilient agrifood systems (domestic and global);
- Climate resilient value chains;
- Production practices and inputs for climate resilience; and
- Gender mainstreaming and social inclusion for climate resilience

Significance Of Investing In Climate Resilient Agrifood System

- Climate change has significant implications for India, particularly affecting its economically vulnerable rural population which is largely dependent on climate sensitive agricultural livelihoods.
- Need for awareness on how agriculture contributes to climate change, as it contributes to a little more than 13% of total greenhouse gas emissions in the country.
- Indian agriculture is susceptible to extreme temperatures, droughts, floods, cyclones, and soil salinity.
- With food demand predicted to grow by at least 50% by 2050, there is a need to scale up investments in **climate resilience in agriculture** to ensure future generations have the resources needed to grow enough food.
- Need for a new direction in economic analysis of agriculture production, considering impact on natural resources, climate change and future generations.
- Thus, it is important to incorporate metrics beyond financial prices to evaluate the economic impact of agricultural activities.
- However, climate mainstreaming into agrifood systems requires much larger investments from global climate finance, domestic budgets, and the private sector.

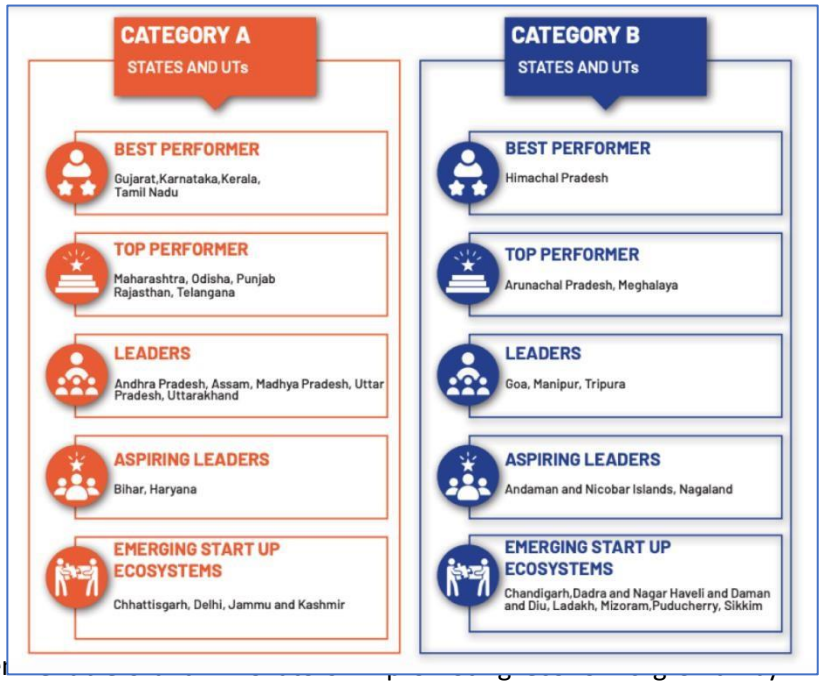
States' Startup Ranking 2022

- The Department for Promotion of Industry and Internal Trade (DPIIT) released the States' Startup Ranking 2022.
- The States' Startup Ranking is a periodic capacity building exercise created by the DPIITto evaluate all of India's States and UTs on their efforts to build an ecosystem conducive to startup growth.
- DPITT started conducting the ranking exercise in 2018, to push states to improve the start-up ecosystem in their respective states.
- It also aims to encourage mutual learning among all states and provide support in policy formulation and implementation in the start-up field.
- It aims to evaluate the Indian startup landscape through the eyes of state / UT policy intervention and identify practices that accelerate ecosystem growth and development.

Methodology

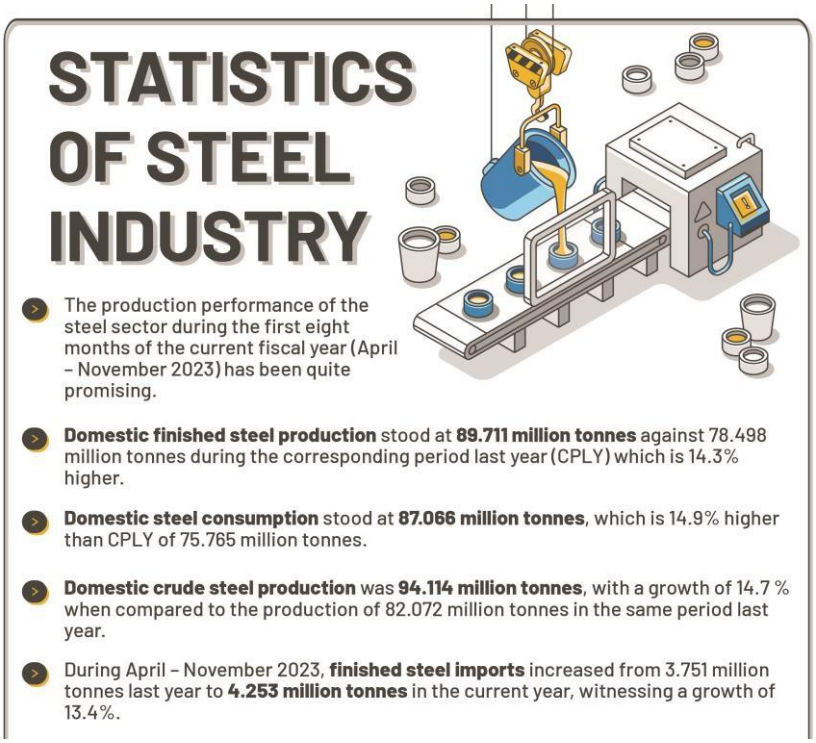
- The fourth edition of the exercise was launched in 2022 wherein the ranking framework comprised of **7 reform areas** with a total of **25 action points** with **score of 85 marks** and overall score of 100 marks including that of the feedback exercise.
- 15% of the total scores were awarded based on 10,000+ survey responses collected in 9 languages (telephonic and web-based).
- This edition saw the maximum participation across all editions, of **33 States and Union Territories**.
- The states and union territories were divided into **Category-A** (Population more than 1 crore) and **Category-B** (Population less than 1 crore) to establish uniformity and ensure standardization in the ranking process.

Significance



- The exercise has helped the Centre and states to <u>come together to cooperate, collaborate and compete, to promote start-ups</u>.
- It has led each state/UT to have dedicated startup policies and through its annual rankings, it is able to track the evolution of these policies and the overall efforts of states/UTs in ecosystem building.
- It accelerates efforts put in by the Center and States / UTs to enliven the entrepreneurial mindset across the country.
- Capacity Building Measures have also been undertaken by the Startup India Team across States and UTs for ecosyste upholding the spirit of cooperative federalism.
- The ranking does not only help states and UTs, but is also of great help to entrepreneurs in launch and expansion of new projects.

India's Steel Sector



- Over the years, the steel sector has witnessed tremendous growth and India has emerged as **2nd largest producer of steel in the world**.
- The steel sector plays a pivotal role in crucial sectors such as construction, infrastructure, automobile, engineering and defence.

<u>Initiatives for Growth of Steel Sector</u>

Production Linked Incentive (PLI) Scheme

- Government has approved inclusion of **Specialty Steel** under the PLI Scheme, with a 5-year financial outlay of ₹6322 crore.
- This is to promote the manufacturing of Specialty Steel within the country by attracting capital investment and promote technology up-gradation

Green Steel Making

- In line with India's commitments towards net-zero emissions, the Ministry of Steel (MoS) has taken various steps towards decarbonization of the steel sector.

- MoS constituted **13 Task Forces** with the engagement of industry, academia, think tanks, S&T bodies, different Ministries and other stakeholders to discuss and recommend upon different levers of decarbonisation of steel sector.
- Ministry of New and Renewable Energy (MNRE) has announced a **National Green Mission** for green hydrogen production and usage. The steel sector has also been made a stakeholder in the mission.
- The steel sector has adopted the **Best Available Technologies (BAT)** available globally, in the modernization & expansions projects.

Engagement with PM Gati Shakti National Master Plan

- MoS has integrated Bhaskaracharya National Institute for Space Applications and Geo-informatics (BISAG-N) capabilities into the **PM Gati Shakti National Master Plan**, uploading geolocations of more than **2000 steel units** to gain insights into steel production facilities.
- This information will aid in planning railway line extension, inland waterways, highways, ports, and gas pipeline connectivity.
- MoS has identified 22 key infrastructure deficiencies that need to be addressed in collaboration with other ministries for comprehensive and integrated infrastructure development.
- MoS has been mandated to create **Sectoral Plans for Efficient Logistics** (SPEL) in line with the National Logistics Policy of 2022.

Steel Scrap Recycling Policy (SSRP)

Notified in 2019, the SSRP provides a framework to **facilitate and promote establishment of metal scrapping centres** in the country for scientific processing and recycling of ferrous scrap generated from various sources including end of life vehicles.

Facilitation of National Infrastructure Pipeline Projects

MoS has been proactively taking up issues related to National Infrastructure Pipeline projects of steel companies with concerned Central/State Government, Ministries/Departments.

National Steel Policy

The Government has formulated the National Steel Policy 2017, which lays down the broad roadmap for encouraging long term growth for the Indian steel industry, both on demand and supply sides, by 2030-31.

Steel and Steel products (Quality Control) Order

MoS has introduced Steel Quality Control Order, to ban sub-standard/ defective steel products both from domestic & imports to ensure the availability of quality steel.

Formulation of Safety Guidelines for Iron & Steel Sector

- After extensive consultations with stakeholders, academia etc. a set of **25 common minimum Safety Guidelines for the Iron & Steel Sector** was formulated.
- These safety guidelines are at par with the global standards and are compliant with the requirements of the ILO Code of practice on safety in the Iron & Steel industry.

National Metallurgist Awards 2022

It is a prestigious award given by the Ministry MoS to recognize the outstanding contributions of metallurgists in the iron and steel sector.

FIU IND Notice To Offshore Crypto Firms

- The Financial Intelligence Unit India (FIU IND) issued show-cause notices to 9 offshore virtual digital asset service providers (VDA SPs), including Binance, Kucoin, Huobi, Bitfinex and MEXC Global, among others.
- It has also asked the Ministry of Electronics and Information Technology to block URLs of the mentioned entities.

- This was for operating illegally without complying with the provisions of the Prevention of Money Laundering Act, 2002 (PMLA).

Background

- In March 2023, VDA SPs in India were brought under anti-money laundering/counter financing of terrorism regulations.
- They were mandated to comply with PMLA 2002, verify the identities of onboarded clients, and maintain records of their financial positions and potentially suspicious transactions.
- This obligation applies to all VDA SPs operating in India irrespective of physical presence. Non-registration made entities non-compliant despite serving Indian users.
- This was done because these entities even after catering to a substantial part of Indian users were not getting registered and coming under the Anti Money Laundering (AML) and Counter Financing of Terrorism Network (CFT) framework.
- Currently, 31 VDA SPs have registered with FIU IND.

Purpose of PMLA compliance

- The objective of the PMLA and its reporting obligation is to enable monitoring and tracking of financial transactions to curb money laundering and terror financing.
- It addresses one of the primary concerns of any regulator about the *possible anonymity of the crypto assets and their potential use for unlawful purposes.*
    - ✓ Mandatory KYC verifications would ensure lack of anonymity and businesses not encountering multiple hurdles.
- It is also aligned with India's efforts through the G-20 where it has been advocating for global regulation of crypto currency and the framework proposed by the IMF and the Financial Stability Board to the G-20 in September 2023.

Approaches to Regulate VDAs

- The Bureau for International Settlements (BIS) - the global forum for cooperation among central banks - in a report about financial stability from crypto assets in emerging economies (August 2023) had observed three high-level policy options.
    - ✓ These include an **outright ban, containment and regulation**.
- BIS observed that **an outright ban may not prove enforceable**. This is because of the pseudo-anonymous nature of crypto markets.
- In fact, there could be a possibility that regulators lose complete sight of the market, further reducing transparency and making them less predictable.
- **Containment** on the other hand would imply controlling the flows between crypto markets and traditional financial systems or limiting their connections.
- However, BIS argued that the strategy would not address the vulnerabilities rooted in the crypto markets and could result in financial stability risks.
- About **regulation**, motivation to regulate the asset varies across jurisdictions.
- The report holds that it must be ensured that benefits of regulating and supervising are greater than the costs involved. Costs may vary as per the characteristics of a country.
- Furthermore, for emerging market economies (EMEs), three issues are of particular importance, that is:
    - Defining the (regulatory) authority or entity and their scope,
    - The scope of regulation in terms of either activity or entity, and
    - Filling in the data gaps to understand the technology and interconnections.

Regulation of Virtual Assets In Other Countries

- One of the more comprehensive regulatory regimes belongs to the **Dubai Virtual Assets Regulatory Authority (VARA)**.
- The standout feature of the regulatory regime is their licensing framework. It aims to encourage consumer protection and prevent illicit finance.
- The mandatory licences are comprehensively categorised based on the service that the entity wants to offer in the market (such as advisory services, exchange services, broker-dealer service and/or transfer and settlement services, among others).
- In the **European Union**, the **Markets in Crypto-Assets Regulation (MiCA)** aims to institute uniform EU market rules for crypto-assets.
- The regulation is built around transparency, disclosure, authorisation and supervision of transactions.
- It would provide measures to tackle market manipulation, prevent money laundering, terrorist financing and other criminal activities.
- Consumers would be better informed about the risks, costs and charges linked to their operations.
- Service providers under this common law would require authorisation to operate in the region.
- Though entered into force in June 2023, the legislation is still in consultation stages. The final report is expected in June 2024.
- The **U.S.** does not have a thorough nationwide regulatory framework at present. Some digital assets and related activities are covered under certain existing regulations, such as the Bank Secrecy Act and the Anti-Money Laundering Act of 2020.

FIU-IND

- Financial Intelligence Unit – India (FIU-IND) is an independent body reporting directly to the Economic Intelligence Council (EIC) headed by the Finance Minister of India.
- It was established in 2004 as the **central national agency** responsible for receiving, processing and analyzing information relating to suspect financial transactions.
- It is responsible for coordinating and strengthening efforts of national and international intelligence.
- It also undertakes investigations for pursuing the global efforts against money laundering and related crimes.

RBI Guidelines For Inoperative Accounts And Unclaimed Deposits

RBI has revised guidelines for classifying accounts and deposits as inoperative accounts and unclaimed deposits by banks.

Unclaimed Deposits

- Balances in savings / current accounts which are **not operated for 10 years**, or term deposits not claimed within 10 years from date of maturity are classified as unclaimed deposits.
- The government recently informed the Parliament that **unclaimed deposits of Rs 42,270 crore** are lying with the banks as of March 2023.

Inoperative Account

- A savings or current account is treated as **inoperative,** if there are **no customer induced transactions** in the account for a period of over **two years**.
- A **customer induced transaction** can be a financial transaction initiated by or done at the request of the account holder by the bank or third party, or a non-financial transaction or a KYC (know your customer) updation.
- There may be instances where the customer has given a mandate like standing instructions (SI)/ auto-renewal instructions. These transactions shall also be treated as customer-induced transactions.

- ✓ **Bank-induced transactions** are transactions in the account initiated by the bank such as charges, fees, interest payments, penalties and taxes.

- Around **Rs 1-1.30 lakh crore** is estimated to be lying in inoperative bank accounts.

Revised RBI Guidelines

- The RBI has asked banks to undertake at least **an annual review** for accounts where there are no customer induced transactions for more than a year.
- Banks should communicate to the account or deposit holders through letters or email or SMS that there has been no operation in their accounts in the last one year.
- The alert messages should mention that the account would become inoperative if no operations are carried out during the next one year.
- The classification of an account as inoperative will be for a particular account of the customer and not with reference to the customer.
- Banks should activate the inoperative accounts or unclaimed deposits only after doing the KYC.
- **No charges** should be levied for activation of inoperative accounts. Moreover, The banks are **not permitted to levy penal charges** for non-maintenance of minimum balances in any account that is classified as an inoperative account
- **Interest on savings accounts should be credited** on a regular basis irrespective of the fact that the account is in operation or not.

Accounts That Cannot Be Classified As Inoperative Accounts

- Banks open zero balance accounts for beneficiaries of Central/State government schemes and for students who receive scholarships.
- Central and State governments have expressed difficulty in crediting cheques or direct benefit transfer or scholarship amount in these accounts as they are also classified as inoperative due to non-operation for two years.
- The RBI said that banks should, based on the purpose of opening of the account, separate such accounts in their core banking solution (CBS).
  - ✓ Through this, the tagging of inoperative accounts will not be applicable to these accounts due to their non-operation for a period of more than 2 years.

