

MONTHLY

EPIC!

*Supplementary reading material for MGP and Current Affairs classes of
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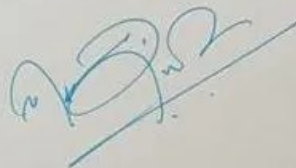
I enrolled myself in the Forum Mains Guidance Program + for GS and Essay test series. The answer writing practice and written feedback from Forum alongwith 'Best answers' and topper's copies provided helped me improve my answers and get a high score in my General Studies papers.

Ayush sir's regular articles were also fun and encouraging reads - I thank the ForumIAS team for their guidance during my two year association with them.

Shruti Sharma
AIR 1, CSE 2021

forumIAS has been an integral part of my upsc journey, right from my very first attempt. The prelims and mains test series have helped me a lot and I have referred to them in all my three attempts. One on one session with Ayush sir for interview ~~was~~ was beneficial too. Always enjoy reading his articles on the forumIAS blog.

with Best wishes,



Utkarsh Dahiya
AIR 5, CSE 2021

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Focus Article

The Issue of Judicial Appointments

News: The mechanism of appointments to Higher Judiciary has become an issue of contention between the Government and the Supreme Court.

What is the current mechanism of appointments to the Supreme Court? – (1) The appointment of the Judges are made by the President of India on recommendation of **Collegium of 5 senior-most Judges** of the Supreme Court. The Collegium is **headed by the Chief Justice of India**; (2) The Collegium is responsible for the appointment of Judges to the Supreme Court, High Courts and transfer of the Judges of High Courts; (3) The Government can **return the recommendations** of the Collegium for **reconsideration**. However, if the recommendations are **reiterated, the Government must accept them**.

What are the concerns associated with the Collegium System? – (1) **Transparency:** There is no **official procedure for selection or any written manual for functioning of the Collegium**. The parameters considered for selection (or rejection) are not public; (2) **Accountability:** The selections of Judges by Judges is considered undemocratic. Judges are not accountable to the people or other organ of the State (Legislature or Executive). It can add an element of arbitrariness in functioning; (3) **Criticism:** Several retired Judges have criticized the working of the Collegium, especially the lack of transparency. Several controversial appointments have been made despite objections by the member-Judges of the Collegium; (4) **Constitutional Status:** The Collegium is **not prescribed in the Constitution**. Article 124 mentions consultation, which the **SC interpreted as 'concurrence'** in Second Judges Case (1993). During the hearing against the NJAC, the then SC Bar President had argued that the **Constituent Assembly** had considered a proposal for making **Judges' appointment 'in concurrence'** with the CJI but had **rejected it**; (5) **No Checks:** There are no checks on the process. Nor has there been any review regarding the effectiveness of the process. Critics of the system argue the phenomena of **'Uncle Judges'** wherein near relatives, kith and kin of sitting Judges are appointed to the higher judiciary leading to **nepotism**. **Law Commission** in its **230th**

Report (2012) had recommended that that the Judges, whose kith and kin are practicing in a High Court, should not be appointed in the same High Court; (6) **No Global Equivalent:** India is perhaps the only country where Judges appoint other Judges without involvement of any other organ of the State. (Refer EPIC March 2022 for Reducing Pendency of Cases by Procedural Reforms).

Constitutional Provisions regarding Judicial Appointments and the Evolution of the Collegium System



- **Article 124(2):** The Judges of the Supreme Court are appointed by the President. She **should consult such a number of the Judges of the Supreme Court** and of the High Courts in the States as she may deem necessary for the purpose.
- **Article 217:** The Judge of a High Court shall be appointed by the President **in consultation with** the Chief Justice of India and the Governor of the State. The Chief Justice of the High Court should also be consulted except in case of his/her own appointment.
- **First Judges Case (1981):** The SC said that **consultation under Article 124 doesn't mean concurrence**. The President is not bound by CJI's advice.
- **Second Judges Case (1993):** The SC **overruled its previous decision** and said **CJI's advice is binding**. The CJI is required to formulate its advice based on a collegium of judges consisting of CJI and two senior-most SC judges.
- **Third Judges Case (1998):** The SC expanded the collegium to a **five-member body** to include the CJI and the four senior-most judges of the court after the CJI.

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What was the National Judicial Appointments Commission? – (1) The Parliament had passed the **99th Constitutional Amendment Act, 2014** and the **National Judicial Appointments Act, 2014** that proposed to create a National Judicial Appointments Commission (NJAC). NJAC was **supposed to be an independent Commission to replace the collegium system** to appoint Judges to the higher Judiciary; (2) The Commission would have consisted of 6 members: (a) The **Chief Justice of India** as the ex-officio Chairperson; (b) Two

senior-most Supreme Court Judges as ex-officio members; **(c)** The Union Minister of Law and Justice as ex-officio member; **(d)** Two **eminent persons from civil society** (to be nominated by a committee consisting of the Chief Justice of India, Prime Minister of India and the Leader of Opposition in the Lok Sabha; one of the eminent persons to be nominated from SC/ST/OBC/minorities or women); **(3)** The NJAC Act prescribed the procedure to be followed by the Commission to appoint judges. The Act empowered any 2 members of the NJAC to veto a recommendation if they did not agree with it; **(4)** In 2015, the Supreme Court had declared the Amendment Act and the NJAC Act as **unconstitutional**, as it impinged on the **independence of the Judiciary** and undermined the **basic structure of the Constitution**.

Infirmities in the 99th Constitutional Amendment Act and the NJAC Act



- The two 'Eminent Persons' to be part of the NJAC **need not have any expertise in Law** or related to functioning of the Courts.
- Certain terms were left **unexplained or ambiguous** e.g., **Section 5(1) of the NJAC Act** required the NJAC to recommend the senior-most judge of the Supreme Court as the Chief Justice of India "**if he is considered fit to hold the office**". The criteria of 'fitness' was not prescribed.
- The **veto power** by any two members could have **resulted in overriding of the Judicial opinion**.
- The **Chief Justice and two senior-most judges of every High Court** had to nominate persons to the NJAC for **appointment as High Court Judges**. Simultaneously, the **NJAC could also nominate persons** for appointment as High Court Judges. This could have **resulted in conflict** if the two set of nominees were different.
- The **NJAC had the power to frame regulations** laying down the criteria of suitability, and the procedure of appointing judges of the SC and the HCs. The **Parliament had the power to nullify these regulations**, thus giving **over-riding powers to the Legislature over Judiciary**.

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What are the benefits of Collegium System? – (1) Checks Interference of the Executive: The system isolates Judiciary from the influence of Executive and Legislature. It ensures independence of the Judiciary. The interference of the Executive manifested during Emergency when several settled conventions were disrupted like appointment of senior-most Judge as the Chief Justice; **(2) Executive as Main Litigant:** The Government is the main litigant in Courts accounting for ~50% of the cases. Prominence to the Executive in appointments may impact impartiality of the Judiciary in adjudication; **(3) Expertise:** Executive may lack the expertise regarding requirements of a Judge. The Judiciary may be the best 'judge' in this regard; **(4) Safeguarding the Constitution:** Excessive Government control over Judiciary will make the Judges vulnerable to external influence. Judicial Independence is absolutely essential to safeguard the Constitution and underlying principles like Right to Life, Right to Privacy etc. (Refer EPIC July 2022 for Reforms in Higher Judiciary: Provisions Related to Services of Judges).

What should be done going ahead? – (1) Revive NJAC: Many judicial experts, including former Judges contend that NJAC system can be a better alternative than the Collegium system, provided the infirmities in the NJAC Act are rectified. In this context, the NJAC can be revived. All stakeholders like Judiciary, Legislature, Bar Associations should be consulted before finalization; **(2) Ensure Smooth Functioning:** Till a new system is established, the Government should adhere to the recommendations of the Collegium and make the appointments in a prompt manner. Delay in appointments and needless friction should be avoided; **(3) Finalize MoP:** The Government and Judiciary should cooperate to finalize the Memorandum of Procedure (MoP) regarding judicial appointments. The MoP should have clear guidelines like transparency, eligibility criteria, mechanism for complaints against candidates etc.; **(4) Bring Transparency:** The Judiciary should bring more transparency in the process of appointments. Collegium must disclose the reasons for selection and rejection of a candidate; **(5) All India Judicial Services (AIJS):** Several experts have argued for establishment of All India Judicial Services (AIJS) to improve the quality of judges in the lower Judiciary. This should be consulted and implemented post consensus among all stakeholders. The system of appointments should be improved expeditiously. **Judicial vacancy is one of the major reasons for judicial pendency.** All organs of the State should cooperate with each other with right citizen-centric spirit to ensure smooth functioning. (Refer EPIC June 2022 for Judicial Accountability in India).

Functioning of the Election Commission

News: The Supreme Court is hearing several petitions seeking functional independence for Election Commissioners. The petitions have asked for creation of an independent Collegium or Selection Committee for the process of appointment of Election Commissioners.

What are the challenges associated with the functioning of the Election Commission? – (1) **Selection Procedure:** The Chief Election Commissioner (CEC) and other Election Commissioners (ECs) are appointed by the President on recommendations of the Union Government. This raises questions regarding impartiality of the officials. One of the EC can also be elevated to CEC. This makes them susceptible to influence by the Government; (2) **Security of Tenure:** The CEC enjoys a secure tenure like a Judge of the Supreme Court. However, the other two ECs can be removed by the President on the recommendation of the CEC; (3) **Post Retirement Jobs:** The Constitution has not debarred the retiring CEC/ECs from any further appointment by the Government. The loophole can be exploited to compromise the independence of the members; (4) **Limited powers:** The Commission has no power to derecognize a political party or control the extent of party expenditure. The Model Code of Conduct (MCC) is not legally enforceable; (5) The Commission has been unable to check the criminalization of politics and the role of money in elections.

Functions of the Election Commission

- The Election Commission is a **permanent and independent body** established by the **Constitution of India** to ensure **free and fair elections** in the country.
- **Article 324** of the Constitution provides that the power of superintendence, direction, and control of elections shall be vested in the Election Commission.
- The functions of Election Commission include:
 - It is responsible for **conducting elections** to the Parliament, State Legislatures, the Offices of President and the Vice-President of India.
 - It prepares and periodically **update electoral rolls** and to register all eligible voters.
 - It **recognises Political Parties** and grants them election symbols.
 - It issues a **Model Code of Conduct** and keeps an eye on the election expenditure of candidates.
 - It sets **limits on election campaign expenditure** per candidate and monitors the same.
 - It **advises the President/Governor** on matters relating to the disqualifications of the Members of Parliament/State Legislative Assembly.

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What can be done to improve the functioning of the Commission? – (1)

The Parliament should **debate the provisions** regarding the appointment of the CEC/ECs. The **Second Administrative Reforms Commission** had recommended **appointment by a Collegium** comprising the Prime Minister, Speaker of the Lok Sabha, the Leader of Opposition in the Lok Sabha

(LoP), the Law Minister, and the Deputy Chairperson of the Rajya Sabha. Similar recommendations were given by the **Law Commission (255th Report)**, **Dinesh Goswami Committee** and the **National Commission to Review the Working of the Constitution**; (2) The Government should expeditiously consider the 50 recommendations sent by the EC. These include: (a) Rules on decriminalizing politics; (b) Transparency in party funding; (c) Checking paid news; (d) Empowering the EC to countermand an election in cases of bribery, etc.; (3) There must be a sufficient **cooling-off period** for CEC/ECs post-retirement; (4) The **expenditure of EC should be charged** upon the Consolidated Fund of India similar to other constitutional bodies such as the UPSC.

Supreme Court's Observations regarding Election Commissioners

During the hearings of the petitions, the SC made several observations regarding functioning of the Election Commissioners:

- The tenures of Chief Election Commissioners (CECs) have 'slid down' from over 8 years in the 1950s to just about a few hundred days after 2004.
- Successive governments have picked Officials they knew **would never get close to the full term of 6 years** prescribed under the **Election Commission Act, 1991**. (*Section 4 of the 1991 Act says the term of a CEC and Election Commissioners is 6 years or till the age of 65 years, whichever is earlier*).
- The Government has **reduced the scope of candidates** to just **bureaucrats**.

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General Studies Paper I

1. Rights of Sexual Minorities in India (LGBTQ+ Rights)

News: Petitions have been filed in the Supreme Court to allow homosexual couples to solemnize marriage under the Special Marriage Act, 1954.

What are the various types of sexual orientation? – (1) Sexual minorities are groups of people whose sexual orientation, gender identity, or sexual characteristics are different from the presumed majority of the population (heterosexual); **(2)** Earlier ‘Gay’ was the broad term used to refer to sexual minorities but the terminology has been expanded to Lesbian, Gay, Bisexual, Trans, Queer, Intersex among others (LGBTQI+); **(3)** The distinctions are based on the differences in the construct of gender, sex and sexuality.

Gender Identities

- **Lesbian:** A woman who has a significant attraction to members of the same gender.
- **Gay:** A person who has a significant attraction to members of the same gender. Typically associated with men.
- **Bisexual:** The potential to be attracted to people of more than one gender (not necessarily at the same time or to same degree).
- **Transgender:** Umbrella term for those whose gender expression or identity is not congruent with the sex assigned at birth and/or whose gender is not validated by the dominant culture.
- **Queer:** Slang used by many who reject gender and sexual binaries.
- **Intersex:** A general term used for a variety of bodies in which a person is born with reproductive or sexual anatomy that does not fit into the sex binary.
- **Asexual:** Umbrella term for those who tend not to have a sexual desire towards others;
- **Non-Binary:** Generally used as an umbrella for various gender non-conforming identities, and is most often used by those who do not strictly identify as “male” and “female”.
- **Cisgender:** Umbrella term for those whose gender expression and gender identity are congruent with the sex assigned to them at birth, and whose gender is validated by the dominant culture.
- **Biological Sex:** Category assigned at birth based on a variety of physical and biological characteristics and anatomy.
- **Gender Identity:** The internal perception of one’s gender, and how they label themselves, based on how much they align or don’t align with what they understand their options for gender to be. Common identity labels include man, woman, genderqueer, trans and more. Gender identity is sometimes confused with biological sex, or sex assigned at birth.
- **Sexual Identity:** The way in which one understands one self in regard to one’s sexuality.