Rising Gap In Incomes

- According to a recent report by the State Bank of India (SBI), **India has witnessed a significant fall in inequality** over the last decade.
- **Examining taxpayer data**, the report claims that the **Gini coefficient has fallen from 0.472 in 2014-15 to 0.402 in 2022-23**. A **fall of almost 15%** in the Gini coefficient indicates a significant reduction in inequality.

Gini Coefficient

- The Gini coefficient (Gini index or Gini ratio) is a statistical **measure of economic inequality** in a population.
- It measures the distribution of income or wealth among the members of a population.
- The co-efficient ranges from 0 to 1, with **0 representing perfect equality** and **1 representing perfect inequality**.
- Thus, **a higher Gini coefficient indicates greater inequality**, with high-income individuals receiving much larger percentages of the population's total income.
- Values greater than 1 are theoretically possible due to negative income or wealth.

Polarisation of Income

- The fall in the Gini coefficient is established by the SBI report, but this has been accompanied by a **polarisation in incomes**.

Table 1: Gini coefficients

	2017-18	2022-23
Overall	0.4297	0.4197
Self-employed	0.37077	0.3765
Regular wage workers	0.43947	0.43198
Casual wage workers	0.27619	0.263

- **Incomes of the top 10% have grown faster than the bottom 30%**, with polarisation largely seen amongst self-employed workers.
- As shown in the table, the Gini coefficient has fallen from 0.4297 in 2017-18 to 0.4197 in 2022-23.
- When comparing the different forms of employment, the Gini coefficient falls for regular wage and casual wage workers, but rises for the self-employed. However, the changes are largely minimal.
- Inequality no doubt has fallen, but inequality among the top income earners seems to have fallen far more than the population as a whole.
- As Gini coefficient is an aggregate measure, that takes into account **all incomes in a given sample**, it is possible for the Gini coefficient to register a fall in inequality even with a divergence between different classes of income-earners.

Concerns With The Data

- The analysis is conducted on **taxpayer data**, and a majority of income-earners fall outside the tax net.
- According to data from the 2022-23 Periodic Labour Force Survey (PLFS), nearly 80% of income-earners earn less than ₹2.5 lakh per annum — the minimum taxable amount.

World Employment and Social Outlook Trends 2024 report

The International Labour Organization recently released the World Employment and Social Outlook Trends 2024 report.

Highlights of The Report

- The macroeconomic environment deteriorated significantly over 2023. Ongoing geopolitical tensions as well as persistent and broadening inflation triggered frequent and aggressive moves by central banks.
- Monetary authorities in advanced and emerging economies implemented the f**astest increase in interest rates since the 1980s**, with significant global repercussions.
- China, Türkiye and Brazil slowed down considerably, causing adverse impact on global industrial activity, investment and trade.
- On a positive note, despite the economic slowdown, global growth in 2023 was modestly higher than anticipated, and labour markets showed some resilience.
- On the back of strong jobs growth, both the unemployment rate and the jobs gap have declined below pre-pandemic values.
- The **global unemployment rate in 2023 was 5.1%**, a modest improvement on 2022. The **global jobs gap** also saw improvements in 2023, but, at close to **435 million**, remained elevated.
- Although the imbalances eased somewhat in 2023, concerns are rising that these labour market *imbalances are structural, rather than cyclical, in nature*.

Real Wages And Poverty

- Real wages declined in the majority of G20 countries as wage increases failed to keep pace with inflation.
- Moreover, in 2023, the numbers of workers living in extreme poverty – earning less than US$2.15 per day per person in purchasing power parity (PPP) terms – grew by about one million globally.
- Only China, the Russian Federation and Mexico experienced positive real wage growth in 2023. The strongest wages gains were in China and the Russian Federation, where labour productivity growth was among the highest in G20 countries in 2023.

Future Projections

- The global unemployment rate is expected to rise slightly in 2024 and **an additional two million workers will seek employment**.
- The report projected a decline in labour force participation rates and slowdown in employment growth, which may raise the global unemployment rate from 5.1 per cent in 2023 to 5.2 per cent in 2024.

- Uneven labour force participation, rising geopolitical tensions, potential disruptions in global value chains and high interest rates in advanced economies may all play a role in adding to the job gap.
- The introduction and popularity of artificial intelligence may worsen the problem, as labour market adjustment will be tested further by accelerating technological progress.

Recommendations

- Major challenges need to be addressed swiftly to accelerate movement towards achieving the UN sustainability goals.
- The current environment of geopolitical tensions is not conducive for rapid and effective international coordination to address major economic, ecological and social challenges.
- Governments need to strengthen their domestic economy through initiatives to raise productivity growth and living standards.
- To this end, governments and social partners could make use of *existing international cooperation instruments to encourage regional productivity initiatives, for instance by strengthening global skills partnerships.*
- Current work by the G20 to push international cooperation to make better use of *multilateral development funds* should be encouraged and sped up to support the most fragile economies.

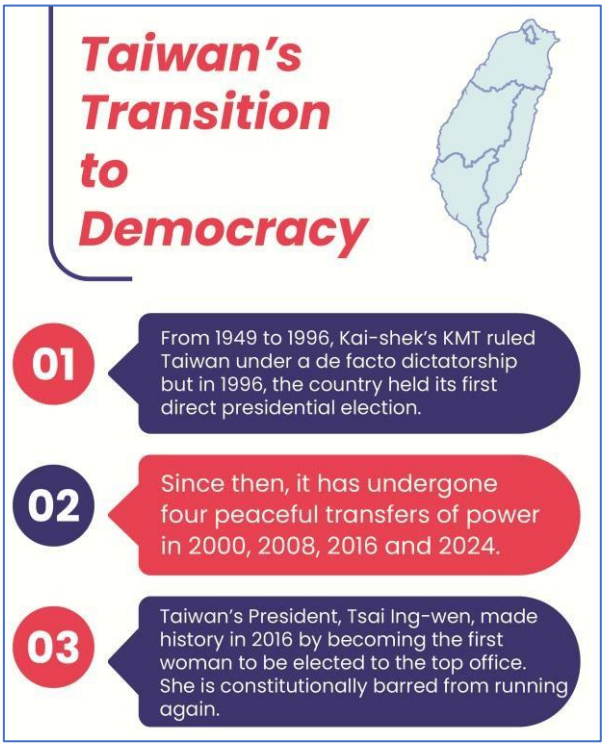
Maldives, China Agree To 'Elevate' Strategic Cooperation

- Recently, the President of Maldives, Mohamed Muizzu, visited China on a five-day state visit.
- During this visit, the two countries signed 20 key agreements and elevated their bilateral ties to a **Comprehensive strategic cooperative partnership**.
- Muizzu's state visit to China took place amid:
  - a diplomatic row with India over derogatory remarks by his ministers against PM Modi;&
  - the release of a report by EU Election Observation Mission of Maldives.
    - The report said the ruling coalition of Progressive Party of Maldives (PPM) and the People's National Congress (PNC) deployed anti-India sentiments.
    - They attempted to spread disinformation in the 2023 Presidential elections in which Muizzu won.
- During this visit, Muizzu also said that his administration is committed to the quick implementation of the Free Trade Agreement (FTA) signed with China.
  - Maldives and China signed the FTA in December 2014 during the pro-China President Abdulla Yameen administration.
  - However, his successor President Ibrahim Mohamed Solih's administration did not implemented the agreement.
- **China-Maldives bilateral trade in 2022**totalled to USD 451.29 million of which China's exports constituted USD 451.29 million against USD 60,000 of exports from Maldives.
- Diplomatic relations between the Maldives and China were established in 1972. China has an embassy in Malé, which opened in 2011.

[Also refer the topic, **"Presidential Election in Maldives"** from The Recitals – October 2023.]

Taiwan Elections 2024

- Taiwan's ruling Democratic Progressive Party pulled off a historic third consecutive presidential victory.
- **Lai Ching-te**, Taiwan's current vice president, was declared the new President of Taiwan as he defeated his two opposition rivals.
  - Lai Ching-te, often referred to as a dangerous separatist and a troublemaker by Beijing, will succeed Tsai Ing-wen as President of the Republic of China (ROC).

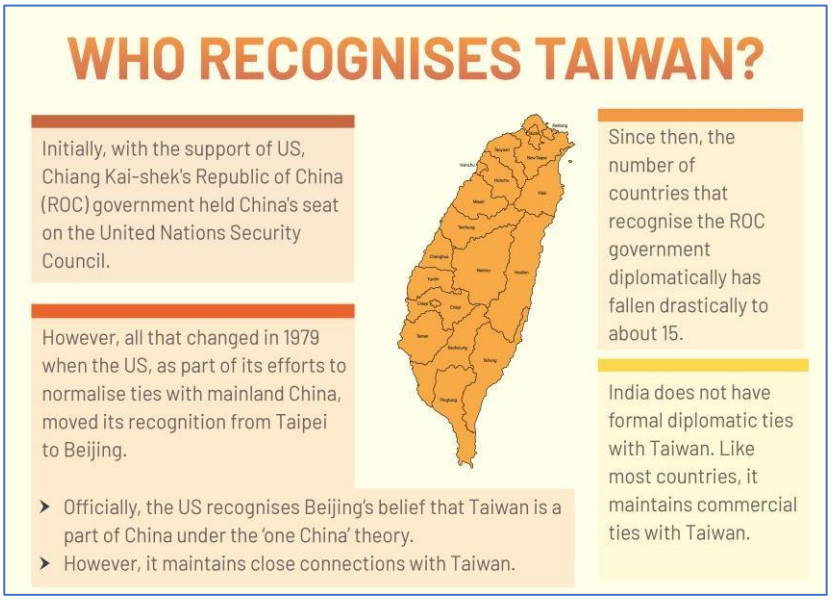


China – Taiwan Dispute

- **Background**
  - The island seems to have first appeared in Chinese records in AD239, when an emperor sent an expeditionary force to explore the area.
    - This evidence is used by Beijing to back its territorial claim.
  - After a relatively brief spell as a Dutch colony (1624-1661), Taiwan was administered by China's Qing dynasty from 1683 to 1895.

- In 1895, Japan won the **First Sino-Japanese War**, and the Qing government had to cede Taiwan to Japan.
- After World War Two, Japan surrendered and relinquished control of territory.

- **Civil War**
  - When Japan surrendered, The Chinese Nationalist Party (also known as the Kuomintang, KMT) began ruling Taiwan with the consent of its allies, the US and UK.
    - **Chiang Kai-shek** was the ruler of this party.
  - However, almost immediately following Japan's surrender, the Chinese Civil War broke out between the KMT and the Chinese Communist Party (CPC).
  - Chiang and the remnants of his Kuomintang government fled to Taiwan in 1949.
- **Disagreement and confusion about Taiwan**
  - China regards Taiwan as a **breakaway province** which it has vowed to retake, by force if necessary.
    - China has repeatedly insisted that Taiwan should be called Chinese Taipei, in efforts to prevent international recognition of Taiwan as a country.
  - But Taiwan's leaders argue that it is a sovereign state. Taiwan continues to participate in international events and dialogues separately.
    - It has its own constitution, democratically-elected leaders, and about 300,000 active troops in its armed forces.



Fourth National Elections Of Bhutan

The Election Commission of Bhutan (ECB) declared the People's Democratic Party (PDP) the ruling party, with 30 out of 47 seats, in the fourth national assembly elections.

Electoral system of Bhutan

- **Transition to democracy**
  - In 2008, Bhutan converted from an absolute monarchy to a constitutional monarchy with a parliamentary government. Since 2008, Bhutan has conducted four elections.
  - The King of Bhutan is the head of the state whereas the Prime Minister is the head of the government.
- **Parliament of Bhutan:** Consists of the King of Bhutan, the National Council (upper house), and the National Assembly (lower house).
- **Elections** to the National Assembly are a two-tier system consisting of a primary round and then general elections.
  - All registered parties contest in the primary round of elections and the top two voted parties contest the general elections to decide the ruling party and the opposition party.

Bangladesh's Sheikh Hasina Wins Fourth Straight Term

- Bangladesh Prime Minister Sheikh Hasina has secured a record fourth straight term as her Awami League party registered a landslide victory in the general elections.
- The election was boycotted by the main opposition Bangladesh Nationalist Party (BNP) and its allies.
  - The polls were preceded by sporadic violence, including setting polling booths and schools on fire.

Electoral System of Bangladesh

- Bangladesh's electoral system is based on the first-past-the-post system.
- Bangladesh's unicameral legislature body Jatiya Sangsad has 350 members who serve five-year terms.
  - 300 of these members are elected by direct popular vote in single-member constituencies.
  - **The remaining 50 seats are reserved for women**, who are selected by political parties based on their share of seats in the legislature.
- The Prime Minister is the head of the government, and the most powerful person in the country.

Gabriel Attal Becomes Youngest French PM

- France's President Emmanuel Macron appointed a new Prime Minister: Gabriel Attal, 34, the youngest person to ever hold the post.
- Attal's appointment comes after sitting PM Elisabeth Borne resigned following a tumultuous term in office.
- **Appointment of PM in France**
  - President of France appoints the prime minister, who is also known as the premier.
  - President is not restricted by the government's composition when making their choice.
- **Role of PM**
  - The prime minister is responsible for the day-to-day management of the French government.
  - They are also responsible for ensuring that legislation is carried out. The prime minister and the Council of Ministers, or cabinet, together make up the government.

US Signals Cooperation With China On AI Safety

- The United States has agreed to work with Beijing on safely deploying AI systems. Earlier, the President Joe Biden had signed an executive order prohibiting American investments in sensitive technologies in China, including AI systems.
- The change in approach from USA comes at a time when rapid progress in AI has triggered global concern that this frontier technology could widen vulnerabilities to cyber-attacks and spread misinformation.
- China has already declared its intent to become the global leader in AI by 2030, and TikTok is seen as a global leader in behavioural algorithms.
- Facial recognition is yet another area where China is seen as getting far ahead of the US and Europe.
  - This is due to the heavy deployment of a billion surveillance cameras in Chinese urban centres that are being hooked up with backend AI tools.

Impact on India

- US-China alignment on AI technology, especially its regulation, could have an impact across other geographies, including India.
- India has been trying to pitch itself as a country that has effectively used technology to develop and deliver governance solutions on a mass scale. E.g., biometric identity programme Aadhaar and the payments solution UPI.
- These solutions form the bedrock of what New Delhi calls Digital Public Infrastructure (DPI). India wants to take the same DPI approach with AI.

- With **sovereign AI and an AI compute infrastructure** (the software and hardware needed to build AI-powered systems), New Delhi is not looking to merely compete with the generative AI type of model.
- It also wants to focus on real-life use cases in healthcare, agriculture, governance, language translation, etc., to maximise economic development.
  i. As of now, the European approach to technology rules is seen as being based inherently on regulation for the rights of citizens, while the US approach is more innovator-focussed.
  ii. According to policymakers, India's approach so far has been a hybrid of the European and American approaches.
- The new US-China consensus on tech development and regulation could offer another useful template.

Visit of French President to India

- French President Emmanuel Macron was on a two-day State visit to India. He was also the Chief Guest for India's Republic Day.
  - The 2nd Infantry Regiment of the French Foreign Legion also participated in Republic Day Parade.
- This year, we are celebrating the 25th anniversary of the India-France Strategic Partnership.
  - PM Modi was the Guest of Honour at the Bastille Day Parade held on 14 July 2023 in Paris.

Key Outcomes Of The Visit

- **Roadmap for India-France Defence Industrial Partnership**
  - The main goal of this roadmap is to find areas to work together on making military equipment.
  - This includes designing, developing, and producing things together, as well as creating supply chains for defence goods between the two countries.
  - It aims to foster collaboration in cutting-edge technologies, including robotics, AI, autonomous vehicles, platforms, and cyber defence.
  - The defence roadmap will cover both air and space technologies, maritime technology, including underwater domain awareness.
- **Defence-space partnership:** The two sides also signed a new agreement for a defence-space partnership that will see them collaborate on space situational awareness.
- **Airbus-TATA chopper deal**
  - Tata and Airbus Helicopters have entered into an industrial partnership for the production of H125 helicopters, fostering collaboration in the defence sector.
  - Two mega multi-billion-dollar defence deals in the pipeline between the two countries are currently in the cost negotiation phase. These are:
    - 26 Rafale-M fighter jets for the Indian Navy's aircraft carriers, and
    - Three additional Scorpene-class conventional submarines.
- **Cooperation in satellite launches:** An MoU was sealed between New Space India Ltd and France's Arianespace, signifying cooperation in satellite launches and advancing space exploration initiatives.
- **Introduction of the Young Professional Scheme**
  - The scheme facilitates:
    - the exchange of individuals between 18-35 years of age,

and

- the extension of visa validity to five years for Schengen visas for Indian students pursuing master's degrees in France.