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What are the challenges faced by the Sexual Minorities? – (1) Inequality and Violence: Members of the LGBT community are more vulnerable to intolerance, discrimination, harassment, and violence because of their sexual orientation. In India, the ‘Hijra’ community members are subjected to regular violence; **(2) Lack of Social Acceptance:** Sexual minorities fail to find acceptance and are often disowned by their families. Young people coming out as gay or lesbian are often **pressurized to get married** to ‘cure’ them. They are also forced to undergo **Conversion Therapy** to change their orientation (*Refer EPIC October 2022 for Ban on Conversion Therapy*); **(3) Health Issues:** Rejection and isolation can lead to **mental health issues** including stress, low self-esteem. This can lead to alcoholism and drug abuse. Lack of knowledge and access to healthcare often exposes them to greater risk of sexually transmitted diseases like AIDS e.g., the Centre for Disease Control and Prevention (CDC, US) estimated that gay and bisexual men made up an estimated 2% of the U.S. population in 2013 but 55% of all PLWH (People Living With HIV/AIDS) in the US; **(4) Political Under-Representation:** Due to their low proportion, Sexual minorities feature low on the priority list of political parties. They do not get opportunity to contest elections and have no political representation. This leads to absence of their perspective in legislation e.g., the **Assisted Reproductive Technology (Regulation) Act, 2021** allows only heterosexual couples to use ARTs. Similarly Rights of Sexual Minorities are not covered under **Maternity Benefits Act, 2017**.

What are the Constitutional and Legal Safeguards for the Sexual Minorities? – There are several safeguards:

(A) Constitutional Safeguards

(1) The Preamble: The Preamble to the Constitution of India provides for Justice (social, economic, and political) and equality of status; **(2) Fundamental Rights: Article 14** (Right to Equality) provides for equal status before the law and an equal protection of the laws; **(3) Article 15** and **16** (Right against Discrimination

and Equality of Opportunity) prohibit discrimination against any citizen on certain enumerated grounds, include 'sex'. Both the Articles prohibit all varieties of gender bias and gender-based discrimination; (4) **Article 21** provides for Rights to Life and Personal Liberty; (5) **Article 23** provides for Right against Exploitation and prohibits various inhuman acts like human trafficking and beggary.

Judgments Related to Rights of the Sexual Minorities (LGBTQI+)



- **Naz Foundation Govt. v. NCT of Delhi (2009)**: The High Court of Delhi held that Section 377 of IPC (carnal intercourse against the order of nature) imposed an unreasonable restriction over two adults engaging in consensual intercourse in private. it was in direct violation of Articles 14, 15, 19 and 21 of the Constitution of India.
- **Suresh Kumar Koushal vs Naz Foundation (2013)**: The SC overturned the Delhi HC Judgment and re-criminalised homosexuality. The LGBTQ+ persons constitute a 'minuscule minority' and therefore **did not deserve constitutional protection**. The SC held that Section 377 was not unconstitutional.
- **National Legal Services Authority v. Union of India (2014)**: The SC legally recognised non-binary gender identities and declared transgender people the 'third gender'. The Rights granted by Articles 14, 15, 16, 19(1) (a) and 21 are equally applicable to them. It gave them the **right to self-identification** (as male, female or third gender). The SC referred to the international human rights treaties and **Yogyakarta Principles** to recognise transgender persons' human rights.

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(B) Legal Safeguards

(1) The **Transgender Persons (Protection of Rights) Act, 2019** prohibits any person or organisation from discriminating against transgenders in matters of employment, recruitment, promotion and other related issues; (2) The **Citizenship Act, 1955** provides for the acquisition and determination of Indian Citizenship. It doesn't, expressly or impliedly, require a determinate sex or gender identity as a pre-condition for acquiring citizenship. For someone to be a voter (elector), the person needs to be a citizen of India. Transgenders persons can also enrol as electors; (3) The **Registration of Births and Deaths Act, 1969** does not mention anything about 'sex'/'gender' of a person to be registered in case of birth or death. The Act is **gender neutral**; (4) The **Immoral Traffic Prevention Act (ITPA), 1956** (amended in 1986) is the principal instrument which prevents the trafficking of women and children into prostitution. With the Amendment of 1986, the scope and ambit of the Act became applicable to both male and female sex workers and also to those whose **gender identity was indeterminable**; (5) The **UGC Anti-Ragging Regulations (2009)** binds both public and private universities to take cognizance of complaints of homosexual assaults. In 2016, UGC had also recognised gender identity and sexual orientation as the grounds for ragging and discrimination.

Judgments Related to Rights of the Sexual Minorities (LGBTQI+)



- **K.S. Puttaswamy v Union of India (2017)**: The SC noted that **sexual orientation is an essential attribute of privacy**. Discrimination based on sexual orientation is deeply offensive to the dignity and self worth of the individual.
- **Navtej Singh Johar V. Union of India (2018)**: The SC **overruled the Suresh Kumar Koushal Judgment (2013)** and held Section 377 as unconstitutional. **Discrimination on the basis of sexual orientation violated the right to equality**. Criminalising consensual sex between adults in private **violated the Right to Privacy**. Sexual orientation is an **intrinsic aspect of self-identity** and that rejecting it would **violate the Right to Life**. Fundamental rights cannot be rejected on the grounds that they only affect a small percentage of the population.
- **Arun Kumar vs Inspector General of Registration (2019)**: The Madras HC recognized a marriage solemnized between a male and a transwoman. The HC stated that transgender persons had the **right to decide their self-identified gender**, (*NALSA v Union of India (2014)*). Under the Hindu Marriage Act, 1955 the definition of marriage only includes men and women. The Judgement **expands the category of women to include transgender people** to identify as women to be brides as well.

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What more should be done to protect Rights of Sexual Minorities? – (1) Recognition of Fundamental Rights:

LGBTQ rights should be recognised as part of human rights. Non Recognition of same-sex marriages, restrictions on adoption, guardianship, surrogacy, IVF, not having LGBT+ inclusive schools, colleges and workplaces are violative of Article 14, 15, 19, 21; (2) **Government and Legislative Initiatives**: The Government should take concrete steps to eliminate the stigma, discrimination and abuse surrounding the

PT BOX

Yogyakarta Principles

The Yogyakarta Principles (2006) address a broad range of human rights standards and their application to issues of sexual orientation and gender identity. The principles were developed by a panel of human rights experts in the domain of gender and sexuality.

LGBTQIA+ community, including amending existing laws discriminatory to sexual minorities (marriage, adoption etc.). Efforts should be directed to make **gender-neutral harassment laws**; **(3) Anti-discrimination Policies**: Both the public and private sector must frame anti-discrimination policies and undertake positive measures to eliminate prejudiced stereotypes rooted in homophobia; **(4) Education and Sensitization**: General public must be educated about the LGBTQ Rights. Efforts must be directed to train school and university staff to provide them with the necessary skills and knowledge to encounter abuse.

The sexual minorities have faced discrimination for long. Judicial interventions have progressively expanded the rights of sexual minorities. However, in the long term there is a need of sensitization and bring in a change in the social attitudes. Unless the social change happens, the judicial and legislative measures may remain ineffective.

2. Effectiveness of Women Leadership

News: The Representation of Women in position of leadership leads to several effective outcomes.

How effective was Women Leadership in management of COVID-19? – **(1)** The nations headed by women leaders like Taiwan, Germany and New Zealand have managed the COVID-19 pandemic comparatively better; **(2)** A detailed study by researchers in the US has reported that States with Female Governors reported fewer COVID-19 deaths.

Although, it may not be right to make generalizations based on few observations, the studies show that the existing biases against women leadership as ineffective should be eliminated.

What has been impact of women representation in Panchayats? – Women tend to perform significantly better than men in implementing policies that promote the interests of women. Nobel laureate Esther Duflo undertook a study to test the effectiveness of female leadership in gram panchayats. The study concluded that gram *pradhans* invested more in **rural infrastructure** that served better the needs of their own gender e.g., women *pradhans* were more likely to invest in providing easy access to drinking water since the collection of drinking water is primarily the responsibility of women.

Political Participation of Women: International Conventions

- **Basic Human Right:** The Universal Declaration of Human Rights (1948) and the International Covenant on Civil and Political Rights (1966) declare **Political Participation as a basic human right**.
- **Eliminate Discrimination:** Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) adopted by the United Nations (UN) General Assembly in 1979.
 - Article 7 calls for the State parties to **take appropriate steps to eliminate discrimination against women** in the political sphere.
 - Women must have equal right to vote and be eligible to hold public office, participate in policy formulation and implementation.
- **Women Participation:** The 4th World Conference on Women (Beijing, 1995) considered 'Women in power and decision making' as one of the 12 critical areas in its **Platform of Action**.
- **30% Representation at Decision Making Level:** The UN Economic and Social Council (ECOSOC) endorsed a **30% target of women participation** at decision-making levels (1995).

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What are challenges to women representation in politics? – All Women citizens in India were allowed to vote after Independence. This is in contrast to 'mature democracies' of Europe and the US where the right was granted after prolonged movements. Yet women face several challenges; **(1)** The representation of women in Union and State governments is still low. Female members make up only about 10% of the total ministerial strength; **(2)** Women have poor representation in the Parliament and State Legislatures. Women constitute only 14% of the 17th Lok Sabha; **(3)** The **Inter-Parliamentary Union** has ranked India 143 out of 192 countries on women representation in legislature; **(4)** Attempts have also been made to extend quotas for women in the Lok Sabha and State Assemblies through a **Women's Reservation Bill**. However, political parties have failed to reach consensus on the issue. (Refer EPIC July 2022 for Gender Representation in the Parliament).

What is the way forward to increase women's representation in politics? – (1) The barriers to women's entry to politics and on women political effectiveness must be removed; (2) Emphasis should be on education and raising political awareness among women; (3) Political Parties should reach consensus on the issue of Women Reservation in Legislatures. They can consider alternative approaches like providing minimum 33% to women contestants in General and State Elections.

3. The Importance of Census

News: The decadal Census has been delayed due to COVID-19 pandemic.

What is Census? – (1) A census is the procedure of systematically acquiring, recording and calculating information about the members of a given population. The information includes several attributes like age, religion, gender, literacy etc. among others; (2) The first census was conducted in India in 1872; (3) The Census is conducted by the **Office of Registrar General** and **Census Commissioner of India** under the Ministry of Home Affairs; (4) The **Census Act** was **enacted in 1948** to provide a plan for conducting population census along with the duties and responsibilities of census officers.

What is the importance of the Census? – (1) **Essential for Governance:** The Census is essential for Governance as data are utilized for: (a) Proper provision of goods and services; (b) Ensuring a fair and just divisions of taxes and expenditure across regions and target groups; (2) **Population Characteristics:** Census provides essential insights about characteristics of population including literacy rate, gender ratio, rate of migration, urbanization etc. which are crucial for policy formulation e.g., Censuses of 1961 and 1971 highlighted the **sharp decline in the gender ratio in India**. It alerted how pre- and post-natal factors were reflecting the '**son bias**'; (3) **Comprehensive:** Census is much more comprehensive than other periodic surveys like on households, jobs and other parameters etc. Such surveys **can only complement the Census**, not replace it. Further, as such surveys are based on smaller sample, Census acts as a corrective benchmark on such surveys, estimates, and extrapolations. (Refer EPIC July 2022 for Issues Related to Population in India). In this context, the delay in census can have long term policy implications.

What should be done? – (1) The Government should **expedite the process of Census**. The Parliamentary Constituencies will be readjusted based on first census after 2026. The decadal census of 2021 can set the tone for the possible readjustments; (2) The Parliamentary Committee on Home Affairs has submitted its report on the Census Exercise. The Report recommended that the census should not merely be a data-oriented exercise. But it should also portray the **perspective of culture and society**, as was done before Independence. An expert group should be set up by the Registrar General of India (RGI) to examine the census pattern since its commencement and suggest measures to bring qualitative change in the census exercise; (3) The Government should **promote the use of technology in census**. The Government has already notified new methods of enumeration including '**self-enumeration**' by the respondents and electronic **submission of data**. The census enumerators will collect data digitally. The technology can be utilized for data analytics and faster release of data after enumeration.

General Studies Paper II

1. Inter-State Boundary Disputes

News: The Karnataka-Maharashtra Boundary Dispute has escalated with incidents of violence.

What is the Karnataka-Maharashtra Boundary Dispute? – (1) The dispute has its origins in the reorganisation of states along linguistic lines via the **State Reorganisation Act, 1956**; (2) Since its creation on May 1, 1960, Maharashtra has claimed that 865 villages, including Belagavi (then Belgaum), Carvar and Nipani, **should be merged into Maharashtra**. These regions have a significant Marathi-speaking population; (3) Karnataka has refused to part with its territory. In November 2022, all 40 gram panchayats of the Jath taluk in Sangli district of Maharashtra, **passed a resolution to join Karnataka**. The Government of Maharashtra has submitted a petition challenging certain clauses of the State Reorganisation Act of 1956.

What are the arguments of the two States?

(A) Arguments of Maharashtra: Maharashtra has invoked **Section 21 (2)(b)** of the **State Reorganisation Act**, submitting a petition to the Union Ministry of Home Affairs. The petition stated its objection to **Marathi-speaking areas being included in Karnataka**. It **filed a petition in the Supreme Court in 2004**, staking a claim over Belagavi. Maharashtra has referred to **Article 131 of the Constitution**, which says that the **Supreme Court has jurisdiction** in cases related to disputes between the Union Government and States

(B) Views of Karnataka: Karnataka has cited the demarcation done on linguistic lines as per the **State Reorganisation Act** and the **1967 Mahajan Commission Report**. From 2006, Karnataka started **holding the winter session of the Legislature in Belagavi**, constructing a Secretariat building on the lines of the **Vidhana Soudha** in Bengaluru to reassert its claim. Karnataka asserts that **only Parliament can decide the borders of States** (Article 3 of the Constitution).