- **Other areas of cooperation:** Both sides also agreed on cooperation in healthcare, which would include education, training and research, and the use of AI in healthcare.

[For detailed discussion on Indo-France bilateral relation, refer the topic ***"French President Macron to be Chief Guest this Republic Day"*** from The Recitals – December 2023]

India-US Trade Policy Meet

Representatives of the Government of India and the US Government meet at the Trade Policy Forum (TPF) — India's bilateral platform with the US.

Significance of Trade Policy Forum for India:

- The US is the single largest trade partner of India and the **only large economy where India exports more than it imports**.
- At a time when goods exports are slowing in the West due to the Russia-Ukraine war, India predominantly depends on the US demand for export earnings.
- India is also banking on the US-led **Indo-Pacific Economic Framework for Prosperity (IPEF)** to counter China's influence on trade in Asia.
  - ✓ IPEF was launched in 2022 with a dozen initial partners who ***together represent 40% of the world GDP***.
  - ✓ IPEF is not a Free Trade Agreement (FTA) but allows members to negotiate the parts they want to.
  - Closer trade ties with the US could help India attract more FDI.
  - Also, in the absence of a free trade agreement (FTA) with the US, such trade policy forum meetings are among the few platforms **to resolve trade tensions and push for tangible export growth**.

Key Concerns

Restoration of Generalized System of Preferences (GSP)	**US' Concerns w.r.t. India's Laptop Import Monitoring System**
● GSP is the largest and oldest US trade preference programme, ***designed to promote economic development by allowing duty-free entry for thousands of products from designated beneficiary countries***. ● India had lost GSP benefits in 2019 when former US President Donald Trump began introducing radical trade measures citing widening trade gap with India and China. ● While it was widely expected that the US under the Joe Biden administration would reverse Trump-era measures, GSP was not restored.	● Even though India has clarified that it will not impose restrictions on laptop imports, the ***US continues to raise questions on the purpose of the "monitoring system" that has been proposed as an alternative***. ● This is likely to be taken up in the trade policy meeting as such measures are seen as a non-tariff measure. ● India has said that the aim to impose such a system is to ensure that the IT products come from "trusted geographies".

How Is India Looking To Boost Service Trade With The US?

- Firstly, ***India is seeking liberal visa regime to boost service trade***.
  - ✓ India's *services exports* have been on the rise and healthy export numbers largely due to the US demand has helped lower the current account deficit.
  - ✓ However, visa delays for Indians surged to record levels during Covid-19.
  - ✓ Visas are a key concern for the US as immigration is a politically sensitive issue in the election year.

- Secondly, ***India is also set to reiterate its longstanding demand for a totalisation agreement that will provide social security to Indian professionals in the US***.
  - ✓ A totalisation agreement or social security agreement will eliminate dual social security deductions in India and the US.
  - ✓ The agreement will particularly benefit the Indian IT sector workforce who are working in the US and paying social security but are unable to get the benefit.

India, Saudi Arabia Ink Haj Agreement

- India and Saudi Arabia signed a bilateral agreement under which New Delhi has been allocated a quota of 1,75,025 pilgrims for the annual Haj pilgrimage in 2024.
- Out of a total quota of 1,75,025 pilgrims from India, 1,40,020 seats will be reserved for pilgrims to proceed through Haj Committee of India whereas 35,005 pilgrims would be permitted to proceed through private operators.
- The Saudi side appreciated the Indian Government's digital initiatives in facilitating and promoting ease and convenience for Haj pilgrims by providing last mile information.

India-Myanmar Border To Be Fenced Soon

- Union Home Minister announced that the Centre has decided to fence the entire length of the currently porous India-Myanmar.
  - India and Myanmar share a 1,643-km border along the Northeastern states of Manipur, Mizoram, Nagaland and Arunachal Pradesh, **a porous border of which only 10 km is fenced in Manipur**.
- He also said that the Centre will consider ending its free movement regime (FMR) agreement with Myanmar.
- He made this announcement while speaking on the 60th Raising Day ceremony of Sashastra Seema Bal (SSB), in Tezpur.

[For detailed discussion on FMR, refer the topic **"Manipur Demands Freezing of Visa-Free Entry from Myanmar"** from The Recitals – September 2023]

SUMMITS AND ORGANISATIONS

United Nations' Refugee Agency for Palestinians (UNRWA)

- UN officials have urged countries to reconsider their decision to suspend the funding for the United Nations agency for Palestinian refugees (UNRWA).
    - *UNRWA stands for UN Relief and Works Agency for Palestinian Refugees in the Near East.*
- Recently, Israel accused 12 of the agency's staff members of involvement in October 7 attack.
    - It has also claimed that Hamas siphons off funds given to UNRWA and fights from in and around the agency's facilities.
- After this, the US and eight other Western countries, which together provided more than half of UNRWA's 2022 budget, cut the money.

About UNRWA

- **About:** It was founded in 1949 to provide aid to about 700,000 Palestinians who were forced to leave their homes in what is now Israel during the 1948 Arab-Israeli war.
- **Working region:** The UN agency operates in Gaza and the Israeli-occupied West Bank, as well as Lebanon, Syria, and Jordan — countries where the refugees took shelter after their expulsion.
- **Areas of work:** The agency runs education, health, relief and social services, microfinance and emergency assistance programmes inside and outside refugee camps based in the aforementioned areas.
- **Funding:** UNRWA is funded almost entirely by voluntary contributions by donor states like the US.It also gets a limited subsidy from the UN, which is used only for administrative costs.
- **Performance:** Currently, around 5.9 million Palestine refugees — most of them are descendants of original refugees — access the agency's services.
    - In Gaza, over 1 million are sheltering in UNRWA schools and other facilities.

Davos Meeting 2024

This year's edition of World Economic Forum (WEF) annual meeting was held from January 15-19. The overarching theme for WEF 2024 was **'Rebuilding Trust'**.

Key Takeaways From Davos Meeting 2024

- **Artificial Intelligence**
- The one issue that took centre stage at this year's WEF meet was AI.
- Its many transformational abilities for human welfare were discussed.
- It also highlighted the potential threats such as:
    - the need for regulation,
    - fear of job losses,
    - the risks of impersonation and misinformation, and
    - the inequalities it can potentially worsen.
- Overall, the participants agreed that the positives outweigh the negatives, and human intelligence did not face a major threat from AI.
- **War and uncertainty**
- The summit highlighted the risk posed by a fragile geopolitical situation, wars in the Middle East and Europe, the threats to global supply chains, & uncertainty around food security.
- The head of the Palestine Investment Fund estimated at least $15 billion would be needed to rebuild houses in Gaza alone.
- However, Arab states said they would not fund reconstruction unless there was lasting peace.

- **Climate**
- The need for businesses to adapt to climate change and for countries to unite for action against it despite differences was another topic of discussion.
- In the financing of climate action in developing countries, assistance has to be provided by developed countries; otherwise, this inequality will only grow, resulting in winners and losers.
- **China's economy**
- Facing a slowing economy, China tried to attract more investment from the West, which has witnessed some cooling.
- At 5.2%, China's GDP growth in 2023 is still below pre-pandemic levels.
- It is battling American attempts to isolate it, as evidenced in the semiconductor trade standoff.
- **India specific observation**
- An assessment of Davos 2024 by consulting firm McKinsey and Company said:
    - India is transforming rapidly as one of the fastest growing large economies in the world.
    - When it comes to technology, talent, healthcare, and other areas, its future in 2024—and beyond—is worth paying attention to.
- The summit announced of the launch of a **Global Good Alliance for Gender Equity and Equality** with the support and endorsement by WEF and Government of India.
    - The idea of this alliance emerged from the G20 Leaders' Declaration.
    - The objective of this Alliance is to bring together global best practices, knowledge sharing and investments in the identified areas of women's health, education, and enterprise
    - Supported by the Bill and Melinda Gates Foundation, the alliance will be housed and anchored by the CII Centre for Women Leadership.
    - WEF has come on board as a 'Network Partner' and Invest India as an 'Institutional Partner'.

About World Economic Forum

- It is the international non-governmental organization for Public-Private Cooperation.
    - It was founded in January 1971 by German engineer and economist Klaus Schwab.
- It has no independent decision-making power.
- **HQ**: Cologny-Geneva, Switzerland.

What is Davos Meet?

- Annually, the WEF organizes a meeting at the end of January in Davos, a mountain resort in Graubünden, in the eastern Alps region of Switzerland.
- The Annual Meeting, also known as the Davos Agenda, has the objective of orienting global leaders on the imperatives of the year ahead.

Different Reports Published by WEF

- Global Competitiveness Report,
- Global Information Technology Report,
- Global Gender Gap Report,
- Global Risks Report,
- Global Travel and Tourism Report,
- Financial Development Report and
- Global Enabling Trade Report.

WTO Dispute Settlement Body: Revival Faces Delays Over Country Differences

According to an economic think tank GTRI report, restoring a fully functional WTO dispute settlement body may take longer due to significant differences between developed and developing countries on the issue.

- This comes as the 164-member WTO is set to gather next month in Abu Dhabi for the 13th ministerial conference (MC).

The Dispute Settlement Body (DSB)

- The General Council convenes as the DSB **to deal with disputes between WTO members**.
- Such disputes **may arise with respect to any agreement** contained in the Final Act of the Uruguay Round.
- **The DSB has authority to -**
    - Establish dispute settlement panels,
    - Refer matters to arbitration,
    - Adopt panel, Appellate Body and arbitration reports,
    - Maintain surveillance over the implementation of recommendations and rulings contained in such reports, and
    - Authorise suspension of concessions in the event of non-compliance with those recommendations and rulings.
- **Only the DSB has the authority to make these decisions**, panels and the Appellate Body can only make recommendations.

Why Does the WTO DSB Remain Defunct?

- WTO dispute settlement is in the midst of a serious crisis because **its appeals mechanism is not functioning**.
- This is because the **US** (over the issue of judicial overreach) **blocked appointments** of new judges **to the Appellate Body.** This has led to most panel reports being appealed "into the void" and leaving the dispute unresolved.
- As a result, it is **extremely difficult right now for WTO members to enforce WTO obligations** through complaints against measures they believe are in violation.

DEFENSE AND SECURITY

58th All India Conference of Director Generals/Inspector Generals

- Prime Minister Modi attended the All-India Conference of Directors General and Inspectors General of Police 2023 in Jaipur, Rajasthan.
- It was hosted by the Intelligence Bureau at the *Rajasthan International Centre* in Jhalana
- During the conference, best practices from States and Union Territories was presented at the Conference so that States can learn from each other.

About the Conference

- The three-day Conference, from January 5 to 7, 2023, was held in hybrid format
  - About 100 invitees including DGP of States/UTs and Heads of Central Armed Police Forces (CAPFs) and Central Police Organizations (CPOs) attended the Conference physically.The remaining invitees participated virtually from across the country.

Cyber Kidnapping

- As per the US police, a missing Chinese foreign exchange student who was later found in Utah (USA) was a victim of cyber kidnapping.
- **Forms of cyber kidnapping**
  - According to the FBI, although virtual kidnapping takes on many forms, it is always an extortion scheme.
  - Unlike traditional abductions, virtual kidnappers have not actually kidnapped anyone.
  - Instead, through deceptions and threats, they coerce victims to pay a quick ransom before the scheme falls apart.

Defence Technology Council

- A top body - **the Defence Technology Council**, should determine the country's defence technology roadmap and decide on major projects and their execution.
- This was recommended by a 9-member expert committee headed by the former principal scientific advisor Prof K **Vijay Raghavan**.

Defence Technology Council

- **About**
  - This top body, called the Defence Technology Council recommended by **Vijay Raghavan** committee, is **chaired by the Prime Minister**.

- The Defence Minister and the National Security Advisor would act as its Vice Presidents.
- It is proposed to have an executive committee chaired by the Chief of Defence Staff.
  - The Principal Scientific Advisor, along with the three service chiefs and their vice chiefs, will also be its members.
- Furthermore, it will include representation from academia and industry, with two members from each sector.

VIJAY RAGHAVAN COMMITTEE

BACKGROUND

- The committee was set up by the government last year to review the functioning of the *Defence Research and Development Organisation (DRDO).*
- The government's decision to review the functioning of DRDO came against the backdrop of several of its projects suffering from huge delays.
  - Recently, the Parliamentary Standing Committee on Defence had expressed concerns that 23 of its 55 mission mode projects could not be completed in time.
  - In 2022, CAG had flagged that 119 (or 67%) of the 178 projects scrutinised by it had failed to adhere to their initially proposed timelines.
  - According to the CAG, multiple extensions were primarily sought due to factors like persistent alterations in design specifications, delays in completing user trials, and in placing supply orders.
  - The practice of seeking multiple extensions defeats the very purpose of projects taken under Mission Mode category.

RECOMMENDATIONS OF THE COMMITTEE

- At present, DRDO remains engaged in all aspects, from research to development to production, in its projects.
- The committee recommended that the **DRDO should focus on its original goal of R&D for defence.**
  - It should refrain from involving itself in productization, production cycles, and product management, tasks that are more suitable for the private sector.
- Furthermore, there are **numerous technologies that DRDO does not necessarily need to get into.** E.g. drone development
- There is a necessity to identify expertise within India and internationally for various technologies.
  - Every defence solution to a problem does not have to only come from DRDO.
- In this context, the committee highlighted that the **Defence Technology Council would play a pivotal role in identifying the right players for specific defence technologies.**

- **Secretariat of the Defence Technology Council**
  - The panel has also suggested the creation of a separate department under the Defence Ministry - **the Department of Defence Science, Technology, and Innovation**.
  - This department, proposed to be headed by a technocrat, will
    - Promote defenceR&D in the academic and start-up ecosystem.
    - **Serve as the secretariat for the Defence Tech Council**.
    - Operate labs for testing and certification, a function also performed by DRDO.

BRU REFUGEES

- Brus, also referred to as Reangs, are a tribal community indigenous to northeast India.
- They have historically resided in parts of Mizoram, Tripura, and Assam.
  - In the state of Tripura, the Brus are a designated Particularly Vulnerable Tribal Group (PVTG).
- While many Brus of Assam and Tripura are Hindu, the Brus of Mizoram converted to Christianity over the years.
- Most Brus residing in Tripura today have suffered more than two decades of internal displacement.
  - They were forced to leave their homes due to ethnic persecution, mainly from Mizoram.
  - It all started in 1995, when different groups in Mizoram demanded that Brus be eliminated from Mizoram's electoral rolls as they were not indigenous inhabitants.
  - Tensions escalated after the Brus retaliated against the Mizos' attempts to disenfranchise them.
  - Hence, the resultant ethnic clashes forced many Brus to migrate to neighbouring Tripura in 1997.

Bru Refugees & Their Rehabilitation

- The **Tripura** government has allocated land for the rehabilitation of the last batch of **Mizoram** Bru refugees.
- These refugees were granted permanent settlement in Tripura through a Home Ministry-initiated quadripartite agreement

signed in January 2020.

2020 Agreement To Rehabilitate Brus

- The governments of Tripura, Mizoram, and the central government concluded a quadripartite pact with Bru community representatives in January 2020 to resettle the Brus **in the state of Tripura**.
- The central government earmarked a Rs 661 crore package to aid the rehabilitation efforts.
- The Bru families were promised a residential plot, a fixed deposit of Rs 4 lakh, Rs 1.5 lakh grant to construct their houses and free ration and monthly stipend of Rs 5,000 for a period of two years.
- Additionally, the pact also promised to include the displaced Brus in the electoral rolls in Tripura.

Operation Sadbhavana

The Army has adopted Topa Pir village in Poonch district as a model village under the Sadbhavana scheme.

- The village came to limelight after a video of alleged torture of civilians went viral in December 2023, in the wake of four soldiers being killed in an ambush by militants
- Three civilians were found dead after they were taken into custody for questioning by the Army.

About Operation Sadbhavana

- Operation Sadbhavana (Goodwill) launched in February 2023 is a unique humane initiative undertaken by Indian Army in Ladakh to address aspirations of people affected by terrorism, sponsored and abetted by Pakistan.
- Under this, Indian Army is undertaking multiple welfare activities such as *running of Army Goodwill Schools, Infrastructure Development Projects and Education Tours* etc.
- The objectives achieved through this scheme are national integration tours, women empowerment, employment generation, education and development activities towards nation building.
- 'Operation SADBHAVANA' projects are selected after taking local aspirations into consideration, in conjunction with local civil administration.
- It is ensured that there is no duplicacy with projects of civil administration.

DRDO Anti-drone Tech Ready

- DRDO has completed its counter-drone system and handed over the Transfer of Technology to private industries.
- The private industries include: Bharat Electronics Limited (BEL), Adani, Larsen & Toubro (L&T)
- DRDO's anti-drone technology can detect, identify, and neutralize different types of drones, including micro drones.
- The technology can also counter attacks and hard and soft kill drones.
    - Soft kills are carried out with RF *jamming* and Anti GNSS (*Global navigation satellite system)* technologies, and hard kills are carried out with Laser Directed Energy Weapon (DEW).

Preeti Rajak Becomes First Woman Subedar In Army

Champion trap shooter Preeti Rajak became the first woman subedar in the Army, after she was promoted from the havildar rank.

- This is for the first time that a woman Army soldier has been promoted to a junior commissioned officer (JCO).
- This was after the Army opened soldier ranks to women in the Corps of Military Police (CMP).
    - At present, other Army arms &services do not have women appointed to other ranks.
    - Women Agniveers keen to join the Army can enrol to join the CMP.

NIA Builds Its Own Database Of Terrorists

- The National Investigation Agency (NIA) has for the first time collected details of all terrorists and uploaded them in one common server at its headquarters in Delhi.
- Known as the National Terrorism Data Fusion & Analysis Centre (NTDFAC), it is modelled along the lines of the Global Terrorism Database of the US.
- The details of the terrorists and their associates, including their case history, fingerprints, videos, social media profiles etc. have been compiled.
- The NTDFAC will also have a face recognition system, which will help them scan pictures of suspects from any CCTV footage.

Overhaul of Cybersecurity Framework

As per various reports, the government has drawn up a guiding policy called the National Cybersecurity Reference Framework (NCRF) to help manage cybersecurity better.

- The framework is based on existing legislations, policies and guidelines. It outlines implementable measure with clear articulation of roles and responsibilities for cybersecurity.

National Cybersecurity Reference Framework (NCRF)

Background

- The NCRF was shared privately with companies and other government departments for consultation in May 2023, but is yet to be made public.
- Apart from the main policy document, at least three supporting compendiums detailing global cybersecurity standards, products and solutions have also been formulated.
- In June 2023, former National Cyber-Security Coordinator Lt. General Rajesh Pant had said that the NCRF will be released for the public soon.

About NCRF

- NCRF is a framework that sets the standard for cybersecurity in India. It focuses on **critical sectors** and provides guidelines to help organizations develop strong cybersecurity systems.
- The NCRF can serve as a template for critical sector entities to develop their own governance and management systems.
- The government has identified telecom, power, transportation, finance, strategic entities, government entities and health as critical sectors.
- **Institutions involved:** The framework has been drawn up by the National Critical Information Infrastructure Protection Centre (NCIIPC) with support from the National Cybersecurity Coordinator (NCSC).

Key Highlights

- **Non-binding in nature:** The NCRF is a guideline, meaning that its recommendations will not be binding.
- **Separate budget allocation:** It recommends that enterprises allocate at least 10 per cent of their total IT budget towards cybersecurity.
    - Such allocation is to be mentioned under a **separate budget** head for monitoring by the top-level management / board of directors.
- **Evolution of ways to use machines to analyse data from different sources:** The framework might suggest that national nodal agencies evolve platforms and processes for machine-processing of data from different entities.
    - This would help check if audits are done properly and rate auditors based on their performance.
- **Greater powers to the regulators:** The NCRF might suggest that regulators overseeing critical sectors can:
    - set rules for information security;
    - define information security requirements to ensure proper audit.

- **Effective Information Security Management System (ISMS):** The regulators may also need to access sensitive data and deficiencies related to the operations in the critical sector.
    - Hence, they also would need to have an effective ISMS instance.
- **Common but Differentiated Responsibility (CBDR):** The policy is based on a CBDR approach, recognising that different organisations have varying levels of cybersecurity needs and responsibilities.

Need for National Cybersecurity Reference Framework (NCRF)

- **Growing cyberattacks and lack of an overarching framework on cybersecurity:** India faces a barrage of cybersecurity-related incidents which pose a major challenge to New Delhi's national security imperatives.
    - E.g., A high-profile attack on the systems of AIIMS Delhi in 2022.
- **Emergence of threat actors backed by nation-states and organised cyber-criminal groups**
    - In recent years many **threat actors backed by nation-states and organised cyber-criminal groups** have attempted to target Critical Information Infrastructure (CII) of the government and enterprises.
    - In addition, availability of cyber-attacks-as-service has *reduced the entry threshold* for new cyber criminals, thus increasing the exposure to individuals and organisations.
- **National Cybersecurity Policy of 2013 is still guiding the cybersecurity of the nation**
    - The current guiding framework on cybersecurity for critical infrastructure in India comes from the National Cybersecurity Policy of 2013.
    - From 2013 till 2023, the world has changed as new threats and new cyber organisations have emerged calling for new strategies.

Union Home Ministry Extends Z+ Security to Kerala Governor

Union Home Ministry has extended Z+ Security cover of CRPF to Governor of Kerala.MHA took a decision on this after the Kerala Governor held a sit-in in front of a roadside shop in Kollam district after Students' Federation of India (SFI) activists allegedly tried to hit his vehicle.

Central Reserve Police Force (CRPF)

- CRPF is one of the oldest Central para military forces (now termed as Central Armed Police Force) and it comes under the Ministry of Home Affairs.
- CRPF came into existence as Crown Representative's Police in July 1939.
- It became the Central Reserve Police Force on enactment of the CRPF Act in December 1949.
- It is All India in character, both in deployment and in its composition.
- CRPF has, over the years, acquired the distinction of being perhaps the most acceptable Force, by the people and the State administrations.
- This is due to its unique capability to quickly adapt to various situations, and also, to work in perfect harmony with the State Police.

Duties Performed By The CRPF

- Crowd & Riot control
- Counter Militancy / Insurgency operations/Dealing with Left Wing Extremism
- Overall co-ordination of large-scale security arrangement especially with regard to elections in disturbed areas.
- Protection of VIPs and vital installations.
- Checking environmental de-gradation and protection of local Flora and Fauna
- Fighting aggression during War time
- Participating in UN Peace Keeping Mission
- Rescue and Relief operations at the time of Natural Calamities.

Different Types Of Security Cover

- There are six kinds of security covers
  - **X -** It has a security cover of 2 personnel (No Commando, Only Armed Police Personnel)
  - **Y-**It has a security cover of 11 personnel (Including 1 or 2 Commando) + (Police Personnel). Only one personnel for mobile security.
  - **Y plus -** It has a security cover of 11+ personnel (Including 1 or 2 Commando) + (Police Personnel). Two personnel for mobile security.
  - **Z -** It has a security cover of 22 personnel (Including 4 or 5 NSG Commando) + (Police Personnel)
  - **Z plus -** It has a security cover of 55 personnel (Including 10+ NSG Commando) + (Police Personnel).
    - Protectees under his category get a bullet proof car, escort in three shifts and additional security when required.
  - **Special Protection Group (SPG**) – SPG protects only the Prime Minister.

ENVIRONMENT AND GEOGRAPHY

PantoeaTagorei

Researchers from Visva Bharti University have Identified PantoeaTagorei(a *plant growth promoting bacteria)* in Jharia coal mine soil samples. It is named after Rabindranath Tagore.

About PantoeaTagorei

- Efficiently extract potassium from the soil, making it readily available to plants for enhanced growth and solubilize both potassium and phosphorus, further assisting in nutrient uptake.
- Fix nitrogen, adding this crucial element to the soil and reducing the need for synthetic fertilizers.

Benefits of PantoeaTagorei

- Increased crop yields with improved nutrient uptake
- Sustainable & Cost-effective Agriculture: Utilizing these bacteria as biofertilizers can be more cost-effective for farmers compared to traditional/Chemical fertilizers.

Invasive Species

Name (Native To)	Features & Affected Area
Lantana Camara (South America)	A decade-long initiative in Madhya Pradesh to reclaim land overrun by lantana helps residents restart agriculture and restore native biodiversity. • Introduced to India in the early 1800s for its aesthetic appeal, the invasive alien plant species Lantana camara has proliferated across national parks, disguising its presence with a luxuriant green facade. • It is listed as one of the world's top 10 invasive species, Lantana has now taken over crucial wild habitats in India. • Toxic to animals like horses, livestock, and pets, causing liver damage and other health problems and Difficult to control due to its vigorous growth and seed production.
Senna Spectabilis (South and Central America)	The Tamil Nadu Forest Department has cleared 356.50 hectares of invasive species Senna spectabills growth that posed a threat to biodiversity conservation in Sathyamangalam Tiger Reserve (STR). • Introduced as shade trees for coffee and firewood in the country, it soon became a threat to native tree species as its dense foliage prevented the growth of other indigenous trees and grass species. • **Growth:** Small, rounded deciduous tree, typically reaching 7-10 meters (maximum 15 meters) in height with a spreading crown. • **Uses:** Ornamental tree, shade tree, source of timber and firewood • **Pros:** Beautiful & showy flowers, fast-growing & provides shade quickly, relatively drought tolerant, Nitrogen-fixing, improving soil fertility. • **Cons:** Weak wood, susceptible to breakage in strong winds, Seeds can be toxic if ingested

Chinnar Wlidlife Sanctuary

A team of researchers found Eurasia otter for the first time in Kerala in Chinnar wildlife sanctuary (WLS). The discovery in the Western Ghats has added another member of mammal in Kerala.

About Chinnar WLS (part of the larger Anamalai Hills, which is a UNESCO World Heritage)

- **Location:** Situated in the Western Ghats Mountain range (Idukki district of Kerala)
- **Physiography:** unique dry deciduous forests, rolling hills, and cascading waterfalls
- **Biodiversity:**
  - ✓ **Flora:** Sandalwood trees, teak, ebony, and bamboos
  - ✓ **Fauna:** Indian gaur, spotted deer, barking deer, slender lorises, Indian star tortoises
- **Tribes:** Inhabited by the Muthuvan and Hill Pulaya tribes.
- It is the only rehabilitation center for the Indian star tortoise in India. It Contains the largest megalithic sites in Kerala.

For information on Eurasian Otter, Kindly refer The Recitals -March 2023}

Green Cover Index (GCI)

The National Highways Authority of India (NHAI) has signed a Memorandum of Understanding (MoU) with the *National Remote Sensing Centre (NRSC)*, to develop a "Green Cover Index" for India's extensive National Highways network.

✓ NRSC (headquartered in Hyderabad) is a part of the Indian Space Research Organization (ISRO).

About GCI (Allow for comparisons and rankings of different national highways)

- This project aligns with the Green Highways Policy implemented in 2015, prioritizing the greening of highway corridors. By estimating green cover for every 1 km length of the highways, the project generates detailed metrics for individual projects and packages.
- The project utilizes the expertise of ISRO's NRSC to undertake a comprehensive, high-resolution satellite imagery-based estimation of green cover across all national highways.
- The index incorporates emerging technologies like in-situ data collection to supplement plantation management, monitoring, and performance audits conducted by NHAI.

** The Mountain Green Cover Index (MGCI) is a metric that measures the amount of green vegetation in mountain areas. It is an indicator of the Sustainable Development Goals (SDGs) 15.

Wetland City Accreditation (WCA)

Ministry of Environment, Forest, and Climate Change (MoEFCC) submits proposals first nomination of its kind for Wetland City Accreditation under the Ramsar Convention on Wetlands for cities of Indore, Bhopal and Udaipur.

✓ Wetlands are areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.

Sites Proposed For Respective Cities

- Indore (crucial for water bird congregation): Sirpur Wetland, Yashwant Sagar
- Bhopal: Bhoj Wetland (Bhopal Municipal Corporation has a dedicated Lake Conservation Cell)
- Udaipur (5 major wetlands): Pichola, Fateh Sagar, Rang Sagar, Swaroop Sagar, and DoodhTalai

About WCA (A Voluntary Program Launched by the Ramsar Convention on Wetlands in 2015)

- It aims to promote the conservation and wise use of urban and peri-urban wetlands, as well as sustainable socio-economic benefits for local populations.
- Additionally, the Accreditation seeks to encourage cities that are close to and dependent on wetlands, primarily Wetlands of International Importance.
- It acknowledges and celebrates cities that prioritize the conservation and wise use of their urban wetlands, going beyond mere preservation.
- 32 cities worldwide have been awarded WCA status presently.

Extra Mile: Ramsar Sites in India

The Ramsar Convention, signed in 1971 at Ramsar, Iran, includes India as one of its Contracting Parties. As of January 2024, the total Ramsar sites in India are 75.

** **Amrit Dharohar**, part of the 2023-24 budget announcement, promotes the unique conservation values of the Ramsar Sites in India.

- The Sundarbans is India's largest Ramsar site and protected wetland. It's also part of the world's largest mangrove forest and includes 90% of India's mangrove species.
- Smallest Ramsar Sites in India is Renuka Lake (Himachal Pradesh).
- Oldest Ramsar Sites in India is Chilka Lake (Nominated in 1981).
- Tamil Nadu has the highest number of Ramsar Sites in India with 14 Ramsar Sites.

Rejupave Technology

The Border Roads Organization (BRO) introduces indigenous technology called Rejupave to enhance the operational capacity of the defence forces along the Indo-China border in Arunachal Pradesh.

About RejupaveTechnology

- Rejupave is a liquid bio-based asphalt modifier & rejuvenating agent. It was developed by the CSIR-Central Road Research Institute (CSIR-CRRI) (India's oldest and premier road research organisation)
- Rejupave is a bio-oil-based product that reduces the heating requirement of bituminous mixes. It is used in road construction to address challenges in low and sub-zero temperatures.
- Rejupave technology addresses construction challenges in low and sub-zero temperatures. It has been used by the Border Road Organization (BRO) to build bituminous road sections at the Sela Road tunnel and LGG-Damteng-Yangste.
  - ✓ The technology is developed using a Bio-based eco-friendly product with 100% biooil.

Advantages	Challenges
1) Sustainable: By promoting recycling and reducing dependence on virgin asphalt, Rejupave minimizes environmental impact and conserves resources. **2) Versatility:** It can be used for various hot mix and hot in-situ recycling processes, making it adaptable to different road conditions.	**1) Cost comparison:** While cost-effective in the long run, initial costs might be slightly higher than traditional methods, requiring careful project-specific evaluations. **2) More long-term data** on the performance of Rejupave-treated roads is needed to solidify its acceptance in the long run.

IISC Study: Impact of Climate Change on Montane Bird Species

Researchers at the Indian Institute of Science (IISc.) in Bengaluru have found that logging and climate change pose a threat to montane birds.

- ✓ The IISc. Team collected data from the Eaglenest Wildlife Sanctuary in Arunachal Pradesh, which is situated in the biodiversity hotspot of Eastern Himalayas and is home to over 500 bird species.

Findings of the Study (by examining over 10 years of data)

- **Rising temperatures:** Due to climate change, temperatures in the mountains are rising. This is causing many bird species to shift their ranges to higher elevations in search of cooler habitats.
- **Habitat loss:** Logging and other human activities are destroying montane forests, further shrinking the available habitat for birds. Logged forests also tend to be warmer and drier than undisturbed forests, making them less hospitable for many species.
- **Impact on specific groups:** Understory insectivores, which are birds that feed on insects found in the lower

levels of the forest, are particularly vulnerable to both climate change and habitat loss. Their populations have declined significantly in recent years.

- **Changes in species composition:** Smaller bird species seem to be better adapted to the warmer temperatures of logged forests and are colonizing these areas more readily. In contrast, the density of larger bird species appears to be increasing in primary forests.

Eaglenest Wildlife Sanctuary (West Kameng District)

- It's a biodiversity hotspot and a birder's paradise, with over 500 species of birds recorded
- **Altitude:** Ranges from 500 meters to 3,250 meters.
- **Habitat:** Subtropical broadleaved forest, temperate forest, bamboo forest, coniferous forest, scrubland.
- **Wildlife:** Over 500 species of birds, including the Blyth's Tragopan, Temminck's Tragopan, Rufous-necked Hornbill, Ward's Trogon, and White-browed Shortwing.
- Part of the Kameng Elephant Reserve (largest contiguous protected area in Arunachal Pradesh).

Tapioca Plants (Cassava)

Central Tuber Crops Research Institute (CTCRI) issues advisory on using parts of tapioca plant to feed cattle in view of the incident in Idukki district of Kerala where 13 cows had died in a farm recently.