What are the reasons for the Inter-State Boundary Disputes? – (1) **Linguistic Identities:** Many disputes have their roots in the reorganisation of States **on linguistic basis** in the 1950s. The language is now tied to the **State identity**; (2) **District Boundaries/Colonial Cartographies:**

Many State boundaries were based on district boundaries established by the British instead of village boundaries. Borders are associated with maps. If a map is not laid out in minute detail where the administrative border stands, it can lead to a disagreement. British demarcations **rarely recognise the socio-cultural liminality of borders**; (3) **Complex Topography:** The topography has also been a

Steps Taken to Resolve Karnataka-Maharashtra Boundary Dispute

- **Mahajan Commission:** The Union Government constituted the Mahajan Commission in 1966. The Commission recommended to merge 264 towns/villages of Karnataka with Maharashtra and 247 villages of Maharashtra with Karnataka. The Report was presented to the Parliament in 1970 but was not taken up for discussion.
- **The Setalvad Study Team on Centre-State Relationships:** It was part of the Administrative Reforms Commission. It strongly recommended establishment of an Interstate Council. It said, *"Inter-state disputes need to be settled quickly and impartially"*.
- **Union Government Affidavit:** In 2010, the Union Government in its affidavit had stated that the transfer of certain areas to then Mysore (now Karnataka) was **neither arbitrary nor wrong**. Both Parliament and the Union Government had considered all relevant factors while considering the State Reorganisation Bill, 1956, and the Bombay Reorganisation Bill, 1960.
- In 1960, a **4-member Committee** was formed by both States, but couldn't arrive at a consensus. CMs of both States have met several times to find an amicable solution but have failed to settle the dispute.
- In 2004, Maharashtra **challenged certain clauses of the State Reorganisation Act** in the Supreme Court.
- **Supreme Court:** The SC has observed that the issue should be handled via mutual dialogue.

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source of difficulty. In many locations, rivers, hills, and forests span the border between two States, and the boundary cannot be physically demarcated.

What are the implications of the Inter-State Border disputes? – (1) Politicization of Disputes: Inter-State Border Disputes become an avenue of political mobilization. Political parties exploit disputes for electoral benefits prolonging the disputes. It hampers efforts for peaceful settlement; **(2) Law and Order:** Political mobilization results in **violence among the communities** in border. Blockades, restrictions on free movement of goods from other States have economic implications; **(3) Neglect of Disputed Regions:** Uncertainty about the status of the disputed regions in future generally deters the State Governments from undertaking development activities in these regions. There is infrastructure deficit, lack of investments as well as neglect of basic facilities. This also leads to poor human development; **(4) Trust Deficit:** It leads to trust deficit between leaderships of the disputing States. It prevents cooperation and hampers the spirit of Cooperative Federalism.

Constitutional Provisions

The Constitution of India contemplates a variety of mechanisms for the settlement of Inter-State disputes.

- **Article 3:** The Parliament has the power to alter the border of any State.
- **Article 131:** It creates a judicial mechanism for dealing with Inter-State Disputes. The Supreme Court has **original Jurisdiction** to adjudicate any dispute between two and more States. The Jurisdiction is extremely wide and includes Inter-State Border Disputes.
- **Article 263:** In Article 263, there is provision for the formation of an **Inter-State Council**. The President can create an Inter-State Council for inquiring into and advising upon **disputes between States**.

However, there is **no explicit provision for boundary disputes** similar to Article 262 for settlement of water disputes.

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What should be the approach for settling Inter-State Border Disputes? – (1) Legal Settlement: The SC should take a more proactive approach in settling the Inter-State Disputes. The Karnataka-Maharashtra Border Dispute has been pending since 2004 (18 years). States should also abide by the Supreme Court Judgments; **(2) Inter-State Council:** The ISC has been **reconstituted** in May 2022. The Council should be enabled to play a more proactive role in Centre-State/Inter-state cooperation and dispute settlement. Settlement of all Inter-State Disputes (include water disputes) should be a mandate of the Council; **(3) Pragmatic Approach:** The State Governments/Political Parties also need to adopt a more pragmatic approach keeping national interest above all. Dispute Settlement requires a give-and-take approach, and States/Parties should be **ready to compromise** in peaceful settlement. Union Government should support the constructive efforts; **(4) Address Local Concerns:** All Stakeholders (Union Government, State Governments, Political Parties) should be mindful of the concerns of the local residents and should settle disputes taking into account their interests. (Refer EPIC April 2022 for Assam-Meghalaya Border Dispute). Political parties need to realize that parochial/narrow approach may lead to short-term benefits but **impacts national interests in the longer term**. It is best to settle disputes through a pragmatic approach.

2. Appointment of Ad-hoc Judges

News: The Supreme Court has remarked that the process suggested by the Union Government for appointment of ad-hoc Judges in the HCs is ‘very cumbersome’.

What is the case in the SC? – An NGO Lok Prahari had filed a plea in the Supreme Court **seeking invocation of Article 224A** for appointment of ad-hoc Judges in High Courts to **address the rising pendency of cases**. During the hearings, the SC observed that Article 224A has largely been a ‘**dormant provision**’ with only **3 recorded instances** of its invocation in 1972 (Madhya Pradesh HC), 1982 (Madras HC) and 2007 (Allahabad HC).

In 2021, the Supreme Court had laid down **certain guidelines for making appointment of ad hoc judges**. The Union Government had to prepare a **Memorandum of Procedure (MoP)**.

What are the concerns associated with the MoP prepared by the Union Government? - The MoP for appointing ad hoc judges to High Courts has nearly **20 service conditions** which include: **(1) A review of their performance every 6 months;** **(2) A report to be drawn out on the Judgments delivered;** **(3) A minimum 3 years' service as district judicial officer among other conditions.**

What is the SC's view on the MoP? - **(1)** The Supreme Court has suggested that the Government should **prepare a simpler MoP** as these judges are not being selected for the first time; **(2)** The Court also suggested that **some senior lawyers are willing to offer their services** as ad hoc judges as they are willing to serve on the bench for a limited period of 2-3 years but not commit to a longer tenure; **(3)** The Court also observed that a long and cumbersome procedure negates the purpose of appointing ad-hoc Judges. Besides the nominees may lose interest to serve due to delays.

PT BOX

Article 224A

The Chief Justice of a High Court (HC), with the previous consent of the President, can a request former HC Judge (of the same or differ HC) to sit and act as a Judge of the HC. Such a Judge shall have all the jurisdiction, powers, and privileges of a HC Judge. The emoluments shall be as determined by the Order of the President.

Supreme Court Guidelines for Appointment of Ad-hoc Judges

Appointment: The Chief Justice of a HC may initiate the process of recommending an **Ad-hoc Judge** if:

- The number of judges' vacancies is more than 20% of the sanctioned strength.
- Cases in a particular category are pending for over 5 years.
- More than 10% of pending cases are over five years old or
- The rate of disposal is lower than the institution of the cases.

Procedure

- The procedure laid down in the **Memorandum of Procedure (MoP)** shall be followed.
- Referral to Intelligence Bureau (IB) is not required as nominees are former Judges.
- A period of 3 months would be sufficient to complete the appointment process.
- The number of ad hoc Judges should be in the range of 2 to 5 in a High Court

Role of Ad-hoc Judges

- The ad-hoc judges can be assigned cases more than 5-years old.
- **A division bench** constituting of only ad-hoc judges can also hear old cases.
- Ad-hoc appointees may not perform any other legal work – advisory, arbitration, or as advocate.
- Ad-hoc appointments are not a substitute for regular vacancies.

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3. Representation of Women in the Judiciary

News: The SC has constituted an all-women bench to hear petitions involving matrimonial disputes and bail matters. This is only the 3rd occasion when an all-women bench has been constituted in the SC.

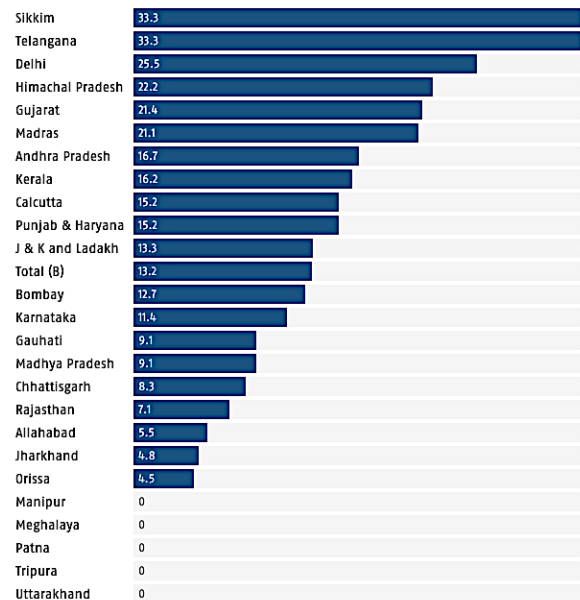
What is the current status of representation of Women in Judiciary? - **(1) Supreme Court:** There are **3 Women Judges** (10.7%) out of **28 Judges** (including the CJI) as of December 25, 2022. There have been only 11 women Judges in the history of the SC so far. 6 have been appointed since 2014 and 5 since 2018; **(2) High Courts:** Women Judges constitute only 13.2% of the Judges of all HCs. 5 HCs do not have a single women Judge. Another 7 HCs have < 10% Women Judges; **(3) Lower Judiciary:** Women Judges constitute ~35% of the Judges in the lower courts. The proportion varies from 19.5% in Gujarat to 70% in Goa; **(4) Advocates:** Out of 1.7 million advocates in the country only 15% are women. Only 2% elected representatives in the State Bar Councils are women.

What are the reasons for Low Representation of Women in Judiciary? - **(1) Judicial Rules:** Article 233 prescribes 7 years of practice as an advocate to be eligible for appointment as District Judge. The Judiciary has interpreted this as 7 years of continuous practice. Most States' Judicial rules dictate a minimum age of 35 years for entry as a district judge through direct recruitment. No one below the age of 55 years can be appointed as a judge in the Supreme Court. **Marriage and Family responsibilities** in this age group reduces the ability of women to compete for roles in the Judiciary; **(2) 'Leaking Pipeline' Syndrome:** This is often used as a metaphor for the way **women disappear as they move from lower to higher levels** e.g., 35% Judges in lower Judiciary to 10.7% in the SC. Family responsibilities, personal choices, long working hours and work-life conflict, working conditions, lack of access to employment opportunities, barriers to advancement, inadequate support from

family results in women frequently dropping out mid-career; (3) **Opaque Recruitment Process (Collegium System)**: Lower Judiciary has higher representation because of formal examination process which is transparent. Appointments to Higher Judiciary are done through Collegium system where eligibility and selection criteria are unknown. Critics of collegium system say appointment depends upon favourable evaluations and personal networks; (4) **Uncomfortable Environment**: The environment is hostile and sexist making it difficult for female litigators to grow as professionals. According to a Research Paper 'Structural and Discretionary Bias: Appointment of Women Judges in India' **13 Judges out of 19 interviewed acknowledged the gender bias that exists** in the appointment procedure of Judges to the SC and the HCs; (5) **Lack of Supportive Infrastructure**: There is lack of supportive provisions and infrastructure, from toilets to maternity leave etc. which leads to a high attrition rate amongst women lawyers. 22% of 6000

Five HCs did not have a single woman judge

(women, % of total working strength of judges in High Courts)



Courts do not have separate toilets for women. Women law graduates prefer to join corporate sector; (6) **Lack of Enabling Provisions**: While quotas for women have been implemented in the lower courts of many states, these policies are yet to be implemented in the Higher Judiciary. States like Assam, Rajasthan, Andhra Pradesh, Telangana, Odisha have these enabling provisions and have > 40% Women Judges.

What are the impacts of Low representation of Women in Judiciary? – (1) Prejudice in Judgements: Lack of gender perspective leads to **prejudiced Judgments** e.g., In August 2020, the Madhya Pradesh HC granted bail to a molester on the condition that he will get a *rakhi* tied by the victim. In June 2020, while granting bail to a rape accused, the Karnataka HC observed that the “*after-rape behaviour of the victim is not how a rape victim ‘ideally behaves’*”; (2) **Deficiencies in Legal Reasoning**: The ability of the legal system to understand and respond to different social circumstances and experiences is enriched by more judicial diversity. If there is not adequate women’s representation, the justice system will not be able to meet the needs of women and other underserved communities; (3) **Trust Deficit**: The lack of women representatives in courts give rise to questions about the Courts’ legitimacy as representatives of the societies they serve.