✓ **CTCRI comes under the administrative control of ICAR (Indian Council of Agricultural Research).**

About Tapioca Plant (grow up to 3 meters tall)

- It is cultivated throughout (perennial shrubs native to South America) the tropical world for its tuberous roots, from which cassava flour, breads and an alcoholic beverage are derived.
- Tapioca thrives in well-drained, warm, and humid climates.

Benefits:

- Cassava leaves and peels can be used as animal feed after proper processing to remove toxins.
- It is a crucial source of carbohydrates for millions of people, particularly in Africa and Asia.
- Tapioca starch is used in various industrial applications (adhesives, textiles, and biofuels).

Toxic Aspect

- There are over 200 varieties of tapioca, with varying levels of bitterness and cyanide content.
- Bitter varieties contain higher levels of cyanogenic glycosides, which can be toxic if not properly processed.

Guidelines to avoid Toxicity

- Use only non-bitter cassava varieties for feeding cattle.
- Properly process tapioca leaves and peels before feeding them to cattle. This involves chopping, soaking in water for at least 4 hours, and then cooking or sun-drying for 12-18 hours.

Green Fuels Alliance India (GFAI)

Denmark has launched an initiative with India, called Green Fuels Alliance India (GFAI).

About GFAI

It is a key initiative under the Green Strategic Partnership (GSP) signed between India and Denmark in 2020 to achieve sustainable energy solutions sector and advance their joint global goal towards carbon neutrality.

Objectives

- The alliance aims to support the development of a green hydrogen ecosystem in India, including production, storage, and transportation infrastructure. Green hydrogen, produced using renewable energy sources like solar or wind power, is a key focus area for the GFAI.
- The GFAI aligns with India's ambitious target of achieving net-zero emissions by 2070.

Extra Mile: The Global Biofuels Alliance (GBA)

- GBA is made up of 19 countries and 12 international organizations, including the World Economic Forum, the World Bank, and the Asian Development Bank. The three founding members are India, U.S., and Brazil.
- India first proposed the GBA at the India Energy Week in February 2023 and launched the GBA at the G20 summit in September 2023.
- The GBA's goal is to promote the development and adoption of sustainable biofuels and set standards and certifications.

Humboldts Enigma

Humboldt's enigma (introduced by Alexander von Humboldt during the 19th century) sets a connection among temperature, altitude, humidity, and biodiversity.

What is Humboldt's Enigma?

- Humboldt's enigma is a term that describes the observation that mountain regions are generally more diverse than tropical regions.
- This observation contradicts the common belief that the most diverse areas on Earth are the rainforests around the equator (areas are the lowland tropical forests).
- **Example:** The eastern Himalayas serve as an illustration, showcasing how differences in climate and varied geological composition contribute to the region's rich biodiversity.

Key Characteristics

- High biodiversity in mountains: Mountains, despite covering only a quarter of the Earth's landmass, host an astonishingly high proportion of terrestrial biodiversity, especially in the tropics. These regions harbour more than 85% of known amphibian, bird, and mammal species, many found nowhere else.
- Challenge to traditional explanation: While the tropics generally boast higher biodiversity due to abundant sunlight and energy, mountains stand out as hotspots even outside this zone. This contradicts explanations solely based on climate.

Drivers behind / Factors Responsible for Such Enigma

- Topography and climate: The varied topography of mountains creates a dramatic range of microclimates with diverse temperatures, humidity, and sunlight conditions.
- Elevational gradients: As you climb a mountain, you essentially travel through different climate zones, from scorching tropical lowlands to icy peaks.
- Isolation and refugia: Mountain ranges often act as "islands" surrounded by lowland plains. This geographic isolation can lead to unique evolutionary trajectories and endemism, where species are found nowhere else.

Vulture Restaurant In Jharkhand

A vulture restaurant to conserve declining population of vulture has been established in Koderma, Jharkhand.

About Vulture Restaurant

- A designated area where non-toxic carcasses are provided for vultures and other scavengers.
- Supports vulture populations by offering safe food sources, especially important due to the decline caused by diclofenac poisoning in livestock medication.
- Protects the ecosystem by maintaining vulture populations, which play a crucial role in preventing disease spread by rapidly consuming carrion.
- The first 'vulture restaurant' came up in 2015 at Phansad Wildlife Sanctuary in Raigad, Maharashtra. There are four other such restaurants, all in the same state.

Types of Vultures

Name	IUCN Status	Features
White-rumped Vulture	Critically endangered	**1)** with dwindling populations 2) Plays a crucial role in scavenger chain
Indian Vulture	Critically endangered	facing similar threats as the White-rumped Vulture
Slender-billed Vulture	Critically endangered	**1)** smallest population among Indian vultures 2) Highly specialized beak for extracting bone marrow
Red-headed Vulture	Critically endangered	**1)** Distinct bare red head and neck 2) prefers open areas and scrublands
Egyptian Vulture	Endangered	**1)** feeds on a variety of carrion 2) exhibits unique stone-tool tossing behavior
Cinereous Vulture (Migratory)	Near threatened	**1)** found mostly in northern India (During Winter) 2) Known for its upright neck feathers like a monk's hood
Himalayan Griffon Vulture (Migratory)	Near threatened	similar to the Eurasian Griffon but found exclusively in the Himalayas
Eurasian Griffon Vulture (Migratory)	Least concern	a large number of vultures found in the Himalayas during winter months

Extra Mile: Causes of Decline of Vultures

- Diclophenac poisoning: Residues of the veterinary drug diclophenac in livestock carcasses are deadly to vultures. This has been identified as the primary reason for the recent, dramatic decline in their populations.
- Habitat loss and degradation: Increased hunting, infrastructure development, and encroachment on nesting sites further contribute to the pressure on vultures.
- Accidental poisoning: Carcasses poisoned for pest control or other purposes can inadvertently harm vultures.

Largest Deep-Sea Corals Mapping & Study

Scientists have mapped the largest coral reef deep in the ocean, stretching hundreds of miles off the U.S. Atlantic coast.

About Largest Deep Sea Corals

- Searched at depths from 200 metres to 1,000 metres where sunlight doesn't penetrate. Reefs spans approximately 500 km in length, and width reaches up to 110 km.
- Scientists have been aware of the reef's presence since the 1960s. However, New underwater mapping technology made it possible to construct 3D images of the ocean floor.

About Deep Sea Coral Reefs

Features Along With Adaptation

- Unlike shallow-water corals reliant on algae for photosynthesis, deep-sea corals lack sunlight and have developed alternative feeding strategies. Some species also produce bioluminescent light, illuminating their surroundings and potentially attracting prey or mates.
- They often grow slowly due to the cold temperatures and limited food availability.
- To withstand the crushing pressure, deep-sea corals have reinforced skeletons made of calcium carbonate or protein.

Ecological Importance

- Deep-sea coral ecosystems provide crucial habitat for a wide range of marine life, including fish,

crustaceans, mollusks, and other invertebrates.

- These complex structures offer shelter & feeding opportunities for numerous species.
- They also play a vital role in the ocean's biogeochemical cycles, filtering nutrients and influencing carbon sequestration.

Some Examples of Deep-Sea Coral Species

Name	Appearance	Feature
Lopheliapertusa	A cold-water stony coral	commonly found along continental margins
Primnoaresedaeformis	A fan-shaped soft coral	known for its bioluminescent properties
Antipathesdendrochristus	A black coral species (bushy or tree-like)	often associated with hydrothermal vents
Caryophylliahuinayensis	A solitary stony coral	surviving under high pressure & darkness

Extra Mile: Difference Between Deep and Shallow Water Coral Reef

	Shallow Water Coral Reef	Deep Water Coral Reef
Color	Brown & Green	White
Depth	Up to 200 feet (60 meters) from surface. (With High Diversity)	Beyond 200 meters to several thousand meters. (With Low Diversity)
Light Availability	Typically found in the euphotic zone where sunlight penetrates and supports photosynthesis. (faster coral growth)	Beyond the reach of sunlight for photosynthesis. So, they rely on alternative energy sources, such as capturing small particles and organic matter
Temperature & Pressure	Stable temperatures & lower pressures compared to deep water	Colder temperatures and higher pressures
Threats	Coral bleaching, overfishing etc.	Bottom trawling, deep-sea mining etc.
Key Example	The Great Barrier Reef	Recently found & located off the Atlantic coast

Wadge Bank Ecosystem & Hydrocarbon Exploration

Wadge Bank faces a potential risk as the Indian government considers offering three oil and gas blocks for exploration in the area under the Hydrocarbon Exploration and Licensing Policy (HELP).

✓ HELP is a uniform policy for granting licenses for exploration of hydrocarbons (crude oil, natural gas, and coal) inside India and its Exclusive Economic Zone.

About Wadge Bank (India's richest fishery resource)

- The Wadge Bank is a submerged plateau/ a continental shelf (10,000 square kilometre area) of the sea south of Kanyakumari.
- Hydrography: Characterized by low tidal amplitude and weak currents, creating favourable conditions for nutrient accumulation and plankton growth.
- Unique biodiversity& High productivity: Supports a diverse community of marine life, including fish, crustaceans, mollusks, and other invertebrates.

Kuno National Park

Namibian cheetah Jwala has given birth to four cubs at the Kuno National Park in Madhya Pradesh.

About Kuno NP (Lies at the crossroads of the Malwa plateau and Bundelkhand uplands)

- Established in 2011 with the primary objective of reintroducing the Asiatic lion, an endangered species, to its historical range in India after an absence of more than 70 years.
- Its proximity to the border with Rajasthan adds another layer of diversity to the region's ecosystem.

- **Rivers:** The Kuno River, one of the major tributaries of the Chambal River, flows through the entire length of the park.
- **Flora: D**ominated by Kardhai, Salai, and Khair trees (with vast grasslands)

Fauna: Home to a diverse range of wildlife, including tigers, leopards, sloth bears, striped hyenas, chital, sambar, nilgai, blackbuck. In 2023, 20 wild Asiatic lions were translocated from Gir National Park in Gujarat to Kuno National Park.

Coal Gasification

Union cabinet approves Rs.8500 crore viability gap funding for coal gasification under National Coal Gasification Mission.

What is Coal Gasification?

- Coal gasification is a chemical process that converts coal into a combustible gas mixture called Synthesis gas (also called syngas), which is a mixture of hydrogen (H2), carbon monoxide (CO) and carbon dioxide (CO2).
- Syn Gas produced from Coal gasification can is usable in producing Synthetic Natural Gas (SNG-For Transportation), energy fuel (methanol & ethanol), ammonia for fertilizers and Petro-chemicals.

** Blue Hydrogen is Produced via natural gas or coal gasification combined with carbon capture storage (CCS).

Importance of Coal Gasification

- **Emission Control:** The gasification process allows for the capture of pollutants and greenhouse gases at an early stage, contributing to lower emissions of sulphur dioxide (SO_2), nitrogen oxides (NO_x), and particulate matter. Hence, it is more environmentally friendly and efficient compared to coal combustion

Advantages	Disadvantages
• Cleaner than direct coal combustion • Efficiency: Gasification can achieve higher efficiency compared to traditional coal combustion. • Versatile product: Syngas can be used for various applications	• High capital costs: Building and operating gasification plants can be expensive. (more water-intensive forms) • Technical complexity: requiring skilled personnel for operation and maintenance

** India is the second largest importer, consumer & producer of coal.

National Coal Gasification Mission

- It aims for 100-million-ton (MT) coal gasification by 2030, with investments worth over Rs. 4 lakh crores. It aims to attract Government PSUs and the Private Sector, fostering innovation, investment, and sustainable development in the coal gasification sector.
- In order to encourage the use of clean sources of fuel, the government has provided a concession of 20% on revenue share under commercial coal block auctions.

Species In News

Austropallenehalanychi

- Scientists have discovered a new species of sea spider
- The spider with yellow body colourhas four black eyes and large bulbous claws. It was found off the Antarctica Ocean.
- It is a distant relative to horseshoe crabs and arachnids.
- It does not use its mouth but a straw-like proboscis to consume food.
- It has a unique way of breathing through lungs.

European wood bison 	• Ongoing war in Ukraine had impacted the efforts to save the last remnant of European wood bison. • It is also known as wisent. • European bison (Bison bonasus) are the largest and heaviest land mammals in Europe. • There were formerly three subspecies, although only one (Bison bonasus bonasus) remains – the other two are now extinct. • Habitat: Grassland, deciduous and mixed forests. **Conservation status:**IUCN: Near Threatened
Camelids 	• The United Nations recently declared 2024 the International Year of Camelids. • A Camelid refers to any of the even-toed ungulates of the family Camelidae. E.g. camels, llamas, alpacas, guanacos, and vicuñas. • These mammals are characterized by having soft-padded, snowshoe-like feet where each foot has two toes. • They have long necks and slender legs. • Their upper lips are split into two independent mobile protrusions. • These animals are herbivorous, and have a unique digestive system that allows them to extract nutrients from fibrous plant material. • They are ruminants. Their stomachs have three chambers, in contrast to other ruminants that have four.
Chum Salmon 	• Scientists have recently discovered Chum salmon, a migratory fish, spawning in the Arctic waters. • They do not reside in fresh water for an extended period. • They are also known as dog salmon. • They are the most widely distributed of all the Pacific salmon. They spend their early life growing and feeding in freshwater streams, estuaries, and associated wetlands.
Blue Dragons 	• This is a small (up to 3 cm) sea slug, also known as the Sea Swallow, Blue Angel, or Dragon Slug. • Venomous blue dragons were spotted near the seashore in Besant Nagar, Chennai recently. • It's found in tropical and subtropical waters around the world, often floating upside down with the help of an air bubble in its stomach. • It feeds on siphonophores, jellyfish-like creatures, and stores their stinging nematocysts in its cerata, making itself even more venomous.
Himalayan Wolf 	• Specie is listed as 'Vulnerable' • **Habitat :** Found in Higher Altitude often exceeding 4,000 meters. • Their hearts are specially adapted to function efficiently in the thin air of these high mountains • Their fur coloration blends seamlessly with the rocky terrain, helping them stalk prey and avoid predators. • They are larger than their European and Indian counterparts.They play a vital role in maintaining the delicate balance of the high-altitude ecosystem.

SCIENCE AND TECHNOLOGY

Non-Invasive Formaldehyde Sensor

Scientists developed a new low-cost sensor which can detect formalin adulteration in fishes at room temperature in a non-invasive way.

- ✓ Formalin (formaldehyde solution) is used to preserve & extend the shelf life of fish by inhibiting bacterial & fungal growth. However, the use of formalin in food products is illegal and poses significant health risks to consumers.
- ✓ **Formaldehyde**- It's a colourless, pungent gas, lurks in various places like building materials, furniture, and even some food preservatives. While it has its uses, exposure to high levels can be harmful, causing respiratory problems, eye irritation, and even cancer.

About Sensor for Formalin Detection

- These sensors emit light at specific wavelengths that interact with formaldehyde molecules.
- By analyzing the changes in the light signal, the sensor can detect the presence and even the concentration of formaldehyde in the air or on surfaces, all without touching a thing.
- Another approach uses nanomaterials like metal oxides or graphene.

These tiny materials have unique properties that change when they come into contact with formaldehyde molecules. By measuring these changes, the sensor can detect the gas without any physical contact.

Benefits of Non-Invasive Sensors:

- **Safer, faster, Portable & Cost Effective:** No need for invasive sampling or harmful chemicals, making them ideal for sensitive environments.
- **Real-time monitoring:** Continuous detection of formaldehyde levels provides instant insights into air quality.

Applications of Non-Invasive Sensors

- **Indoor air quality & Environmental monitoring:** It will ensure safe homes, offices, and public spaces by keeping tabs on formaldehyde levels.
- **Food safety:** Detecting formalin (formaldehyde solution) used illegally in some food products, protecting consumers from health risks.
- **Industrial safety:** Protecting workers in industries that use formaldehyde, from furniture manufacturing to chemical processing.

Traditional vs. Non-Invasive Sensors:

- Sniffing out formaldehyde traditionally involved invasive methods, like wet chemical analysis or using bulky, expensive portable devices.
- These methods often required taking samples or damaging the material being tested, making them inconvenient and impractical for many situations.

Electronic Soil (eSoil)

Researchers have developed a new electronics soil that was found to increase the growth of barley seedlings by 50 per cent in a new study. **E soil is an electrically conductive cultivation substrate designed specifically for hydroponic systems,** where plants grow in nutrient-rich water instead of traditional soil.

About E soil

- eSoil is made from a blend of cellulose, a natural biopolymer, and a conductive polymer called PEDOT.
- The conductive properties allow eSoil to deliver low-power electrical currents to plant roots.
- These currents stimulate root growth and nutrient uptake, leading to healthier plant development.