What should be the approach going ahead? – (1) Gender Sensitisation: Judges must see themselves in the shoes of the victim while dealing with cases of sexual violence. The CJI Justice Chandrachud recently remarked that Feminist approach should be imbibed while dealing with law. All India Bar Examination should contain questions or sections relating to gender sensitisation; (2) **Gender Bias Task Forces**: Similar to the Gender Bias Task Forces in the US, which look at how gender affects court systems, India needs a committee that works to make the judiciary more open to everyone (International Association of Women Judges, 2019); (3) **Mentorship System**: The **Geneva Forum on Women in the Judiciary** (2013) had suggested a mentorship system where senior women judges and lawyers can help and guide their younger peers. Regular, informal meetings of women judges and lawyers can be a great way for them to talk about the challenges they faced and figure out what kind of help they need. Such arrangements will prompt more young women to join the judiciary; (4) **Moulding the Rules**: The

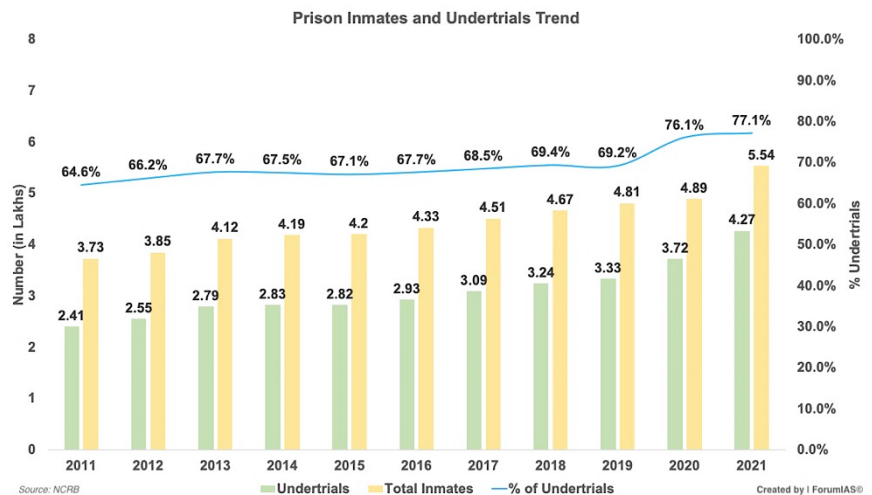
Representation of Women in Judiciary		
Court	Number of Women Judges	% of Women Judges
Supreme Court	3	11.11%
High Court	96	13.20%
Lower Subordinate Courts	6765	35.10%

Rules can be moulded so that more women take up or to **continue court practice even after marriage**. Lowering the minimum age requirement for the appointment of a district judge can stop female advocates from opting out of practice; **(5) Enabling Provisions:** The SC should gradually improve the ratio of women Judges in higher Judiciary. Presence of Women Judges can have a revolutionary impact on jurisprudence e.g., **Justice Sujata Manohar** (2nd Women Judge to be appointed to the SC) was responsible for **writing up the Vishakha guidelines**. The representation of women in the Judiciary has seen a gradual uptick. However, despite recent improvements, women continue to face bias in the judicial field. Both institutional mechanisms and social change are necessary to overcome the bias and make the Judiciary truly representative.

4. The Issue of Undertrials in India

News: On the occasion of National Law Day (Constitution Day, November 26), the President of India highlighted the plight of large number of undertrials in prisons.

What is the current status of Undertrials in India? – **(1)** According to the National Crime Record Bureau (NCRB), 427,165 prisoners out of total 554,034 (77%) **were undertrials** in 2021; **(2)** There has been a 14.9% increase from 371,848 undertrials in 2020; **(3)** In 2021, **25.2% of prisoners were illiterate** and 40.2% had not completed high school; **(4)** In 2019, **Scheduled Castes** made up 21% of under-trials and 21.7% of convicts (16.6% of the population (2011 Census)). **Tribals** made up 10.5% of all under-trials and 13.6% of all convicts (8.6% of the population (2011 Census)); **(5)** In 2011, 1% undertrials had been in prison for less than 3 months, while almost 22% had been imprisoned for a year or more. By 2021, **29.1% of undertrials had been in prison for more than a year**; **(6)** **Uttar Pradesh has highest number of undertrials** followed by Bihar, Maharashtra. The proportion of undertrials to the total number of prisoners was the highest in Bihar with 89.1%, followed by West Bengal (87.6%), and Odisha (87.3%); **(7) The prison occupancy rate is 130.2%**. Uttarakhand had the highest prison occupancy rate at 185%, followed by Uttar Pradesh (184.8%) and Sikkim (166.9%).



What safeguards are in place to protect the Undertrials?

(A) Constitutional Safeguards

(1) Article 21: “No person shall be deprived of his life or personal liberty except according to procedure established by law”; **(2) Article 22:** Undertrials have the right to consult and be defended by a legal practitioner of their choice (**State of Madhya Pradesh vs. Shobharam (1966)**); **(3) Article 39A:** The State is obligated to ensure that the functioning of the judicial system promotes justice and should provide free legal aid.

(B) Legal Safeguards

(1) Bail provisions have been defined in **Criminal Procedure Code (CrPC)** under sections 436-450. Section 436 and 437 of CrPC deal with provisions for bail in bailable and non-bailable offences respectively. The first schedule of CrPC defines the bailable and non-bailable offences; **(2) Section 436A** states that when a person has (except when accused for offences punishable with death) **undergone detention for a period extending up to one-half of the maximum period of imprisonment** specified for that offence, the person **shall be released by the**

Court on a personal bond; (3) **Section 167** states that undertrial prisoners have the **indefeasible right to be released on default bail** (even for non-bailable offences), when their judicial custody exceeds 90/60 days, but **no charge sheet has been filed** by the police.

(C) Supreme Court Judgments/Observations

(1) The Supreme Court has said that unless a crime is devious and attracts a punishment of 7 years or more, **no arrest should be made**; (2) The SC in **Bhim Singh v Union of India** has sought **effective implementation of Sec 436A**; (3) In **Rasiklal v Kishore (2009)**, the SC held **right to bail for bailable offences is an absolute and indefeasible right**. No discretion can be exercised in granting bail as under Section 436, bail is imperative and the person accused of an offence is bound to be released as soon as bail is furnished.

(D) International Safeguards

(1) The **Universal Declaration of Human Rights (1948)** recognises the presumption of innocence until proven guilty; (2) The **United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules)** clearly specify the standards of treatment with prisoners on trial.



What are the reasons for high number of Undertrials in India? – (1) **Low Capacity of Judicial System:** India has **21 judges per million population**, while the Law commission has recommended 50 per million. Lack of infrastructure results in large pendency of cases which now has reached over 4.5 crore cases (*Refer EPIC September 2021 for The Issue of Pendency of Cases in Judiciary*); (2) **Poor Economic and Education Levels:** A large number of under trials are poor, illiterate, belong to the marginalized communities and lack of financial resources. This leads to inability to get legal aid and pay the bail amount; (3) **Unnecessary Arrests and Issues of Bail System:** Law Commission (268th Report) has highlighted that **over 60% of arrests are unnecessary**. Poverty becomes the reason for incarceration of many prisoners, as they are unable to afford bail bonds or provide sureties (*Refer EPIC July 2022 for The Supreme Court's Observations Regarding Provisions of Bail*); (4) **Delay in Investigation:** Poor 'Police-Population' Ratio leads to delay in investigation and trial process. According to PRS, the sanctioned police strength was 181 police personnel per lakh persons in 2016, the **actual strength was 137**. The UN recommended standard is 222 police personnel per lakh persons.

What should be done to address the problem?

(A) Prisoners: (1) Undertrials should be housed in **open jails** (where they can move freely and earn a living) and allowed to regularly communicate with families to reduce the punitive character of incarceration; (2) Undertrials should also be compensated, upon release or acquittal (*Refer EPIC June 2022 for The Right to Compensation*); (3) Steps should be taken for their rehabilitation after release, by providing them with self-employment skills, educational and vocational training etc.

(B) Government: (1) A comprehensive **Bail Law** should be enacted to curb arbitrary arrests. There is a need to **revamp outdated prison laws** like the Prisons Act; (2) Police functions should be **separated into investigation and law and order duties**. Sufficient strength should be provided to complete investigations on time and avoid delays; (3) **Sensitisation programmes** and workshops should be introduced to counter prejudice and bias in police forces; (4) **Judicial vacancies** should be filled on an urgent basis.

(C) Judicial Processes: (1) Aid to Undertrials:

Access to free legal aid shall be provided to under trials through NALSA by increasing its capacity and reach; (2) **Automatic extension of remands** should be stopped; (3) Video conferencing between jails and courts should be encouraged; (4) The practice of lower judiciary to **grant adjournment of hearings on arbitrary grounds** should be curbed; (5) Computerization of Court procedures can help manage pendency.

Prolonged incarceration is a violation of basic rights. Several judgements have backed undertrials' rights to a speedy trial and legal representation. However, undertrial population continues to expand. Many experts are of the opinion that the issue can be addressed to a large extent by effective implementation of existing provisions. There is a need for greater political and judicial will to push through the procedural reforms.

Problems Faced by Undertrials

- **Prison Violence:** Prisoners are vulnerable to violence. Group violence and riots are common.
- **Criminalizing effect of Prison:** Absence of **scientific classification methods** to separate hardened criminals/convicts from young, first-time new criminals. **Intermingling** exposes circumstantial and young offenders to hardcore criminals.
- **Health Problems:** Overcrowding leads to shortage of adequate space leading to unhealthy conditions.
- **Mental Health Issues:** Long incarceration without conviction leads to **mental health issues**. There is lack of facilities to deal with mental health issues in prisons.
- **Drug Abuse:** Isolation inside prison leads to increased desperation to access banned substances. It also increases the danger of other prisoners being inducted into drug abuse.
- **Effect on the Families:** Many prisoners are sole breadwinners for their families. Incarceration leads to **loss of income**. Social stigmatization post release impact the **ability to get employment**.
- **Violation of Rights:** The '**Right to Speedy Trial**' was recognized by the SC in *Hussainara Khatoon vs. Home Secretary, State of Bihar (1979)*. Prolonged incarceration without bail violates the right. The '**Right to Bail**' is denied. Many prisoners are unable to pay exorbitantly high bail amount. '**Right to Effective Legal Aid**' is violated due to absence of adequate legal support.

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5. Steps to Improve Functioning of Quasi-Judicial Agencies

News: Many Quasi-Judicial Agencies, generally handled by revenue authorities and handling functions related to land, tenancy, excise etc., face several challenges in their functioning. These issues are a source of inconvenience to the general public.

What are the issues faced by Quasi-judicial Agencies? – (1) Work overload: These quasi-judicial agencies are staffed by revenue authorities who have several other functions such as law and order, coordination and other administrative functions. The officials have little time for court work; **(2) Understaffed:** Many of the agencies are understaffed; **(3) Lack of infrastructure:** These agencies lack basic infrastructure like computers. Many activities are undertaking manually like filing of cases; **(4) Lack of Adequate knowledge:** Many presiding officers lack proper knowledge of law and procedures; **(5) Harassment of citizens:** Due to the workload and understaffing, justice is delayed; **(6) Lack of adequate supervision:** These agencies are not properly supervised by the administrative and political leadership. This leads to inadequate data on the pendency of the cases which becomes the reason for understaffing.

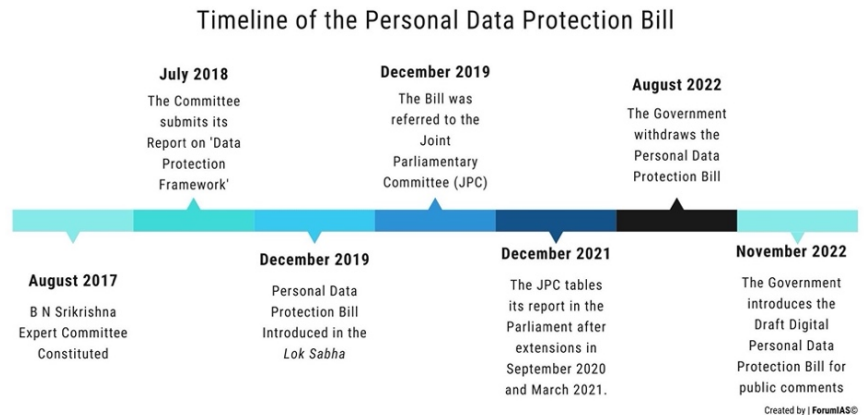
What steps can be taken to address the Issues? – (1) Detailed data on the functioning of these agencies must be **collected and analysed**. It should be laid before the concerned Legislature and the staff strength should be decided based on the analysis. It will ensure accountability; **(2)** An **electronic platform** should be established to handle all subsidiary work related to the administration of justice; **(3)** Annual **inspections** of the subordinate courts should be made mandatory by the superior authority. The training of presiding officers should be decided based on these inspections; **(4) Interdisciplinary research** on the functioning of these courts should be encouraged. This would identify the areas of improvement such as legal reforms or issue of clear guidelines; **(5)** Regular **training and orientation** of the adjudicating authorities should be taken up from time to time; **(6)** The **State Index of Performance** of these quasi-judicial courts should be published. It would help those states lacking in the index to focus on the improvement of these agencies; **(7)** Important decisions, guidelines and directions could be compiled and published on the portal of the apex adjudicating forum such as the Board of Revenue. These would be helpful for lower-level agencies; **(8)** Proper training should be given to the officials

handling judicial work in the revenue courts; (9) **Procedural reforms** such as minimising adjournments and other such reforms proposed by bodies like the Law Commission should be adopted by these adjudicating bodies.

6. Draft Digital Personal Data Protection Bill, 2022: Benefits and Concerns

News: The Government has released the draft of the Digital Personal Data Protection Bill, 2022 (DPDP Bill) for public comments. The Bill is being considered an improvement over the withdrawn Personal Data Protection Bill. Yet several concerns remain.

Why was the Personal Data Protection Bill, 2019 withdrawn? - The Government said that the 2019 Bill was deliberated in a great detail by the Joint Parliamentary Committee, which had proposed 81 amendments and 12 recommendations for a comprehensive legal framework for the digital ecosystem. The Government took the decision to work on a comprehensive legal framework and withdrew the Bill.



What are the positive aspects of the Digital Personal Data Protection Bill, 2022? – (1) **Data Protection Board of India:** The Board would be empowered to direct Data Fiduciaries to adopt urgent measures to respond to **Personal Data breaches**. It will have the same rank as a civil court. *Data Fiduciary is/are person(s) who determine(s) the purpose and means of processing of Personal Data (e.g., Social media platforms can be data fiduciaries);* (2) **Simplified Notice and Consent Requirements:** Data Fiduciaries are required to obtain consent from Data Principals prior to processing of their Personal Data. The consent must be sought through an **itemised notice** containing a description of the Personal Data being collected and **purpose of processing**. The request for consent must be in clear and plain language and available in the 22 (twenty two) languages listed in the Eighth Schedule. *Data Principal is the individual to whom the personal data relates to (e.g., Social media users can be Data Principals);* (3) **Introduction of 'Deemed Consent':** The Bill has introduced the concept of 'deemed consent'. It intends to enable processing of Personal Data without explicit consent where it is '**reasonably expected that the Data Principal would provide such Personal Data**'. Other conditions under deemed consent include purposes related to employment (including biometric information) and public interest such as debt recovery and prevention of fraud. This also simplifies consent requirement; (4) **Rights of Data Principals:** The Bill grants Data Principals rights in relation to their Personal Data, such as the **right of correction, right of erasure** and **right to be forgotten**. The Bill provides the **right to nominate any other individual to exercise the rights of the Data Principal** in the event of their death or incapacity; (5) **Clarity on Consent Managers:** The Bill clarifies that Consent Managers will be **interoperable platforms** registered with the Board.