Benefits of eSoil

- **Increased crop yields:** Studies have shown that eSoil can boost plant growth by up to 50% compared to traditional hydroponics.
- **Reduced water and resource usage:** eSoil systems are closed loop, meaning they recirculate water and nutrients efficiently. This can significantly reduce water consumption compared to traditional farming methods.
- **Improved efficiency in urban settings:** eSoil's compact and controlled environment makes it ideal for urban farming, where space is limited.

Challenges

- **Cost:** Currently, eSoil is relatively expensive to produce compared to traditional growing medium
- **Technical complexity:** Operating an eSoil system requires a good understanding of electronics and plant science
- **Energy consumption:** While eSoil can reduce water usage, the electrical currents used to stimulate plant growth do require energy.

Smart Lander for Investigating Moon (SLIM) Mission

The Japan Aerospace Exploration Agency (JAXA)'s Smart Lander for Investigating Moon (SLIM) landed on the moon's surface.

- ✓ Japan became the fifth nation to achieve a soft landing on the Moon's surface. The same club that India joined when Chandrayaan-3 landed in 2023.
- ✓ The Soviet Union, the United States, China, and India are the only four previous countries that have successfully carried out soft landings on the moon.

About SLIM (smallest and lightest spacecraft to land on the Moon)

- SLIM is a very small spacecraft, weighing just 200 kilograms. To put that into context, the Chandrayaan-3 lander weighed about 1,750 kilograms. *SLIM is dubbed as the "Moon sniper*. It is the second Japanese mission to target a soft landing on the Moon.
- SLIM Mission employs 'Vision based navigation' technology for its higher landing accuracy.
- Hakuto, a private commercial mission led by Tokyo-based space technology firm 'ispace', failed crashed on to the lunar surface in April 2023.

** Japan is also home to several private-sector space startups and JAXA aims to send an astronaut to the moon as part of NASA's Artemis program in the next few years.

Objectives

According to JAXA, **pinpoint landing technology** (a powerful tool in future exploration of hilly terrain) is essential to make sure that a spacecraft can land close enough to scientifically interesting sites on the Moon that are accessible by a rover.

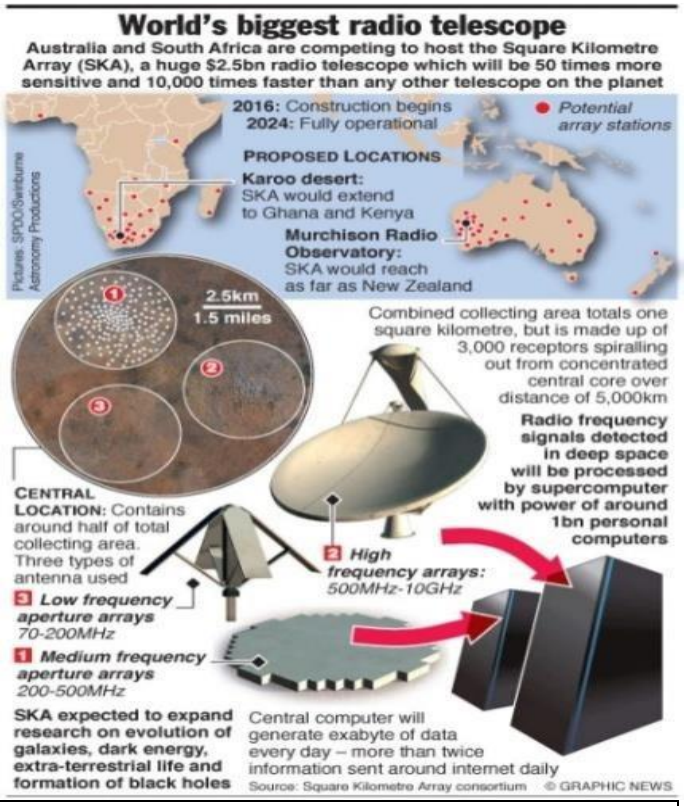
- **Precision landing (Main Objective):** SLIM targets a landing within 100 meters (versus the conventional accuracy of several kilometres) of its chosen site near the Shioli Crater, a significant improvement over previous lunar landing accuracy.
- **Technology demonstration:** The mission tests autonomous hazard detection and avoidance systems, crucial for future lunar exploration.
- **Scientific investigation:** SLIM carries instruments to analyse the lunar surface composition, measure radiation levels, and study the lunar mantle.
- **Future exploration preparation:** The mission paves the way for more advanced lunar probes and potentially manned missions in the future.

Components

- **Lander:** The main spacecraft weighing 590 kg, housing scientific instruments and the two Lunar Excursion Vehicles (LEVs- weighing 25 kg each).
- **Instruments:**
  - ✓ Compact Lunar Imager (CLI): Takes high-resolution images of the landing site.
  - ✓ Lunar Neutron Telescope (LNT): Measures radiation levels on the Moon.
  - ✓ Subsurface Lunar Mineralogy Extraction (SuMINER): Extracts and analyses lunar soil samples

Square Kilometer Array Observatory (SKAO)

India is set to get full member status (joined in January 2024) to the Square Kilometer Array (that will function as the world's largest radio telescope).



About SKAO (World's Most Powerful Radio Telescope Anticipated To Commence in 2027)

- **Location of Telescopes:** A vast network of thousands of radio antennas spread across vast distances in Australia (mid-frequency range) and South Africa (low frequency). (Not a single large telescope, but a collection of thousands of dish antennas operating as a single unit.)
- **Project Headquarters: United Kingdom (Not in Africa & Australia)**
- **Member countries:** Australia, Canada, China, France, Germany, **India**, Italy, New Zealand, South Africa, Spain, Sweden, Switzerland, The Netherlands and the UK.
- ** India's involvement in the project is facilitated by the Department of Atomic Energy (DAE) and the Department of Science and Technology (DST).

Telescopes Associated

1. **SKA-Mid:** Located in the vast plains of the Murchison Radio-astronomy Observatory in Western Australia, SKAO-Mid will focus on the mid-frequency range of the radio spectrum.
2. **SKA-Low:** Deep in the heart of the Karoo Desert in South Africa lies SKAO-Low, the low-frequency champion.

Significance of SKAO

- **Black Hole Unveiling:** It will tackle the enigmas of dark matter and dark energy, which together make up most of the universe but remain shrouded in obscurity.
- These advancements will spill over into other fields like computing, medicine, and engineering, potentially leading to groundbreaking discoveries in diverse areas.

India & SKAO

- Though none of the SKA facilities would be located in India, there are immense science and technology gains for the country by participating in the project as a full member (A full member status would provide India preferential access to the SKA facilities.).
- Pune's Giant Metre wave Radio Telescope, managed by the National Centre for Radio Astrophysics (NCRA) under the Tata Institute of Fundamental Research (TIFR), serves as the Indian research collaborator for the

SKA project.

- India's significant involvement in the SKA project lies in the creation and operation of the Telescope Manager component, often referred to as the "neural network" or the software responsible for the functionality of the telescope.
- In this regard, SKA offers opportunities similar to the LHC (Large Hadron Collider) or the ITER (International Thermonuclear Experimental Reactor), which too are located on foreign soil but have brought rich dividends to the Indian scientific community.

India & RADIO Astronomy

- Radio astronomy is something in which India already has highly developed capabilities.
- The Giant Meter wave Radio Telescope (GMRT) near Pune is one of the most advanced — and sought-after — facilities in the world, which has been producing remarkable scientific results.
- There are other similar facilities in Ooty, Nainital and Bengaluru.

Extra Mile: How Radio Telescopes are Different from Optical Telescope?

	Radio Telescopes	Optical Telescope
Wavelength of Observation	Operate in the radio frequency (part of the electromagnetic spectrum), with wavelengths ranging from millimeters to meters	Observe the visible light (part of the electromagnetic spectrum), which ranges from approximately 400 to 700 nanometers.
Detection Method	Unlike optical telescopes, radio telescopes use large parabolic dishes or arrays of antennas to collect and focus radio waves.	Use lenses or mirrors to collect and focus visible light.
Observation Limitations	Radio waves can penetrate dust and gas more effectively than visible light, allowing radio telescopes to observe objects that may be hidden from optical telescopes.	May face challenges in observing celestial objects obscured by dust or gas since visible light is affected by these materials.
Common Applications to Both Telescopes Used to study a variety of celestial phenomena, including pulsars, quasars, galaxies, and cosmic microwave background radiation.		
Specific Utility	Particularly valuable for investigating objects and processes that emit radio waves, providing insights not easily obtained with optical telescopes.	Provide detailed images and spectral information about the composition and temperature of these objects
Key Examples	Square Kilometer Array Observatory (SKAO), Atacama Large Millimeter Array (ALMA), Giant Microwave Radio Telescope (GMRT) etc.	Hubble Space Telescope (HST), European Southern Observatory's Very Large Telescope (VLT), Spitzer Space Telescope etc.

ISROs POEM

ISRO's space platform POEM-3 (PSLV Orbital Experimental Module-3) achieves all payload objectives, set to re-enter Earth.

All About POEM (PSLV Orbital Experimental Module)

What is POEM?

- It is a platform that will help perform in-orbit experiments using the final, and otherwise discarded, stage of ISRO's workhorse rocket, the Polar Satellite Launch Vehicle (PSLV).
- The PSLV is a four-stage rocket where the first three spent stages fall back into the ocean, and the final stage

(PS4) — after launching the satellite into orbit — ends up as space junk.

- However, in POEM mission, the spent final stage will be utilised as a "stabilised platform" to perform experiments.
  - ✓ **Example:** In PSLV-C53 mission (June 2022), POEM carried six payloads, including two from Indian space start-ups Digantara (for making the map of space radiations, debris, and orbits) and Dhruva (for full- stack satellite development, launch, deployment, operation and maintenance services) Space.
- **Another Purpose:** the last stage of the PSLV rocket is made to enter the Earth's atmosphere and burn up within few days. This will ensure that the mission leaves no debris. To cut down on space debris, ISRO has been taking steps such as lowering the orbit of defunct satellites and last stages of the rockets
  - ✓ **Example:** last stage of the PSLV rocket that carried XPoSat to space on New Year's Day is likely to enter the Earth's atmosphere and burn up within the next 75 days. Hence, PSLV-C58 XPoSat mission will be leaving zero debris in space.

How will ISRO keep POEM 'alive and stable' in orbit?

- POEM has a dedicated Navigation Guidance and Control (NGC) system for attitude stabilisation, which stands for controlling the orientation of any aerospace vehicle within permitted limits.
- The NGC will act as the platform's brain to stabilize it with specified accuracy.
- POEM will derive its power from solar panels mounted around the PS4 tank, and a Li-Ion battery. It will navigate using "four sun sensors, a magnetometer, gyros & NavIC".

Advantages & Future Potential of POEM

- **Increased access and Diverse Applications to space:** POEM offers a readily available platform for various research institutions and startups, democratizing access to space-based experimentation.
- **Short turnaround time:** Experiments can be deployed quickly compared to developing and launching dedicated satellites.
- **Wider participation from private companies and academic institutions:** Leading to a Development of new space technologies with diversified space sector in India.

Polymer Electrolyte Membrane Fuel Cell

ISRO has successfully tested a 100 W class Polymer Electrolyte Membrane Fuel Cell based Power System (FCPS) in its orbital platform, POEM-3.

About Fuel Cell

- A fuel cell is an electrochemical device that converts the chemical energy of a fuel directly into electrical energy. Unlike traditional combustion engines, fuel cells operate without burning the fuel, resulting in higher efficiency and lower emissions.

Basic Components of Fuel Cell

- **Anode:** The anode is the electrode where fuel (commonly hydrogen) is introduced. At the anode, a fuel undergoes electrochemical oxidation, breaking down into protons and electrons.
- **Cathode:** The cathode is the electrode where an oxidizing agent (typically oxygen from the air) is introduced. At the cathode, the oxidizing agent combines with electrons and protons, often forming water or other byproducts.
- **Electrolyte:** The electrolyte is a substance that allows ions (charged particles) to move between the anode and cathode while preventing the mixing of fuel and oxidizer. The type of electrolyte used varies among different types of fuel cells.

Real Life Examples of Fuel Cells

- Indian Railways is testing fuel cell-battery hybrid systems to power coaches and reduce diesel consumption.
- Kerala Startup Mission has deployed micro-PEM fuel cell systems that provide power for telecom towers

and weather stations in remote areas.

- DRDO is developing portable methanol-based fuel cells to charge military batteries and equipment in the field.

Types of Fuel Cells (Based on the types of electrolytes used)

1) Proton Exchange/Polymer Electrolyte Membrane Fuel Cell (PEMFC):

- Uses a water-based acidic polymer membrane as the electrolyte and porous carbon electrodes containing a platinum catalyst. It uses hydrogen as fuel and oxygen/air as oxidant.

2) Alkaline Fuel Cell (AFC):

- Also known as Bacon fuel cell, uses an alkaline solution like potassium hydroxide as the electrolyte and operates at 60-250°C.
- It is one of the most developed fuel cell technologies but is sensitive to CO2.

3) Solid Oxide Fuel Cell (SOFC):

- Employs a hard, non-porous ceramic compound as the electrolyte and operates at 500-1000°C.
- SOFCs offer high efficiency and can utilize a variety of fuels. However, high temperatures are a challenge.

Working & Advantages of PEMFC

- **Hydrogen and oxygen enter the fuel cell:** Hydrogen is supplied to the anode, while oxygen is fed to the cathode.
- **Electrochemical reaction takes place:** At the anode, a catalyst splits hydrogen molecules into protons and electrons. The protons pass through the proton-exchange membrane (PEM), a thin, electrolyte film that is impermeable to electrons. Simultaneously, oxygen molecules react with electrons at the cathode to form water.
- **Electricity is generated:** The flow of protons across the PEM creates a current, which is then harnessed to produce electricity (PEMFCs convert up to 80% of the chemical energy in hydrogen into electricity, significantly higher than internal combustion engines.)

Applications of PEMFC	Challenges to PEMFC
1) Transportation: Powering electric vehicles, such as cars, buses, and trucks. **2) Aerospace:** Propelling aircraft and drones. **3) Portable power:** Providing clean & efficient power for camping, emergency response, and remote locations.	1) Limited by the lack of a robust hydrogen infrastructure for production, storage, and distribution. 2) PEMFCs are still relatively expensive compared to traditional technologies.

Extra Mile: Soil-based Microbial Fuel Cells (MFCs- first created in 1911)

- This fuel cell generates power with the help of microbes in the soil and can potentially be used in green infrastructure and precision agriculture applications.
- MFCs mimic the natural process of decomposition, where microbes in the soil break down organic matter (like sugars, proteins, and fats) and release electrons.
- They have an anode, a cathode and electrolyte. But instead of using chemicals to generate electricity, they harvest electricity from bacteria that naturally give out electrons to nearby conductors. These electrons from anode to cathode to create an electric circuit.
- **Advantage:** MFCs utilize organic matter readily available in soil, making them a renewable and sustainable energy source.
- **Challenges:** Optimizing Microbial Activity: Understanding and influencing the specific microbial communities in soil for efficient electricity generation is an ongoing research area.

Deep Tech Policy

National Deep Tech Startup Policy (NDTSP) is Sent to Cabinet for Approval.

What is Deep Technology?

- It is a term used to describe a category of innovations based on significant scientific or engineering advances. These technologies often address complex challenges.
- Deep-tech startups and companies seek to provide answers to complex problems through technologies and processes that typically require lengthy R&D cycles.
- Fields of deep technology, such as Artificial Intelligence, advanced materials, blockchain, biotechnology, robotics, drones, photonics, and quantum computing, are rapidly transitioning from early-stage research to practical applications (commercialisation) in the market.

Characteristics

- **Complexity:** Deep tech aims to solve crucial problems, often in fields like healthcare (Gene editing therapies), energy, materials science, artificial intelligence, and space exploration
- **Intellectual Investment:** technologies involve overcoming substantial technical hurdles, requiring expertise in advanced science and engineering (Quantum computing, Robotics etc).
- **Technical Expertise:** These innovations require a high level of technical expertise, often from experts in fields such as physics, biology, chemistry, mathematics, and engineering.

National Deep Tech Startup Policy (NDTSP) 2023

The PM's Science, Technology & Innovation Advisory Council (PM-STIAC) recommended in 2022 the creation of a National Working Group to propose Deep Tech policy. In 2023, The Office of Principal Scientific Adviser to the Government of India is entrusted with the formulation of this policy.

- Acknowledging the key significance of deep technology in propelling innovation, economic growth, and societal development, the NDTSP lays the foundation for India's emerging Deep Tech Startup ecosystem.