Key Provisions of Personal Data Protection Bill, 2019 (Withdrawn)

- **Personal data definition:** Any information which renders an individual identifiable. Also, it defined data 'processing' as collection, manipulation, sharing or storage of data.
- **Territorial applicability:** The Bill included the processing of personal data by both government and private entities incorporated in India. It also covered the entities incorporated overseas if they systematically deal with data principals within the territory of India.
- **Grounds for data processing:** Data processing by fiduciaries was allowed if consent was provided by the individual.
- **Sensitive personal data:** It included passwords, financial, biometric and genetic data, caste, religious or political beliefs. The Bill specifies more stringent grounds for the processing of sensitive personal data, such as seeking explicit consent of an individual prior to processing.
- **Data Protection Authority:** The Bill provided for the establishment of a Data Protection Authority (DPA). The DPA would have been empowered to: (a) Draft specific regulations for all data fiduciaries across different sectors; (b) Supervise and monitor data fiduciaries.
- **Cross-border storage of data:** Every fiduciary shall keep a 'serving copy' of all personal data in a server located in India.
- **Transfer of data outside the country:** Personal data (except sensitive personal data which is 'critical') may be transferred outside India under certain circumstances.

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These platforms will enable individuals to manage, review and withdraw consent provided across Data Fiduciaries and platforms; **(6) Duties of Data Principals:** The Bill imposes certain duties on Data Principals, including the duty to **comply with the provisions of “all applicable laws”** among others; **(7) Significant Data Fiduciaries (SDF):** The Bill retains the concept of a ‘Significant Data Fiduciaries’ (SDFs) and allows the **Government to notify an SDF** based on, among other things, **the volume and sensitivity of Personal Data processed by it**, risk of harm to Data Principals, potential national impact and impact on public order; **(8) Compliances for SDFs:** The requirement to appoint **(a) A data protection officer based in India**, as the representative or point of contact for grievance redressal; **(b) An independent data auditor** to evaluate compliance; **(c) The obligation to undertake data protection impact assessment (DPIA) and periodic audits.** (*Refer EPIC August 2022 for Data Protection Framework in India*).

What are the concerns associated with the Draft Bill? – (1) Missing Rights for Data Principals: The Bill misses out on two main rights for Data Principals: **(a) Right of data portability:** It would have allowed the data principal to receive their personal data (that they had provided to the data fiduciary and the data generated by the fiduciary through processing) in a structured format. This would have eliminated the need to provide all their personal data again while switching the platforms and enhance competition between data fiduciaries to increase consumer welfare; **(b) Right Foregone:** It is the right to be forgotten. It would have allowed the data principal to ask the data fiduciary to stop the continuing disclosure of their personal data. The Bill subsumes this right under the **right to erasure**. This conflation between the general right to erasure with the right to be forgotten (specific to disclosure of personal data compromises) on the right to freedom of speech and expression of

other individuals; **(2) Narrow Focus:** **(a)** It is focussed on personal data and **excludes non-personal data**; **(b)** It eliminates the categorisation of personal data into sensitive and critical; **(3) Government Control:** The regulator is now a **Data Protection Board**, with its **role limited to enforcement and penalties**. The other aspects of implementing the law are left entirely up to the Union government (which it will do through rules) and not the specialised regulator. While the **Data Protection Authority** was earlier envisaged to be a **statutory authority** (under the 2019 Bill), the Data Protection Board is now a **Board set-up by the Union Government**. The Government will have a say in the composition of the board, terms of service, etc. This has diluted the regulation; **(4) Data Localisation:** The draft law does not require local storage of data. But it **does not allow free flows of data across borders** either. Businesses can **only transfer data to countries that are notified by the Government of India**. The whitelisting of regions (where data flow will be allowed) is not clear. Data Localization has been a contentious issue including in the ongoing FTA negotiations with the UK. Without the assessment criteria being defined in the law though, this could mean that whitelisting depends more on geopolitics than appropriate privacy safeguards; **(5) No Criminal Liability:** The Bill only prescribes monetary penalties (under Schedule 1) for breaches and non-compliances and limits such penalties to breaches/non-compliances that the **Data Protection Board determines to be ‘significant’**. The Bill has done away with criminal liabilities; **(6) Data of Children:** The Bill requires parental consent for age less than 18 years. Parental consent would be required every time they want to access the internet. Some experts have criticized this: **(a)** The Bill fails to recognize that consent of a child is different from that of an adolescent. It limits their evolving capacity; **(b)** It might hamper their access to the internet; **(c)** Requiring consent from parents would **hamper autonomous**

Challenges in Formulating Data Protection Law

- Balancing the **Rights of Data Principal** with the **compliances of Data Fiduciary**. Regulations shouldn't be so stringent to make data processing by Data Fiduciary impractical.
- Balancing the Right to Privacy of Data Principals with **reasonable exceptions**.
- Technology evolves fast. Data Protection Law shouldn't be unduly centred on providing solutions to contemporary concerns while **ignoring problems that may emerge in future**.
- Data Principals should be **able to readily exercise their rights and remedies** given their unequal bargaining power with respect to Data Fiduciaries.

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development of children since parents may not want them to be exposed to viewpoints contradictory to their own. Such restrictions are in violation of India's obligations under the **Convention on Rights of the Child**; (7) **Data Collection**: The Draft removes explicit reference to certain data protection principles such as **collection limitation**. Data fiduciary can **collect any personal data** consented to by the data principal. Data principals often **do not have the requisite awareness** about the kind of personal data that is relevant for a particular purpose (e.g., Photo Filter App has no requirement for device location or contacts yet many apps seek such details); (8) **Government Exemptions**: Government bodies can be **exempted from the application of the law** in the interests of India's sovereignty and integrity, security, foreign relations, public order and others e.g., there is no bar on how long government agencies can retain data. The earlier version of the Bill subjected government exemptions to a '**just, fair, reasonable and proportionate**' procedure, which is missing from the latest draft.

What steps can be taken going ahead? – (1) The Government should consider **providing statutory status** to the Data Protection Board; (2) More provisions should be **covered through the Legislation** rather than leaving it to the rule-making by the Government (Executive); (3) A plan should be put in place to **compensate individuals** in the event of a data breach; (4) The right to privacy must be respected which, critics argue, seems to be lacking in this case. Rights such as **data portability** and the right to opt out of data collection must be included; (5) The principles of the **General Data Protection Regulation (GDPR)** of the EU can be incorporated in the Bill.

Rights of Users under the GDPR

- **The right to be informed**: Data subjects must be informed about the collection and use of their personal data when the data is obtained.
- **The right to access their data**: A data subject can request a copy of their personal data via a data subject request. Data controllers must explain the means of collection, what's being processed, and with whom it is shared.
- **The right of rectification**: If a data subject's data is inaccurate or incomplete, they have the right to ask to rectify it.
- **The right of erasure**: Data subjects have the right to request the erasure of personal data related to them on certain grounds within 30 days.
- **The right to restrict processing**: Data subjects have the right to request the restriction or suppression of their personal data (though it can still be stored).
- **The right to data portability**: Data subjects can have their data transferred from one electronic system to another at any time safely and securely without disrupting its usability.
- **The right to object**: Data subjects can object to how their information is used for marketing, sales, or non-service-related purposes. The right to object does not apply where legal or official authority is carried out, a task is carried out for public interest, or when the organization needs to process data to provide customized services.

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Several experts have lauded the improvements in the Draft Digital Personal Data Protection Bill, 2022 over the earlier versions. Yet several concerns remain. The Government should try to incorporate the comments of the civil society/public on the Bill before it is introduced in the Parliament.

7. Functioning of the POCSO Act

News: The POCSO Act came into force in November 2012. Vidhi Centre for Legal Policy has undertaken an analysis of the working of the Act and has suggested measures to improve its effectiveness.

What is the background to the enactment of the POCSO Act? – (1) Despite strong Constitutional (Articles 15(3), 21A, 24, 45 etc.) and International Legal Frameworks towards strengthening child rights, **India's legal system lacked any dedicated provision against child sexual abuse** for long; (2) The criminal law (Indian Penal Code, IPC) failed to recognise sexual assault and exploitation of children as separate offences. The offences under IPC, intended to criminalise sexual offences against women, **fell short of addressing the complexities, social and mental impact of sexual exploitation of children** like instances of sexual assault and molestation of young boys; (3) Several **Reports of the Law Commission** (42nd, 156th, 172nd) dealt with the issue. The 172nd Report recommended a major amendments to address the offence of child sexual abuse and exploitation including amendment to IPC Section 375 to make it gender neutral, increase penalty in case of sexual offences committed by near relatives and persons in position of trust, penalising touching any part of the body of an adolescent with sexual intent etc.; (4) In 2007, a Report '**The Study of Child Abuse**' published by the Ministry of Women and Child Development (based on ~12,500 children) found that **50.8% of children surveyed reported having faced one or more form of**

sexual abuse, indicating seriousness of the issue; **(5) The POCSO Act** was passed by the Parliament in June 2012 and was enforced on the occasion of Children's Day on November 14, 2012.

What are the salient provisions of the POCSO Act? – (1) Confidentiality of the victim's identity:

The Act lays out the protocol for the media and imposes the obligation to conceal the name of the child victim, until the Special Court gives its permission for the information to be made public; **(2) Gender-neutral Provisions:** The Act doesn't make a difference based on the gender of the victim or the assaulter. Any person under the age of 18 is considered a child; **(3) Mandatory Reporting of Child Abuse Cases:** Often families try to hide intra-family child abuse offences. In order for the POCSO Act to work properly, third parties who know or suspect these crimes must report them. These laws have been made based on the idea that children are weak and helpless and that it is society's job to protect their best interests; **(4) Child-friendly Investigation and Trial:** The POCSO Act lay down the procedure of investigation and trial which has been formulated keeping in mind the needs of a child. These include procedure for recording of statement, medical examination and designation of special child friendly courts; **(5) Differentiate various sexual abuse:** The Act distinguishes between a wide variety of forms of sexual abuse, including non-penetrative and penetrative assault, and sexual harassment among others. The Act lays down stringent punishment for exposing children to, or using them to create **Child Sexual Abuse Material** (child pornography).

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International Conventions on Child Rights

The Geneva Declaration of the Rights of the Child (1924)

- The Declaration listed **5 principles** directed toward the **development of children**. However, these principles considered children as an object of protection, **instead of holders of rights**. The Declaration **did not put any obligation** on the member States.

Declaration of the Rights of the Child (1959)

- It was adopted by the UNGA in 1959. The Declaration recognised the need for the protection of children against all forms of neglect, cruelty and exploitation.

International Covenant on Economic, Social and Cultural Rights (ICESCR) (1966)

- Article 10 recognised that children and young persons should be **protected from economic and social exploitation**. **Employment of children in work harmful** to their health, life or likely to hamper their normal development should be **punishable by law**.

United Nations Convention on the Rights of the Child (CRC) (1990)

- It was adopted by UNGA in 1989 and entered into force in 1990. It offered a **legally binding instrument** that recognised children's rights. It established a **Committee on the Rights of the Child** to monitor the progress of the member States in realising the goals envisioned by CRC. It recognised State parties' obligation to **protect children from all forms of sexual abuse and exploitation**.

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Amendments to POCSO Act

The POCSO Act was amended in 2019 due to concerns with rising cases of sexual offences against children and in response to coming to light of certain heinous sexual crimes committed against children.

- The amendment **increased the minimum punishment** for penetrative sexual assault from 7 years imprisonment to 10 years and aggravated penetrative sexual assault from 10 years imprisonment to 20 years.
- It has also introduced the **punishment of the death penalty** for the offence of aggravated penetrative sexual assault.
- The Amendment Act has also introduced offences for **transmitting or propagating pornographic materials involving a child** and failing to destroy or report such pornographic materials.

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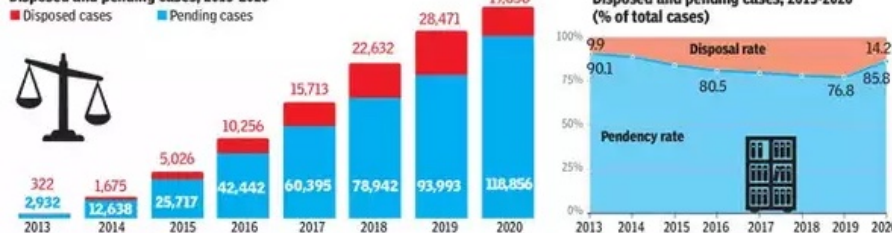
What are the shortcomings in the working of the POCSO Act? – (1) At the Trial Stage: (a) Lack of Special Courts in all districts; (b) Lack of Special Public Prosecutors for Special Courts; (c) Non-compliance with the timelines prescribed by the Act; **(2) At the Post-Trial Stage:** Special Courts tend not to provide interim compensation. Often, disbursement of compensation is delayed; **(3) Hurdles in implementation:** (a) Slow pace of designation of Special Courts; (b) Delay in investigation and filing of chargesheets; (c) Non-appointment of support persons for child victims; (d) Delay in disposal of POCSO Cases. The pendency of POCSO cases has reached 85% in 2020; **(4) Legal Aids Create Nuisance:** Many legal aids add extra information to make the case stronger. Many times false information is added in the complaint. This only creates issues in the moving forward of the case; **(5) Inadequate awareness about the POCSO Act:** A 2020 study on Child Sexual Abuse Awareness and Attitudes by World Vision India found that only 35% children and 32% caregivers were aware about the POCSO Act; **(6) Inadequate Training of Various Stakeholders:** Child Protection System involves a lot of stakeholders like Private and Government Medical Practitioners, Juvenile Justice Boards, Law Enforcement Officials (Police), Judges, Public Prosecutors etc. All stakeholders should be aware of their own as well other stakeholders' responsibilities. At present, there is lack of adequate training for many stakeholders; **(7) Low Conviction Rate:** Of the cases analysed by Vidhi Centre, only 14% cases resulted in conviction, while 43% cases resulted in acquittal.