PRITHviVIgyan (PRITHVI) Programme

Cabinet clears PRITHVI initiative for ease of research in earth sciences.

About Programme (Scheme of the Ministry of Earth Sciences (MoES) for the period 2021 - 2026)

Under PRITHVI initiative, earth system sciences will be seen as one unit, instead of separate verticals such as atmosphere, cryosphere, geosphere, ocean science. Hence, it encompasses following five ongoing sub- schemes of MoES):

1. Atmosphere & Climate Research-Modelling Observing Systems & Services (ACROSS): For Research and Development (R&D) of dynamical models and providing forecast services.
2. Ocean Services, Modelling Application, Resources and Technology (O-SMART): For technology development for oceanic applications, services (forecast and advisories), and R&D activities in the marine and coastal environment.
3. Polar Science and Cryosphere Research (PACER): Comprising the Antarctic program, Indian Arctic program, Southern Ocean program, and Cryosphere and Climate program.
4. Seismology and Geosciences (SAGE): Encompasses 6 activities including Seismological monitoring and microzonation, and Setting up a facility for geochronology.
5. Research, Education, Training and Outreach (REACHOUT): Incorporating R&D in Earth System Science (RDESS), developing Skilled manpower in Earth System Sciences, etc.

Significance of PRITHVI

- The scheme emphasizes upon long-term monitoring across the atmosphere, ocean, geosphere, cryosphere, and earth to track Earth System's vital signs and changes.
- Improve weather forecasting and disaster preparedness (for natural disasters like cyclones, floods, heat

waves, and earthquakes).

- Provide crucial data for climate change mitigation and adaptation strategies and ensure sustainable management of ocean resources and coastal zones.
- PRITHVI expands its exploration to encompass the Earth's three poles: the Arctic, Antarctic, and Himalayas, Enhance understanding of polar regions and their role in global climate system.

Zosurabalpin

Researchers have identified a new class of antibiotics with the potential to tackle a drug-resistant bacterium, Acinetobacter baumannii.

✓ Zosurabalpin was found to be effective against CRAB (carbapenem-resistant Acinetobacter baumannii)-induced pneumonia and sepsis in mouse models.

About

- An experimental antibiotic being developed by Roche and scientists from Harvard University
- Zosurabalpin has successfully completed Phase I clinical trials, showing promising safety and efficacy against CRAB in humans. Phase II trials are ongoing to further evaluate its effectiveness and dosage.
- Specifically designed to combat carbapenem-resistant Acinetobacter baumannii (CRAB), a multi-drug resistant bacteria posing a major threat in healthcare settings.
- Unlike traditional antibiotics that target bacterial growth or replication, *zosurabalpin disrupts a unique process for building the bacteria's outer membrane*, rendering it vulnerable and enabling other antibiotics to work effectively.

Benefits:

- If successful, zosurabalpin could become a crucial weapon in the fight against antibiotic resistance, offering a much-needed treatment option for CRAB infections.
- It also has the potential to be effective against other multi-drug resistant bacteria.

Tricholime

The Indian Institute of Spices Research (IISR) Kozhikode have successfully developed a new granular lime-based Trichoderma formulation, **'Tricholime'. It is developed by integrating Trichoderma**- *a fungal biocontrol agent used for controlling a variety of soil-borne pathogens* and **Lime into a single product**, making the application easier for the farmers.

About Tricholime

It combines two powerful tools for sustainable agriculture: Trichoderma – a beneficial fungus that acts as a biocontrol agent – and lime – which neutralizes soil acidity.

Functions:

1. **Soil pH correction:**Tricholime effectively neutralizes soil acidity, creating a more balanced environment for plants to thrive. Acidic soil can hinder nutrient availability and hamper plant growth.
2. **Biocontrol agent:** The Trichoderma fungus present in Tricholime acts as a natural enemy to several soil-borne pathogens that cause diseases in crops.
3. **Improved soil health:**Tricholime also promotes microbial activity in the soil, leading to better nutrient cycling and overall soil health

Benefits for farmers

- **Reduced reliance on chemical pesticides:** Tricholime offers a sustainable and eco-friendly alternative to chemical pesticides for managing soil-borne diseases
- **Improved crop yields:** By addressing soil acidity and protecting plants from diseases, Tricholime contributes to improved crop yields and quality.

- **Cost-effective solution:** Tricholime is a relatively cost-effective solution compared to chemical pesticides, making it beneficial for small and marginal farmers.
- **Easy application:** The granular formulation of Tricholime makes it easy to apply in the field, requiring minimal labor and equipment

Einstein Probe

China has recently launched an astronomical satellite named Einstein Probe, designed to observe unique transient phenomena in the universe that flicker like fireworks.

All About Einstein Probe (EP)

By Whom?	Chinese Academy of Sciences (CAS) & the European Space Agency (ESA).
Aim	To discover and study high-energy transients and variable objects in the X-ray band, and particularly focusing on phenomena like neutron star mergers and black hole activity

Instruments

- **Lotus-Shaped Structure:** Weighing approximately 1.45 tonnes and resembling a full-size SUV, the EP satellite boasts a lotus-shaped design in full bloom. It features 12 petals and two stamens.
- **12 Petals (WXT):** The 12 'petals' consist of wide-field X-ray telescopes (WXT), forming a space observatory capable of capturing extensive portions of the sky in one glance.
- **2 Stamens (FXT):** The two 'stamens' consist of follow-up X-ray telescopes (FXT), designed for in-depth observation and the discovery of transient celestial objects.

Advantages

1) Unlike traditional X-ray telescopes, the distinctive design of the Einstein Probe enables it to simultaneously observe nearly one-twelfth of the sky. This capability allows the identification of new sources as they emit X-rays, facilitating in-depth studies of known and new celestial phenomena over extended time frames.

2) It will identify light emissions from gamma-ray bursts, supernovae, flares from distant stars, and events within the Solar System, including emissions from comets.

ANEEL (Advanced Nuclear Energy for Enriched Life)

Clean Core Thorium Energy (a US-based company) developed a new type of nuclear fuel named Advanced Nuclear Energy for Enriched Life (ANEEL)

✓ ANEEL is named after India's scientist, Dr Anil Kakodkar (an Indian nuclear scientist who served as the Chairman of the Atomic Energy Commission of India from 2000 to 2009 and has made significant contributions to the development of India's pressurized heavy water reactors (PHWRs).)

What is ANEEL?

- It is a fuel that combines Thorium and High Assay Low Enriched Uranium (HALEU).
- ANEEL can be used in the existing Pressurized Heavy-Water Reactors (PHWRs), an indigenous reactor system that is the workhorse of India's nuclear fleet.
- According to the World Nuclear Association, most of the current reactors run on uranium fuel enriched up to 5 per cent Uranium-235. HALEU is Uranium enriched to more than 5 per cent but less than 20 per cent.

Implication of ANEEL with respect to India:

- India possesses the largest known reserves of thorium globally (estimated at 1.07 million tonnes, enough to last over a century. If India uses this Thorium, it can then produce enough green energy and easily turn net-zero by its target date of 2070.)
- ANEEL has the potential to enable the effective utilization of thorium in nuclear reactors.

Advantages	Challenges
1) Higher burn-up rate: ANEEL fuel can stay in a	**1) Technical challenges:** The fuel needs to be able to

reactor for much longer than traditional fuel, producing more energy from the same amount of material. **2) Reduced waste:** ANEEL fuel produces less radioactive waste than traditional fuel, making it a more environmentally friendly option.	withstand the high temperatures and pressures inside a reactor. **2) Regulatory hurdles:** ANEEL fuel needs to be approved by regulators before it can be used in commercial reactors. This is a complex process that could take several years.

Amaterasu

A cosmic ray 'Amaterasu' appears to have reached the earth from an empty part of the universe.

✓ Amaterasu is named after the sun goddess in Japanese mythology.

About Amaterasu

- It is the second highest-energy cosmic ray ever detected (surpassed only by the "Oh My God" particle discovered in 1991), with energy levels of 240 exa-electron-volts (EeV).
- This is about 40 million times higher than the energy produced by the Large Hadron Collider (the most powerful accelerator ever built).
- The origin of the Amaterasu event remains unknown, likely originating from outside our galaxy due to its immense energy.
- Discovered in May 2021 (sending an air shower of muons, gluons and other secondary particles into 23 of the more than 500 detectors of the Telescope Array) by Dr. Toshihiro Fujii, an astronomer at Osaka Metropolitan University, while analyzing data from the Telescope Array Project in Utah.
  - ✓ Cosmic rays are high-energy charged particles (move through space at nearly the speed of light), primarily protons and atomic nuclei, that originate from various sources in the universe. They constantly bombard Earth's atmosphere from outer space. (The term "cosmic rays" is a bit misleading, as they are not rays but rather fast-moving particles).
  - ✓ Utah's flat terrain and dark skies make it the Northern Hemisphere hub for UHECR-spying detectors. The Telescope Array started operations in 2008 and consists of 507 large table-sized surface detectors that cover a combined 700 square kilometres. The Array has observed more than 30 ultra-high-energy cosmic rays, but none were bigger than the Amaterasu particle.
  - ✓ In the Southern Hemisphere the Pierre Auger Observatory—a network of 1,600 detectors spanning 3,000 km2 of remote Argentina—complements the Telescope Array's Northern Hemisphere vantage point.

Significance of Amaterasu Finding

- Provides valuable insights into the properties and sources of ultra-high-energy cosmic rays (UHECRs). UHECRs challenge our understanding of fundamental physics as they exceed the energy limits predicted by current theories.
  - ✓ Each UHECR usually arrives alone and without warning, like a celestial speeding bullet, crashing into our atmosphere and exploding in a cascade of secondary particles that spark imperceptibly brief flashes of light as they rain down to the surface.
- The discovery of Amaterasu has boosted research and development efforts in cosmic ray detection and analysis. New experiments and telescopes are being designed to capture more UHECR events and unravel their secrets.

Thylakoid Membranes

Researchers at the University of Liège, Belgium have identified thylakoid microstructures in fossil cells that are 1.75 billion years old.

About Thylakoid membranes

- **Location:** Thylakoids are little pouches located in the chloroplasts of plants.
- **Function:** They store chlorophyll, the substance in plant that reacts to sunlight and triggers photosynthesis. Overall, thylakoid membranes are critical components of the photosynthetic machinery in plant cells, allowing them to harness light energy and convert it into chemical energy to fuel various cellular processes.

About Discovery & it's Analysis (Great Oxidation Event)

- They are found in ancient, light-sensitive bacteria called cyanobacteria (blue-green algae). The latter, multiplied in the oceans billions of years ago, and are believed to be responsible for the vast stores of oxygen that are found in the atmosphere & thus, a precursor to life as we know it.
- The recent discovery also raises the possibility of discovering thylakoids in even older cyanobacterial microfossils, and to test the hypothesis that the emergence of thylakoids may have played a major role in the so called 'Great Oxygenation' of the early Earth around 2.4 billion years ago.
- Around that time, the oxygen released by cyanobacteria, filled the ocean and made its waters oxygen rich. Over time, this oxygen started escaping into the atmosphere, where it reacted with methane. As more oxygen escaped, methane was eventually displaced, and oxygen became a major component of the atmosphere. This event is known as the Great Oxidation Event.

Samavesha Project

I-STEM (Indian Science, Technology, and Engineering facilities Map) is launching the Samavesha project at IISc. Bengaluru

About Project

- **Increased research collaboration:** The project aims to improve accessibility to facilities and labs by connecting researchers and industries with institutions that have the required equipment.
- **Reduced costs & Improved efficiency:** This can help to save capital expenditure for researchers, industries, and startups, and prevent duplication of resources at the national level.

About I-STEM (National Web Portal)

- I-STEM, an initiative of the Office of Principal Scientific Advisor, Government of India. It is planning to conduct around 50 Samavesha across India in 2024.
- It is developed with the concept "One Nation One Portal" for the scientific community, aimed at "Linking Researchers and Resources".

India's First Graphene Centre

The India's first Graphene Centre named India Innovation Centre for Graphene (IICG) has been established in Kerala (At Makers Village, Kochi).

✓ Centre of Excellence (CoE) in Intelligent Internet of Things (IIoT) Sensors also established in Kerala.

About India Innovation Centre for Graphene (IICG)

- **Focus:** R&D, incubation, innovation, skilling, capacity building, testing, and certification related to graphene and 2D materials.
- **Partners:**MeitY (Ministry of Electronics and Information Technology), Government of Kerala, and Tata Steel Limited.

{For more information on Graphene, kindly refer The Recitals -August 2023}

Scrub Typhus

The study published in journal Scientific Reports noted that Monthly scrub typhus cases increased by 7.6 per cent for every per cent jump in mean relative humidity.

✓ Every millimetre increase in rainfall could lead to a 0.5 to 0.7 per cent rise in monthly scrub typhus cases, according to a new study conducted in Tamil Nadu's Vellore.

About Scrub Typhus (Bush Typhus Or Tsutsugamushi Disease)

- **Cause:** It is an infectious disease caused by the bacteria Orientia tsutsugamushi.
- **Transmission:** It is transmitted to humans through the bites of infected larval mites (chiggers) belonging to the Trombiculidae family. These mites typically live in scrub vegetation and feed on rodents, which serve as the natural reservoir for the bacteria.
- **Symptoms:** Fever and chills (the first signs), Swollen lymph nodes, pneumonia, meningitis, and encephalitis etc.
- **Treatment:** Antibiotic therapy, typically doxycycline or tetracycline, is highly effective if started early and supportive care, for symptoms like fever and pain.
- **Prevention**: Wearing protective clothing and insect repellent when spending time in areas with scrub vegetation where chiggers are present, Reducing rodent populations etc.

Scrub Typhus and India

- Endemic in many parts of India particularly in hilly & forested areas in the north, east & south.
- Several outbreaks have been reported in different regions of the country.
- The National Centre for Disease Control (NCDC) has resources and guidelines for healthcare professionals and the public regarding Scrub Typhus in India.

Havisure: Hepatitis A vaccine

Hyderabad-based Indian Immunological Ltd (IIL)M launched India's first indigenously developed Hepatitis A vaccine 'Havisure'.

✓ IIL (a leading biopharmaceutical company in India) is a wholly owned subsidiary of National Dairy Development Board (NDDB).

About Vaccine (prequalified by the World Health Organization (WHO))

- It was launched in 2014 and is a two-dose vaccine recommended for children with routine immunizations starting at 12 months of age. While Hevisure is marketed primarily for children, it can also be administered to adults who are at risk of Hepatitis A infection due to travel, occupation, or other factors.
- Schedule: Two doses, at least 6 months apart.
- It is included in India's Universal Immunization Programme (UIP).

Basics of Hepatitis A (A contagious liver infection caused by the Hepatitis A virus (HAV))

- **Transmission:** Primarily through ingestion of contaminated food or water
- **Common symptoms:** Fatigue, Loss of appetite, Nausea and vomiting, Abdominal pain, Dark urine, Jaundice (yellowing of the skin and eyes)

Mpemba Effect

Scientists remain fascinated by the interplay of physical mechanisms observed in the Mpemba Effect

What is it? (One of the challenges with it is its inconsistency; it doesn't occur in all situations.)

- The Mpemba effect is the observation that hot water can sometimes freeze faster than cold water under certain conditions.
- The effect has been observed in a variety of liquids, including water, ethanol, and glycerine.
  - ✓ The effect is most likely to occur when the hot water is cooled quickly.
  - ✓ The effect is most likely to be observed in small samples of water.
- The Mpemba effect has some potential applications. For example, it could be used to speed up the freezing of food or other liquids.

Theories and Explanations regarding Mpemba Effect (None Has Been Universally Accepted.)

- **Evaporation:** Hot water evaporates more quickly than cold water, leading to a faster loss of water content. This evaporation might contribute to a more rapid cooling of the remaining water.
- **Convection Currents:** Hot water may promote better convection currents within the liquid, facilitating more efficient heat transfer and faster cooling.
- **Supercooling:** Cold water may undergo supercooling, remaining in a liquid state below its normal freezing point.
- **Ice Crystal Formation:** Hot water might form smaller ice crystals compared to cold water. The formation of smaller crystals could allow the hot water to freeze faster.

Asteroid 2024 BM

Asteroid 2024 BM recently passed by the earth at a distance of approximately 3 million km.

About Asteroid (Not classified as a Potentially Hazardous Object (PHO) due to its size and orbit)

- Approximately 150 feet (45 meters) in diameter, roughly the size of an airplane.
- It is travelling at 21,511 kilometers per hour (13,369 miles per hour), which is similar to the speed of Intercontinental Ballistic Missiles (ICBMs).
- According to NASA's Center for Near-Earth Object Studies (CNEOS), Asteroid 2024 BM poses no threat to Earth. Its predicted path will not take it close enough to our planet to pose any danger.

Cold Dark Matter

Scientists have found a new approach to explore cold dark matter (CDM). Cold dark matter is a hypothetical type of matter that constitutes about 27% of the universe's total mass but remains undetected directly.

Properties Of CDM:

- It moves slowly compared to the speed of light, with velocities much lower than those observed in ordinary matter.
- Weak-interaction: It barely interacts with electromagnetic radiation, hence its invisible to telescopes and other instruments that rely on light.
- Massive: Cold dark matter contributes significantly to the universe's gravitational pull, influencing the formation and evolution of galaxies and large-scale structures.

Evidence:

- **Gravitational effects:** The observed rotation curves of galaxies, gravitational lensing, and large-scale structure formation all point towards the existence of much more matter than what we can see directly (ordinary matter). This unseen matter is believed to be cold dark matter.
- **Cosmic microwave background:** The tiny temperature fluctuations in the Cosmic Microwave Background (CMB) radiation provide hints about the distribution and properties of cold dark matter in the early universe.

CULTURE

Pran Pratishtha

- The Pran Pratishtha of the idol at Ayodhya's Ram temple was performed on 22nd January.
- The basic meaning of pranpratishtha is **giving life to the idol**. It is the act which **transforms an idol into a deity**, giving it the capacity to accept prayers and grant boons.
- For this, the statue has to go through various stages. The process of the pranpratishtha is mentioned in the **Vedas** and elaborated upon in various Puranas, such as **Matsya Puran, Vaman Puran, Narad Puran**, etc.
- Pran pratishtha can be held for both **chalitmoorti**(household idols that can be moved about) and **sthirmoorti** (temple idols that once fixed remain so).
- When the mantra is chanted for pranpratishtha, the prayer is both for the idol to come to life and to be prepared to give up that life.
- This is because, in case that particular statue is damaged, another will have to be installed in its place, and life should flow from the damaged idol to the new one.
- Two divine objects — the **Shaligram** found in the Gandki river, and the **Narmadeshwar**, a shivling found in the Narmada river, **do not need pranpratishtha**, as they carry divinity within them.

Shobha Yatra

- One of the first stages of pranpratishtha is a shobha yatra, or a procession of the idol, taken out in the neighbourhood of the temple.
- During this yatra, as the idol is greeted and cheered on by onlookers, some of their devotion is transferred into it, instilling it with devotion and divine strength. It is, thus, the devotee who begins the process of turning a statue into God.

Adhivaas

- To ready the idol for the pranpratishtha, multiple adhivaas are conducted, in which the idol is **submerged in various materials**. For one night, the idol is kept in water, which is called jalãdhivãs. Then it is submerged in grain, which is called dhãnyãdhivãs
- When an idol is crafted, it sustains various injuries from the craftsman's tools. These **adhivaas are meant to heal up all such injuries**.
- The process serves another purpose - if the idol has a defect, or if the stone is not of a great quality, it will be found out when it is submerged in various materials.

Ritual Bath

- After this, the idol is given a ritual bath with various materials, depending on the scale of the ceremony.
- This ritual can involve 108 different types of materials, such as panchamrut, water containing the essence of various fragrant flowers and leaves, water which has been poured over the horns of a cow, and sugar cane juice.

Opening Of The Eyes

- The most important ceremony is that of **netronmeelan**, or the opening of the deity's eyes.
- Several mantras are chanted, asking for various Gods to come and animate its various parts — Soorya the eyes, Vayu the ears, Chandra the mind, etc.
- Then comes, the final step, the opening of the statue's eyes. This ceremony involves putting anjan, somewhat like kohl, around the deity's eyes, with a gold needle.
- This process is carried out from behind, as it is believed that if one looks into God's eyes the moment they open, their brilliance can be too much to take.
- Once the anjan has been applied and the deity's eyes have opened, it has come to life and can now receive devotees.

Madhika Language

- In a remote colony of **Kookanam (Kerala)**, the **Chakaliya community** is dealing with the possible loss of its unique language **Madhika**.
- There are only two fluent speakers at the moment, and it is feared that after them the language will be lost to the world.
- Despite sounding similar to Kannada, Madhika can still confuse listeners due to its diverse influences. It is a **blend of Telugu, Tulu, Kannada, and Malayalam**.
- However, it is largely influenced by **Havyaka Kannada**, an old form of Kannada.
- The language's neglect is associated to the **social stigma with the Chakaliya community**, who were considered untouchables.
- For a significant period, the community faced dehumanising treatment. Hence, many of its young and educated people want to dissociate themselves with the past and do not even want to be identified by their language and prefer to speak Malayalam.

Chakaliya Community

- The community in northern Malabar migrated from the hilly regions of Karnataka centuries ago.
- The community was nomadic and worshippers of Thiruvenkatramana and Mariamma.
- Initially recognised as Scheduled Tribe, it was later included in the Scheduled Caste category in Kerala.

Language Preservation Efforts

- The Union Government has initiated a Scheme called **Scheme for Protection and Preservation of Endangered Languages of India** (SPPEL).
- Under this Scheme, the **Central Institute of Indian Languages (CIIL), Mysore** works on protection, preservation and documentation of all the mother tongues/languages of India spoken by less than 10,000 people which are called endangered languages.
- The University Grants Commission (UGC) has also initiated two schemes for protection of endangered languages.
- They are '**Funding Support to the State Universities for Study and Research in Indigenous and Endangered languages in India**' and '**Establishment of Centres for Endangered Languages in Central Universities**'.

Rajon ki Baoli

- Rajon ki Baoli was recently in the news. A Baoli is a step well and a reservoir in which water can be stored.
- **Rajon ki Baoli** also referred as *Rajon ki Bain* is a famous stepwell in Mehrauli Archaeological Park in Delhi.
- It was built in 1516, by Daulat Khan, an administrator under Ibrahim Lodi. The name Rajon comes from the masons who were living at the baoli and using its water. They were called Raj Mistri, hence the baoli is called 'Rajon Ki Baoli'.
- The enclosure of Rajon Ki Baoli includes a mosque and a tomb and has an **Indo-Islamic design**.
- The structure has four levels and is described as s U-shaped Baoli with its natural springs as source water.

Kalaram Temple

- The Prime Minister recently visited the Kalaram temple on the banks of the Godavari in the Panchavati area of the city.
- The temple was built in 1792 with the efforts of **Sardar Rangarao Odhekar**. The Kalaram temple derives its name from a black statue of the Lord — Kala Ram translates literally to **Black Ram**.
- It is said that Sardar Odhekar dreamt of a black-coloured statue of Lord Ram in the Godavari, and recovered the statues from the river and built the temple. The place where statues were found was named Ramkund.

- The main temple has 14 steps, which represent the 14 years of Ram's exile. It has 84 pillars, which represents the cycle of 84 lakh species that one has to complete in order to be born as a human.
- The temple is also the site of a landmark agitation led by **Babasaheb Ambedkar** and the Marathi teacher and social activist **Pandurang Sadashiv Sane**, known as **Sane Guruji demanding temple entry rights for Dalits in 1930**.

Significance of Panchavati

- The name Panchavati comes from the existence of five banyan trees in the area.
- A number of important events described in the epic story of Lord Ram took place here.
- Ram, along with Sita and Lakshman, spent the first few years of their 14-year exile in **Dandakaranya,** the dense forest in central India of which **Panchavati** was a part.
- It is from the Panchavati region that Ravan, the king of Lanka, abducted Sita.

Classical Language

- West Bengal Chief Minister Mamata Banerjee has asked the Central Government to officially list **Bangla as a classical language**.
- In her letter, the CM mentioned that the language's origin can be traced back to the 3rd-4th BCE and is the seventh most spoken language in the world.
- Currently, six languages enjoy the 'Classical' status: Tamil (declared in 2004), Sanskrit (2005), Kannada (2008), Telugu (2008), Malayalam (2013), and Odia (2014).

Classification of Classical Languages

- The guidelines for declaring a language as Classical are:
    - High antiquity of its early texts/recorded history over a period of 1500-2000 years.
    - A body of ancient literature/texts, which is considered a valuable heritage by generations of speakers.
    - A literary tradition that is original and not borrowed from another speech community.
    - The classical language and literature being distinct from modern, there may also be a discontinuity between the classical language and its later forms or its offshoots.

Benefits Provided to a Classical Language

- Two major annual international awards for scholars of eminence in classical Indian languages.
- A Centre of Excellence for studies in Classical Languages is set up.
- The University Grants Commission (UGC) is requested to create, to start with atleast in the Central Universities, a certain number of Professional Chairs for the Classical Languages.
- The UGC also awards research projects for promoting these languages.

AWARDS/ PERSONALITIES IN NEWS

Indian of the Year Award

- **Team ISRO** was recently presented the Indian of the Year Award in the **Outstanding Achievement** category.
- The award recognised the remarkable contribution made by ISRO in pushing the boundaries of Space exploration.
- ISRO had a stellar 2023. The space agency's lunar craft Chandrayaan-3 successfully made a soft-landing on the moon, as India made history by becoming the first to land near the lunar south pole.
- In another extraordinary feat, ISRO's Aditya-L1 successfully reached its destination Lagrange Point 1, from where it will be able to continuously watch the sun.
- Actor **Shahrukh Khan** won the Indian of the Year of the award for 2023.
- Currently in its 13th edition, **CNN-News18** Indian of the Year is an initiative that recognises Indians who have made significant contributions to various fields and have had a profound impact on the nation.

Jeevan Raksha Padak Series of Awards

- President has approved the conferment of Jeevan Raksha Padak Series of Awards-2023 on 31 persons.
- This series of awards are given to a person for meritorious act of human nature in **saving the life of a person**.
- The award is given in three categories: **Sarvottam Jeevan Raksha Padak; Uttam Jeevan Raksha Padak; and Jeevan Raksha Padak**.
- Persons of all walks of life are eligible for these awards. The award **can also be conferred posthumously**.
- The decoration of the award (medal, **certificate signed by the Union Home Minister**and lump sum monetary allowance) will be presented to the awardees in due course.

Kottai Ameer Communal Harmony Award

- The Tamil Nadu government recently awarded the **Kottai Ameer Communal Harmony Award, 2024**, to Alt News co-founder **Mohammed Zubair** during the Republic Day celebrations in Chennai.
- Mr. Zubair was honoured for a series of fact-checking articles he published on the rumours that migrant workers from north India were being attacked by natives in Tamil Nadu.
- The award was instituted in the **year 2000**. It is presented to a **person belonging to Tamil Nadu** for outstanding services to **promote communal harmony**.
- The award includes a medal, certificate and cash award of Rs. 25,000.

Rohan Bopanna

- India's Rohan Bopanna recently became the **oldest tennis player to achieve the world No. 1 ranking in men's doubles**. He achieved this feat during the recently held **Australian Open** that he won with his partner Mathew Ebden.
- Bopanna broke the record of **Rajeev Ram of USA**, who was the oldest player to be ranked world no. 1 when he had achieved the top ranking in 2022 at the age of 38 for the first time in his career.
- Bopanna is the 4th Indian after **Leander Paes, Mahesh Bhupathi and Sania Mirza** to take the world number one rank in doubles. **All four** are also the **only Indian Grand Slam winners**.
- Bopanna is also the **oldest player to claim a men's doubles title at a Masters 1000 event**. He achieved the feat last year at the age of 43 with Ebden, winning the prestigious Indian Wells tournament.

Rashtriya Khel Protsahan Puruskar

- The **Ministry of Youth Affairs & Sports** recently announced the **Rashtriya Khel ProtsahanPuruskar (RKPP) 2023**.
- Later, awardees received their awards from the **President of India** at Rashtrapati Bhavan.
- Introduced in 2009, RKPP is given to corporate entities (both in private and public sector), Sports Control Boards, NGOs, including sports bodies at the State and National level, who have played a visible **role in the area of sports promotion and development**.
- **Odisha Mining Corporate Limited** was awarded in the category of '**Encouragement to sports through Corporate Social Responsibility**'.
- **Jain Deemed to be University, Bengaluru** was awarded in the category of '**Identification and nurturing of budding/young talent**'.
- The **six core awards** which constitute India's National Sports Awards are the Major Dhyan Chand Khel Ratna Award or simply the Khel Ratna; the Arjuna Award; the Dronacharya Award; the Major Dhyan Chand Award; the Maulana Abul Kalam Azad Trophy; and the Rashtriya Khel ProtsahanPuruskar.

Karpoori Thakur

- The Centre has announced that it would award the Bharat Ratna posthumously to Karpoori Thakur, former chief minister of Bihar. This is also the birth centenary year of Thakur.
- Thakur was born in village Pitaunjhia (now known as Karpoori Gram), in the **Samastipur district of Bihar**, on January 24, 1924, into the Nai Samaj (barber society).
- Thakur was a freedom fighter and was jailed during the Quit India movement in 1942.
- Known as **Jannayak, or People's Leader**, he is seen as the architect of the social justice plank in Indian politics.
- He was also **part of the anti-Emergency movement**, along with another great socialist leader, Jayaprakash Narayan.
- He was voted in as an MLA in 1952. He remained an MLA till his death in 1988, except when he became an MP in 1977 & when he lost an Assembly election in 1984.
- He went on to **serve twice as Chief Minister of Bihar** — first between December 1970 and June 1971 as part of the Bharatiya Kranti Dal and later between December 1977 and April 1979 from the Janata Party.

Major policy decisions

- Thakur is recognized in Bihar for implementing a **complete ban on alcohol in 1970**.
- He also **removed English as a compulsory subject** for the matriculation examinations.
- He also implemented the **layered reservation system**. In 1970, the Bihar government appointed the **Mungeri Lal Commission**, which in its 1976 report named 128 "backward" communities, 94 of which were identified as "most backward".
- The Janata Party government of Thakur implemented the recommendations of the Commission.
- The '**Karpoori Thakur Formula**' provided 26% reservation, of which OBCs got a 12% share, the economically backward classes among the OBCs got 8%, women got 3%, and the poor from the "upper castes" got 3%.
- This was much before the central government came up with the EWS quota, and demands of layered reservation gained momentum amid caste census demands.
- This reclassification was also seen as a percussor of the Mandal Commission report that recommended 27% reservations for Other Backward Classes, implemented in the 1990s.
- In the short term, however, the 'Karpoori Thakur Formula' cost him dearly. His government fell, and he witnessed major opposition from upper castes.

Bharat Ratna

- Instituted in 1954, Bharat Ratna is the **highest civilian award** of the country.
- Any person without distinction of race, occupation, position or sex is eligible.
- It is awarded in recognition of **exceptional service/performance of the highest order in any field of human endeavour**.
- The award was originally limited to achievements in the arts, literature, science, and public services, but the government expanded the criteria to include "any field of human endeavour" in 2011.
- R**ecommendations** for the award are **made by the Prime Minister** himself to the President.
- The number of annual awards is restricted to a **maximum of three** in a particular year.
- The recipient receives a Sanad (certificate) signed by the President and a **peepul lead-shaped medallion**. The Award **does not carry any monetary grant**.
- Though usually conferred on India-born citizens, the Bharat Ratna has been awarded to one naturalized citizen – **Mother Teresa**, and to two non-Indians: **Abdul Ghaffar Khan** (born in British India and later citizen of Pakistan) and **Nelson Mandela**.
- The **first recipients** of the award in 1954 were:
    - The last Governor-General of the Dominion of India and the former Chief Minister of Tamil Nadu – **C. Rajagopalachari**;
    - Second President and the first Vice President of India – **Sarvepalli Radhakrishnan**;
    - Nobel Prize Laureate and Physicist **C. V. Raman**.

Best FIFA Football Awards 2023

- The Best FIFA Awards 2023 were recently awarded in London.
- **Lionel Messi** won the **best men's player** award for the second successive year.
- **Spain's Aitana Bonmati** was the winner for the **women's best player** award.
- It rewards standout candidates in 9 categories, **irrespective of championship or nationality**, for their respective achievements during the designated qualifying period.
- The awards ceremony is an attempt to revive the FIFA World Player Gala, which was presented throughout 1991-2009.
- Best FIFA Football Awards was first held in 2017, honouring achievements from year 2016.

FIFA

- **Founded in 1904**, FIFA or The **Fédération internationale de football association** is the international governing body of football.
- **Headquartered in Zurich, Switzerland**, its membership comprises 211 national associations.
- FIFA is a member of the **International Football Association Board (IFAB)**, that is responsible for setting the laws of the game.
- FIFA has the responsibility to apply and enforce the rules across all FIFA competitions.