What steps can be taken to enhance effectiveness of the POCSO Act? – The Vidhi Centre has provided several recommendations: **(1) Legislative and Policy Recommendations:** (a) Reduce the age of consent from 18 to 16 years with adequate safeguards; (b) Hold public consultations with domain experts before making any substantive amendments to the Act; (c) Stipulate a time limit for consideration of disbursement of interim compensation to the victim; **(2) Making POCSO Courts Functional:** (a) Appoint **adequately trained Special Public Prosecutors** exclusively for POCSO courts. Progress for this can be monitored by respective High Courts; (b) Establish **Vulnerable Witness Deposition Centres**; (c) Employ a **‘hybrid’ approach** for recording of evidence wherein the evidence of certain witnesses like doctors, forensic experts can be recorded virtually; (d) Ensure the appointment and continuous presence of support persons in every pre-trial and trial stage; (e) Proper training of all stakeholders; (f) Timely and effective disbursement of compensation to victims; **(3) Increasing awareness about the POCSO Act:** (a) Include age-appropriate information about POCSO in school curriculum, including information on helplines like Childline; (b) Impart POCSO awareness training to school staff. Include POCSO in the curriculum of teacher training courses; **(4) Capacity Building at All Levels:** Conduct periodic integrated capacity building programmes for stakeholders with a focus on sensitivity training. The Report also recommends to set up more Forensic Science Laboratories (FSLs) while improving the capacity and infrastructure of existing ones.

Pendency Rose Sharply In 2020 As Covid Hit

The total number of POCSO cases reported on eCourts rose steadily between 2013 and 2020. But though the share of pending cases in total POCSO cases had been declining consistently, there was a sharp increase in 2020, which could be attributed to the fact that the district judiciary did not function at its usual capacity during the Covid-induced lockdowns, leading to poor disposal. While the number of cases disposed rose between 2013 and 2019, the number of cases disposed fell sharply from 2019 to 2020.

Disposed and pending cases, 2013-2020



Despite its progressive provisions, the lacunae in the implementation of the POCSO Act has reduced its efficacy. The recommendations provided by the Vidhi Centre are worthwhile which, if implemented, can go a long way in addressing the issues with the functioning of the POCSO Act.

8. Ensuring Safety of Tourists in India: Tourist Police

News: Incidents of crime against foreign tourists leaves negative impression about India. A dedicated Tourist Police can ensure security for the tourists.

What are the statistics related to crime against tourists? – (1) 29 foreigners have been murdered in the last three years; (2) 14 foreigners tourists were raped in 2021, 16 were raped in 2020 and 12 in 2019; (3) 15 cases of assault to outraging modesty of foreign women were registered in 2021 across the country, apart from 14 complaints of cheating; (4) 142 cases of theft were lodged by foreigners in 2019, though it declined to 52 in 2020 and to 23 in 2021; (5) Many cases go unnoticed as tourists do not report the cases to the police.

What is the importance of ensuring safety of the tourists? – (1) Crime against foreigners **dents the image of the country globally**; (2) Negative perception could also adversely affect the **inflow of foreign tourists**, which is a vital source of income and foreign exchange. India's earnings through tourism was US\$ 30.06 billion in 2019; (3) As India **hosts several important international events**, notably the G20 Summit in 2023, it becomes imperative to **ensure a pleasant experience** to the foreign delegates; (4) ~12-13 million tourists are expected to visit by 2024. There is need to upgrade the law and order and security systems.

What steps have been taken to ensure tourist safety? – (1) States like Uttar Pradesh, Madhya Pradesh, Delhi, Goa, Rajasthan and Kerala have established ‘Tourist Police’ wings; (2) The Bureau of Police Research and Development (BPRD) has brought out a **booklet on the Tourist Police Scheme** detailing the mode of setting up of tourist police stations and control rooms, outposts, uniforms, recruitment, qualifications, training and logistics requirements for tourist police stations; (3) **25 popular tourist spots** have been identified in the country where the tourist police has to be necessarily deployed to help foreigners; (4) As an **incentive**, a 30% deputation allowance has been recommended for the police personnel who join the tourist police on deputation.

What more steps can be taken to ensure security of tourists? – (1) All criminals in and around tourist spots need to be identified and kept under **constant surveillance**; (2) **Fast track courts** should be set up immediately to try cases of crime against foreigners and the culprits punished speedily. Such speedy disposal of cases of crime against foreigners can be replicated if we have the will.

9. Analysis of India’s Performance on Various Global Indices

News: The Economic Advisory Council to the Prime Minister (EAC-PM) has released a working paper titled ‘Why India does poorly on global perception indices’.

What are the problems EAC-PM has found with these indices? – The working paper analyses three perception-based indices: Freedom in the World Index, V-DEM indices and EIU Democracy Index;

(1) Freedom in the World Index: It has been published since 1973 by Freedom House. The index has placed India in the ‘**partially free**’ category. India had been placed in this category only twice earlier; during emergency and in 1995–96 during era of economic liberalization. This seems arbitrary as period of emergency was completely different from the period of liberalization or present times. The index also **treats Kashmir as a separate territory** and considers its ‘not free’.

(2) Democracy Index: The index is published by Economist Intelligence Unit (EIU). India is placed in the category of ‘**Flawed Democracy**’ and its rank deteriorated from 27 in 2014 to 53 in 2020 and then improved to 46 in 2021. The index is prepared through mix of ‘expert opinions’ and ‘public opinions’. The report **does not reveal the number, nationality, credentials or even field of expertise of the ‘experts’**. In case of India, the index notes that **no public opinion was conducted**. India’s score on Political Culture sub-index is 5.0. Lesotho, a country with a military coup in 2014 and under emergency since 2020 has a better score (5.63) than India. There are many such discrepancies. (Refer EPIC February 2022 for India ranked 46th in Democracy Index).

(3) Varieties of Democracy (V-DEM) Report: It is produced by the Varieties of Democracy Institute at the University of Gothenburg in Sweden. It comes up with 6 indices covering various aspects of democracy such as Liberal Democracy, Electoral Democracy, Liberal Component, and Egalitarian Component among others. India has been termed as an ‘**electoral autocracy**’ in the 2021 report, the **same as it was during the period of Emergency**. India’s rank on Liberal Democracy Index is 93. In contrast, the Kingdom of Lesotho (under emergency with military coups) has a rank of 60. Kosovo (got independence from Serbia in 2008) has a rank of 79. (Refer EPIC March 2022 for Democracy Index, 2022).

What are the problems with the methodology of these indices? – (1) No information is shared regarding ‘expertise’ of ‘experts’; (2) The questions used in surveys/polls are subjective and are worded in a contorted way making it difficult to answer objectively; (3) Certain questions that should be asked are not included; (4) Certain questions used by these indices are not an appropriate measure of democracy across all countries.

General Studies Paper III

1. Introduction of e-Rupee

News: The RBI has launched the Central Bank Digital Currency (CBDC): e-Rupee (Digital Rupee).

What is CBDC or the Digital Rupee? – (1) CBDC is a **legal tender** issued by the RBI in **digital form**; (2) It is the same as the **fiat currency** and is **exchangeable one-to-one** with the fiat currency. The difference is that it is not in form of physical cash; (3) It is a **fungible legal tender** for which holders need not have a bank account; (4) CBDC will also appear as ‘liability’ (currency in circulation) on the RBI’s balance sheet.

What are the types of e-rupee? – Based on **usage** and **functions** performed by the digital rupee, and considering the **different levels of accessibility**, the RBI has demarcated the digital rupee into retail and wholesale categories: (1) **Retail e-Rupee:** It is an electronic version of cash primarily meant for **retail transactions**, which can potentially be used by almost everyone, and can provide access to safe money for payment and settlements; (2) **Wholesale e-Rupee:** It is designed for restricted access to **select financial institutions**. It has the potential to transform the **settlement systems for financial transactions** undertaken by banks in the **Government Securities (G-Sec)** segment and **inter-bank market**. It can make the capital market more **efficient** and **secure** in terms of **operational costs**, use of **collateral**, and **liquidity management**. (Refer EPIC December 2021 for Central Bank Digital Currency (CBDC): Digital Currency in India).

How can an individual use the e-Rupee? – (1) e-Rupees will be issued in the same denominations as paper currency and coins and will be distributed through the Banks (intermediaries); (2) Transactions will be through a **digital wallet** offered by the participating banks, and stored on mobile phones and devices; (3) Transactions can be both **person-to-person (P2P)** and **person-to-merchant (P2M)**. For P2M transactions (such as shopping), there will be **QR codes** at the merchant location; (4) A user will be able to withdraw **digital tokens** from banks in the same way she can currently withdraw physical cash. She will be able to keep her digital tokens in the wallet and spend them online or in person or transfer them via an app.

The currency has been launched on a pilot basis in 4 cities, Mumbai, New Delhi, Bengaluru and Bhubaneswar. The scope of the pilot may be expanded gradually to cover more banks, users and locations.

WHY DO WE NEED THE DIGITAL RUPEE?



● To reduce operational costs in managing physical cash and bring efficiency in payments systems



● To boost innovation in cross-border payments



● To quell concerns over money laundering, terror financing, tax evasion with private cryptocurrencies like Bitcoin, Ether, etc.

What are the benefits of e-Rupee? – The e-Rupee can make the monetary system more efficient and the financial markets more stable in a number of ways; (1) **Monetary System:** (a) Reduce the cost of physical cash management; (b) Push the Monetary system towards more digitisation; (2) **Financial Markets:** (a) The e-Rupee will provide an **alternative to crypto assets**, it will provide **financial stability** in the economy; (b) Provide the public with a risk-free virtual currency; (3) **Payments Infrastructure:** As e-rupee (a) Provide the domestic payments system with an additional channel; (b) Increases resilience by providing payment services outside of the commercial banking system; (c) Diversify the range of payment options, particularly for e-commerce; (d) Helps the international payments infrastructure by making **cross-border transactions easier, faster and economical**. It can facilitate international trade; (3) **Financial Inclusion:** (a) Make financial services more accessible even to the unbanked and underbanked population; (b) Offline functionality as an

option will allow the e-rupee to be **transacted without the internet**. This will enable access in regions with poor or no internet connectivity. (Refer EPIC November 2021 for Managing the Cryptocurrencies).

What are the concerns associated with the digital rupee? – (1) Banks generate loans depending on the amount of deposits they have. With the introduction of e-Rupee, people may shift away from deposits to e-Rupee in wallets. This may impact the ability of banks to lend loans as Banks' lending activity is driven by the amount of cash they hold; (2) Some experts argue that digital currencies will give power to central banks to supervise economic activities. This could act as hindrance to economic growth if certain economic activities are considered illegal by governments.

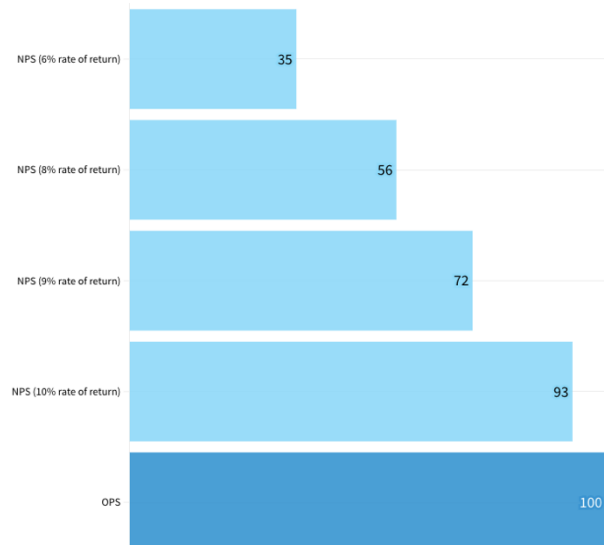
2. The Debate Regarding Pension Schemes

News: Several States like Punjab, Rajasthan, Chhattisgarh have announced to revert to Old Pension Scheme. It has become an electoral issue. It has serious implications for State Finances.

What was the Old Pension Scheme (OPS)? – (1) The OPS existed before 2004. It is a '**defined benefit**' scheme, where the Government pays 50% of the last drawn salary plus Dearness Allowance as pension to employees after retiring, and half of that to their eligible dependent family members in case of death. Minimum pension was INR 9,000; (2) It is a '**Pay As You Go**' (PAYG) or **unfunded scheme** since the government pays the pension when due, **without making any provision while it accrues**; (3) The beneficiaries decided how much they wanted to contribute either by having the specified amount regularly deducted or by contributing a lump sum amount; (4) The entire pension amount was borne by the Government while fixed returns were guaranteed for employee contribution to the General Provident Fund (GPF).

What is the New Pension Scheme? – (1) The National Pension Scheme (NPS) was introduced on January 1, 2004 for all employees of the Union Government appointed on or after this date; (2) The PFRDA Act of 2013 defines the NPS as a '**defined contribution**' pension scheme. Throughout the career of the employee, a monthly contribution (partly by the government and partly deducted from the salary of the employee) is made; (3) The amount of pension pay-out is **determined by the market value of the contributions** made by the employee; (4) 10% of salary plus dearness allowance (DA) is deducted as employee's contribution, along with a government contribution of 14% (till recently/still in some States, 10%) of salary plus DA. The proposal to move from **the defined benefit scheme (DB) to a defined contribution scheme (DC)** had been under consideration of the Government since the mid-1990s. NPS was **introduced in 2004** and **made mandatory** for Union Government employees as well as staff of those State Governments which adopted this scheme. However, it is voluntary for the workforce in the unorganized sector.

What are the benefits of OPS? – (1) The pay-out in NPS is expected to be **lower than OPS**; (2) The pay-out is uncertain and **depends on the market value** of the contribution. Lower the market return, lower the pay-out e.g., if market return on the contributions is 6%, the NPS pay-out will only be 35% of OPS; (3) A major market crash can significantly lower the pay-out to employees. Pay-out for OPS is not volatile.



What is the current status of National Pension Scheme? – (1) Most states have migrated to the NPS, except for West Bengal and Tamil Nadu (Adoption voluntary). However, Rajasthan, Chhattisgarh, Jharkhand, Punjab have moved back to the old scheme recently; (2) According to an SBI report, **there are around 55 lakh state government employees** enrolled in NPS as of March 2022. It further noted that the yearly contribution of the State Government employees is in excess of INR 2.5 lakh crore for FY 2021-22.

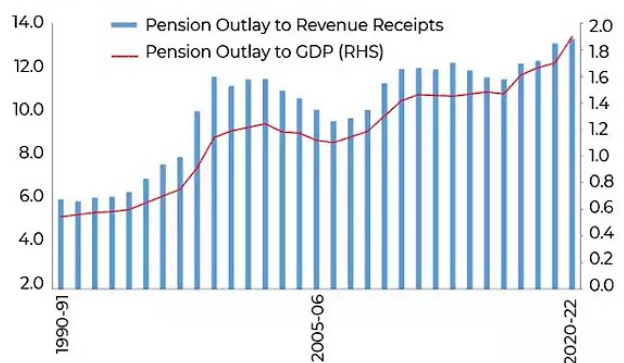
Working of the NPS

- The contributions to the NPS are managed by **professional fund managers** like the LIC, ICICI etc.
- The fund managers are selected through a **transparent and competitive process**.
- NPS allows the **subscriber to choose her fund manager** and her preferred investment option including a 100% government bond option.
- A **guaranteed return option** could also be considered to provide an **assured annuity**.
- An **NPS Trust** has also been constituted to regularly **oversee performance of fund managers** with a trustee bank to efficiently manage fund flows.
- A **Custodian has been appointed** to hold the securities with subscribers being beneficial owners of the assets.
- The NPS is regulated by the **Pension Fund Regulatory and Development Authority (PFRDA)**.

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Why did the government introduce NPS? – (1) **Fiscal Burden:** The PAYG scheme was proving too expensive and would have become fiscally unsustainable. The expenditure on Union civil service pensions was estimated to be 2.31% of the GDP in 2004-05. Economists at the **India Pension Research Foundation** estimated (in 2005) that the **implicit pension debt** of the Government of India worked out to about **56% of the GDP**. In 2019-20, the Union Government's expenditure on **salaries/wages was INR 1.39 lakh crore**, while it was **INR 1.83 lakh crore on pensions**. A Report by SBI highlighted that the pension outgo as % of revenue receipts is ~13.2% for all States and 29.7% of own tax revenue. This would have become unsustainable had OPS been continued. According to another report by SBI Research, the promise of reverting to the OPS will come at a spend of 450% of Himachal Pradesh Government's own tax revenue (Refer EPIC July 2022 for The State of State Government Finances); (2) **Future Commitments:** Pension liabilities of the Governments would have gone up even more in future. This would happen due to **improvement in life expectancy, periodical additions to dearness allowance** and linking of pension to prevailing **levels of salaries**; (3) **Generational Equity:** Many economists have criticized the PAYG scheme as **putting the burden on future generation**. Under PAYG, contributions of the current generation of workers were explicitly used to pay the pensions of pensioners; (4) **Disincentivize Early Retirement:** The old scheme used to incentivize early retirement as the pension was fixed at the last drawn salary. This early retirement resulted in under-utilization of human resources by the government.

Trends in State Finance in Respect of Pension Outlay



Why are some States switching to the OPS? – (1) **Populist Measure:** Most experts are calling it a populist measure as employees are an important pressure group (Refer EPIC August 2022 The Issues of Freebies); (2) **Market Uncertainty:** There is an apprehension in certain sections of the staff that the new NPS will **not deliver the same benefits (pay-outs) as the OPS**. They believe that their money will not be safe in the hands of fund managers considering the market uncertainty; (3) **Employee Pressure:** There has been a constant demand from those who joined government services that the 'contributory pension' scheme introduced in 2004 be reversed to the 'defined pension' scheme. There have been some mass protests; (4) **Reducing burden on Employees:** Under the OPS, all the burden is borne by the Government and employees get greater disposable and assured income; (5)

Attracting Good Talent: Proponents of OPS argue that the uncertainty regarding NPS may discourage many talented youth to enter into the government sector considering a rise in salaries and other benefits offered by the private sector in the future; **(6) Countering Fiscal Burden:** Some experts argue that Governments can enhance revenues by **increasing the share of direct taxes** (e.g., corporate taxes) in revenues, and **generating additional revenue from property and wealth taxes**. Then the fiscal burden from OPS can be mitigated.

What can be done going ahead? – **(1)** A former Union Finance Secretary has recommended that **the Government should design an 'assured pension' scheme**. This should combine elements of both the defined and the contributory pension schemes; **(2)** The future Pay Commissions should move towards the concept of **'cost to company' (C-to-C)** and include the cost of assured pension while determining pay revisions; **(3)** The Government should also **revisit the structure of the civil services** to ensure that the organizations don't become **'top heavy'** over time; **(4)** The focus should be on improving the NPS as per **CAG 2018 recommendations**: **(a)** A foolproof system needs to be put in place to ensure all nodal offices and eligible employees are registered under NPS; **(b)** Delays need to be penalized and compensation affected to avoid loss to the subscribers.

The experience so far shown that the **NPS has given good returns**. Many experts believe that the annuity is likely to be as attractive as in the OPS, if not better. OPS will prove to be fiscally unsustainable. Moreover, shift to OPS now will result in operational and fiscal complexities. The Governments can focus on improving the NPS rather than shifting to OPS.

3. Production of Millets in India

News: In 2021, the UN had declared 2023 as the International Year of Millets (IYOM). The pre-launch celebration of the IYOM23 was organized jointly by the Ministries of External Affairs and Agriculture.

What are the benefits of Millet Production? – There are several benefits:

(A) Nutritional and Health

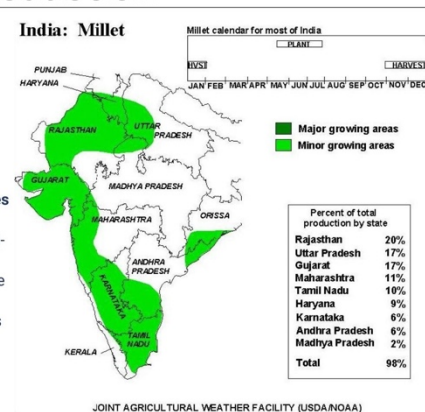
(1) According to ICAR-Indian Institute of Millets Research, Hyderabad, Millets contain 7–12% protein, 2–5% fat, 65–75% carbohydrates and 15–20% dietary fibre. They are more nutritious compared to fine cereals. They contain higher protein, fat and fibre content;

(2) They are **gluten free** and non-allergenic. They have low Glycaemic Index (GI, *value used to measure how much specific foods increase blood sugar levels*) and are rich in bioactive compounds and **essential amino acids**. Because of low GI, they are good for diabetic persons; **(3)** They are also rich in micronutrients like calcium, iron, zinc, iodine etc.; **(4)** They are **3–5 times more nutritious than wheat and rice** in terms of proteins, minerals and vitamins; **(5)** Millets can help combat cardiovascular diseases, anaemia, calcium deficiency etc. Millets are considered to be the **next super food** or **'nutri-cereals'** of the world because of their high nutritional content. They can be useful as a sustainable means for **nutritional security**.

(B) Food Security

Conditions for Millet Production

- Millets are a group of **small-seeded grasses** (Poaceae/grass family), grown as cereal crops or grains. They are used as both human food and animal fodder. Millets provide food security and contribute to the economic efficiency of farming.
- Millets include **three major** (Sorghum (Jowar), Pearl (Bajra), Finger (Ragi)) and **six minor crops** (Barnyard (Sanwa), Proso (Chenna/Barri), Foxtail (Kakum), Kodo, Brown Top and Little Millet (Kutki/Shavan)).
- **Climate Requirements:** Millets require **warm temperatures** for germination/development (**20°C and 30°C**) and are **sensitive to frost**. They are planted from mid-June to mid-July. Millet are **efficient users of water** and can grow in areas with **annual rainfall range of ~30–50 cm**. Millets are often grown as **catch crops** (a crop grown in the space between two main crops or at a time when no main crops are being grown).
- **Soil Requirements:** Millets are **highly adaptable** to a variety of soil conditions, from extremely poor to very fertile, and can handle a degree of alkalinity. **Alluvial, loamy, and sandy soils** with good drainage are the ideal soils for millet cultivation.



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(1) Millets are sustainable food source for combating hunger in a changing climate. Millets secure 6th position in terms of world agricultural production of cereal grains and are a staple food in many regions of the world. They promise an additional advantage for **combating nutrient deficiencies in the third world countries**; (2) Millets are resistance to climatic stress, pest and diseases; (3) They can be stored for long with ease.

(C) Environmental

(1) Millets have low water requirement and are drought resistant. They have short growing season and require less water during growth. Millets can grow in regions with < 50 cm annual rainfall; (2) They can be grown in dry land areas using farmyard manures, and have less **dependence on synthetic fertilisers**.

(D) Economic

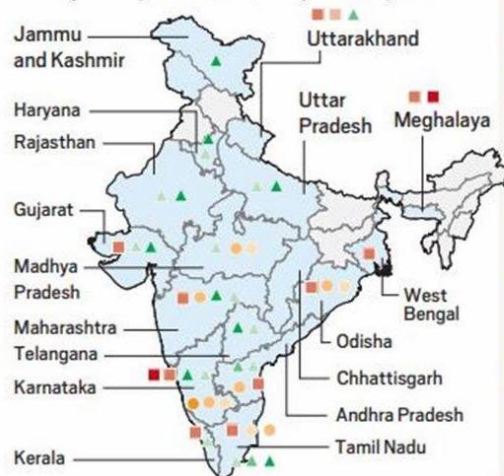
(1) Millets offer farmers a **stable source of income** as they are drought-resistant and less susceptible to failure due to weather-related events; (2) Millet production requires a low initial capital investment; (3) The global Millets market was valued at US\$ 9.95 billion in 2020 and may reach US\$ 14.14 Billion in 2028.

(E) Social

(1) SDG: Millets have the potential to help achieve the sustainable development goals (SDGs), mainly **SDG 2** (Zero Hunger), **SDG 3** (Good Health and Well-being), **SDG 12** (Sustainable Consumption and Production), and **SDG 13** (Climate Action); (2) Millets can be helpful in reducing gender nutrition gaps and inequalities; (3) Other social benefits include improving farmers' income and an **increase in human capital** as a result of an increase in the availability of nutritious food.

INDIA'S MILLETS MAP

Jowar is grown mainly in Maharashtra, Karnataka, Rajasthan, and Tamil Nadu; bajra mainly in Rajasthan, UP, Haryana, Gujarat



JOWAR
4.24 mn ha area
4.78 mn tonnes production

BAJRA
7.75 mn ha area
10.86 mn tonnes production
(In 2020-21)

MILLETS GROWN IN
130 countries, traditional food for more than 500 million people

'NUTRI-CEREALS'
Govt has declared millets 'powerhouses of nutrition'.



What are the challenges to Millet Production? – (1) **Mono-cropping**: The Green Revolution has altered the cropping pattern to wheat-paddy cycle. The area under Millet cultivation has reduced from 37 million hectares (pre-Green Revolution) to ~14 million hectares. Millets have become a predominantly fodder crop from staple diet; (2) **Inconsistent Supply and Demand**: (a) According to NSSO household consumption expenditure survey, less than 10% of rural and urban households reported consumption of millets. It is not the first choice of consumers or farmers; (b) The Millets Mission quotas under the PDS are small; (c) The lack of access to HYV seeds has led to **low crop productivity**, the lack of public awareness about nutritional benefits of millets has led to **limited adoption of millets**. In addition, **limited distribution** and **lack of market knowledge** have resulted in sub-optimal reach, lower price realization and wastage; (3) **Processing Issues**: (a) Some millets **require multiple processing** for optimization of grain recovery and optimization of polishing to retain their nutrition value. Processing of millets face several hurdles owing to variation in size and hardness of various millet types and low shelf life of the processed millets; (b) Lack of processing units make it difficult to bring cultivated millets to consumption market; (4) **Low Shelf Life**: Processed Millets (like millet flour) have poor shelf life due to its **intrinsic enzyme activity** (lipase activity, lipid oxidation etc.) that causes rapid development of rancidity and bitterness. Millet products are also **prone to moisture** and water activity. Quality assurance depends on different pre-treatments and storage conditions; (5) **Ease of Consumption**: Making *chapattis* with wheat is easy

because of presence of gluten (soft *chapattis*). This isn't the case with millets due to absence of gluten; **(6) Options in PDS:** For the rural poor, rice and wheat were aspirational foods. An expanded PDS has provided them access to these fine grains, which is distinguished from coarse grains.

What steps have been taken to promote Millet Production? – **(1)** In 2018, the Ministry of Agriculture declared millets as '**Nutri-Cereals**', considering their 'high nutritive value' and also 'anti-diabetic properties'. 2018 was observed as 'National Year of Millets'; **(2)** The UN General Assembly adopted an India-sponsored resolution to mark 2023 as the '**International Year of Millets**'; **(3)** The Government of India has laid (through National Food Security Mission Operational Guideline) **specific focus on 212 millet districts** in 14 states to provide **incentives to farmers** for quality seed production/distribution, field-level demonstrations, trainings, primary processing clusters and research support. The launch of 67 value-added technologies at the '**Centres of Excellence**' has been supplemented with the release of 77 high-yielding and 10 bio-fortified varieties; **(4)** The US\$ 14-billion **Agricultural Infrastructure Fund (AIF)** has pushed investments across States to support millet entrepreneurs, **primary processing machines** for dehulling millets (removal of husk) and the formation of **millet farmer collectives**; **(5)** The 'One District One Product' (ODOP) initiative has identified **27 millet focus districts**; **(6)** The promotion of 10,000 FPOs' programme (US\$ 924 million) aims at the **millet producers' effective market participation** as member shareholders in these entities; **(7)** The **Odisha Government's 5-year 'Millet Mission'** is supplementing the input as well as marketing needs of indigenous small farmers like the Dongria Kondhs to grow millets. Similar initiatives have been launched in Karnataka, Maharashtra and Telangana; **(8)** Fast-emerging organic food brands are further **helping mainstream millet consumption**.

What further steps can be taken to enhance Millet Production? – **(1) Production, Processing and Storage:** Millet cultivation should be. **Women millet farmers in rain-fed areas have to be empowered** through capacity-building and skills training; **(2) Marketing:** There is a need for **linking small and marginal millet farmers to online marketing platforms**, such as the Electronic Agricultural National Market (e-NAM), for sourcing quality millets and marketing activities; **(3) FPOs:** FPOs can enhance the millet producers' bargaining power in domestic and global markets. There is need to learn from the last-mile experiences of approximately 200 millet start-ups that have been incubated in the last few years by young agri-entrepreneurs; **(4) Generating Awareness and Capacity Building:** Multiple stakeholders like doctors, chefs and nutritionists can be engaged to educate farmers and consumers about benefits of Millets. There is a need to develop solutions to improve the shelf life of millets – grains, processed grains, flours to make it comparable to competing crops; **(5) Branding to Popularise:** It is necessary to improve marketing strategies and the recipes in order to increase consumption; **(6) Government Procurement and Distribution:** **(a)** The quantity of coarse grains procured for the Central Pool and distributed under the NFSA must be increased. As of November 2022, the availability of coarse grain stocks with the Food Corporation of India (FCI) stood at 2.64 lakh metric tonnes (LMT) compared to 265.97 LMT and 210.46 LMT for Rice and Wheat respectively; **(b)** Millets should be included in the **Anganwadi Midday Meal Scheme** and the PDS, in order to improve the nutritional status of pre-school children and women of reproductive age; **(c)** Only jowar, bajra, and ragi are covered under the Minimum Support Price (MSP) set by the Government, Other millets should also be included; **(7) Others Steps:** **International Fund for Agricultural Development (IFAD)** has helped to revitalise kodo and kutki farming in Madhya Pradesh's Dindori. There is need to replicate the **Dindori model** beyond one district and across other millets.

The cultivation of millet on a broad scale has the potential to assist farmers in safeguarding their livelihoods in the face of climate change. Widespread adoption of millets can also help address the lifestyle diseases like diabetes due to their nutritional value. India's External Affairs Minister named '**Covid, Conflict, and Climate**' as the **world's primary food security challenges**. He placed the cultivation and popularisation of millets in the context of the larger imperative of '**de-risking the global economy**'. Government has taken several

commendable initiatives to promote millet production. The efforts should be scaled up to further enhance area under millet cultivation.

4. India's Agriculture Exports: Status and Challenges

News: India's Agriculture exports have grown 16.5% in April–September 2022 and appear set to surpass the record US\$ 50.2 billion achieved in FY2021-22. While some experts laud focused policy measures by the Government, others attribute the rise to high commodity prices and geopolitical factors.

What is the trend of India's Agriculture Exports?

– (1) India's agricultural exports crossed US\$ 50 billion during the fiscal year ended March 31, 2022; (2) India's top export items include **Marine products, Rice, Sugar, Spices** etc. among others; (3) Some items (like rice and cotton) have witnessed stagnation in the export levels; (4) India has been a **net exporter of agriculture products** (exports greater than imports) since 1991. Technological advancements, government incentives, and institutional changes have contributed to a massive increase in agricultural output. This has resulted in growth in agriculture exports; (5) According to NABARD, India's Agriculture Exports have increased from **INR 6,012.76 crore in 1990-91 to INR 305,469 crore in 2020-21**. In the corresponding period, imports have increased from INR 1,206 crore to INR 157,788 crore. India's net **agri-export surplus has also increased from INR 4,806.9 crore in 1990-91 to INR 147,680.84 crore**; (6) The **share of agricultural exports to agricultural Gross Value Added (GVA)** increased from 3.88% in 1990-91 to 13.64% in 2013-14. However, it has **slipped to 8.45% in 2020-21**.

INDIA'S AGRICULTURAL TRADE (IN \$ MN)				INDIA'S TOP AGRI-IMPORT ITEMS (IN \$ MN)			
	Exports	Imports	Surplus		2021-22	Apr-Sep 2021	Apr-Sep 2022
2012-13	41.73	18.98	22.75	Vegetable oils	18991.62	8862.38	11097.72
2013-14	43.25	15.53	27.72	Fresh fruits	2460.33	1101.08	1237.86
2014-15	39.08	21.15	17.93	Pulses	2228.95	835.35	595.78
2015-16	32.81	22.58	10.23	Spices	1299.38	658.37	755.27
2016-17	33.70	25.64	8.05	Cashew	1255.46	755.62	1412.52
2017-18	38.90	24.89	14.01	Natural rubber	1032.71	442.99	542.18
2018-19	39.20	20.92	18.28	Alcoholic beverages	693.23	319.28	435.80
2019-20	35.60	21.86	13.74	Raw cotton	559.55	297.25	1081.16
2020-21	41.90	21.65	20.24				
2021-22	50.24	32.42	17.82				
Apr-Sep 21	22.98	15.12	7.86				
Apr-Sep 22	26.77	19.31	7.46				
				TOTAL*	32422.30	15119.78	19309.05

What are the opportunities for India's Agriculture Exports? – (1) India has large **extent of arable land** and **diverse agro-ecological conditions** which provides huge potential for agriculture products; (2) India's spices and fruits are famous around the world for their **high quality**; (3) India **leads global production** in several commodities. According to the FAO, India is the largest producer of **milk, pulses and jute** and ranks as the second largest producer of **rice, wheat, sugarcane, groundnut, vegetables, fruit and cotton**. India is also one of the leading producers of spices, fish, poultry, livestock and plantation crops; (4) Globally, India **ranks second in total agricultural production** at US\$ 367 billion, yet India's share in export market is minuscule. This indicates huge opportunity in scaling up the exports.

What are the benefits of enhancing Agriculture Exports? – (1) **Largest sources of livelihood:** Agriculture (and allied sectors) is the largest source of livelihoods in India. It employs 152 million Indians as of 2021. 70% of rural households still depend primarily on agriculture for their livelihood; (2) **Increase Farmers Income:** Increase in export of agri-commodities at **globally competitive prices** will help increase income for farmers. However, there is a need to ensure that farmers, instead of middlemen, benefit from the farm exports; (3) **Rural Development:** Improvement in farm incomes will boost rural demand and contribute to growth of rural economy and development; (4) **Trade Balance:** Agriculture sector has regularly maintained

a trade surplus (net exporter). This helps in mitigating Current Account Deficit (CAD) and help enhance forex reserves.

What are the challenges to India's Agriculture Exports? – (1) Inward-looking policies: India's agriculture policy is focused more on food security and price stabilization, impacting policy approach to agriculture exports e.g., the recent bans on exports of wheat and rice. Agri-exporters are impacted by frequent flip-flops in the policy. The policy **deprives farmers of higher prices in the international market;** **(2) Value Addition:** Majority of India's agriculture exports consist of low-value and semi-processed items which have limited demand. The proportion of food processed in India (of the total production) is very low; **(3) Lack of uniformity:** Lack of uniform quality standards, standardization of commodities and high losses in value chain have limited the potential of export of horticulture produce; **(4) Maximum Residue Limit (MRL):** India's agricultural products are rejected to presence of **pesticide and chemical residues above the Maximum Residue Limit (MRL)** of importing nations. In the past, India's products like basmati rice, grapes and peanuts have been rejected. Farmers lack awareness about appropriate amount and timely use of chemicals; **(5) Low Yield:** The yield levels of the majority of crops in India remain much lower than the global average. This is compounded by **fragmented landholdings**. The average farm size in India is only 1.15 hectares. Majority of the Indian farmers belongs to small and marginal category. A large proportion of domestic production is used for self-consumption, reducing availability for exports.

What steps can be taken to further enhance

Agriculture Exports? – (1) Empowering the farmer to improve quality: Farmers should be trained about **export standards and compliances**. Tools that measure quality and residue levels can be provided to farmers to make farm produce export competitive. *Krishi Vigyan Kendras* can be engaged to take export-

INDIA'S TOP AGRI-EXPORT ITEMS (IN \$ MN)

	2021-22	Apr-Sep 2021	Apr-Sep 2022
Marine products	7772.36	3836.75	4120.08
Non-basmati rice	6133.63	2968.77	3207.29
Basmati rice	3537.49	1659.60	2279.66
Sugar	4602.65	1820.68	2649.00
Spices	3896.03	1992.11	1928.67
Buffalo meat	3303.78	1593.60	1636.54
Raw cotton	2816.24	1137.83	435.87
Wheat	2122.13	630.15	1487.47
Fruits & Vegetables	1692.48	736.71	752.98
Processed F&V	1190.59	583.89	694.63
Castor oil	1175.50	615.62	662.93
Oilseeds	1113.65	453.28	531.02
Other cereals	1087.39	467.42	524.85
Oil meals	1031.94	471.65	556.61
Coffee	1020.74	460.40	610.23
TOTAL*	50240.21	22984.54	26771.64

*Includes all other items.

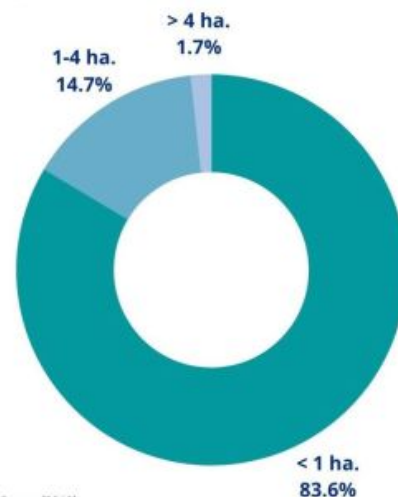
PT BOX

Maximum Residue Limit

The traces pesticides leave in treated products are called "residues". According to the FAO, a maximum residue limit (MRL) is the highest level of a pesticide residue that is legally tolerated in or on food when pesticides are applied correctly in accordance with Good Agricultural Practice.

Distribution of Landholdings in India

Almost 5/6th of landholdings in India are smaller than 1 hectare (ha.). The Average area per landholding is 0.9 ha. The average landholding per household is 0.51 ha.



Source: NSO 77th Survey (2019)

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oriented technology to farmers and creating awareness among farmers about export opportunities; **(2) Branding Produce from Export Clusters:** Export clusters lack organised marketing and branding support for their products. Branding will help ease their entry into international retail chains. Products such as Zespri Kiwi, Washington Apples, and California

Almonds have benefitted greatly from marketing and branding, helping the farmer-producers get fair compensation for their produce; **(3) Promoting Niche Indian products:** Traditional wisdom and nutritional value of niche Indian food products, such as Indian variants of millets, fruits, rice, and oilseeds make them excellent export choices. Government support in promoting these products (similar to the International Yoga Day initiative), will help in making niche Indian products stand out in international markets; **(4) Connect to GVCs:** There is a need to connect Farmer Producer Organisations (FPOs) with **global value chains** and importers from other markets. It can help them understand quality needs and the importers can be assured of quality standards; **(5) Addressing Logistics glitches:** Agricultural commodities are perishable. Hence, logistics in agriculture value chains must be made more robust; **(6) Bilateral trade and sectoral agreements:** The Government should negotiate bilateral trade agreements to ensure **favourable tariffs** for India's agriculture exports. The Government should also negotiate to **address the non-tariff barriers** that Indian exports face like the quality and testing protocols, fair trade certifications etc.; **(7) Research and Development:** It is important to promote R & D activities for new product development for upcoming markets, like fortification of food products.

India's Agriculture Exports have performed well in recent times. The Government's policy initiatives have led to many positive outcomes. However, the level of exports is still below the potential level. The Government should continue the efforts to facilitate the agriculture exports further. Enhancing agriculture exports is one of the most potent lever in improving farm incomes and ensuring rural development.

5. Market Infrastructure Institutions (MIIs)

News: Securities and Exchange Board of India (SEBI) had constituted a committee to review the governance framework for Market Infrastructure Institutions (MIIs). The Committee has released its draft report for public comments.

What are the Market Infrastructure Institutions (MIIs)? – **(1)** MIIs are unique institutions providing vital **infrastructure for trading, settlement and record-keeping**; **(2)** Stock exchanges, depositories and clearing houses qualify as MIIs and **constitute a key part of the nation's vital economic infrastructure**; **(3)** They are vested with regulatory responsibilities while also pursuing commercial interests like other profit-oriented entities; **(4)** According to the **Bimal Jalan Committee** (2010), MIIs are **systemically important** for India as these institutions have seen phenomenal growth in terms of the: **(a)** Market capitalization of listed

Steps Taken to Promote Agriculture Exports

- **Agriculture Export Policy 2018 (AEP):** The key objectives of the AEP are to **diversify export basket** and destinations; boost **high value-added** agricultural exports and to enable farmers to get benefit of **export opportunities in overseas market** etc.
- **Financial Assistance Scheme (FAS):** It is the **export promotion scheme** by the Agriculture and Processed Food Products Export Development Authority (APEDA). Its aim is to assist businesses in **export infrastructure, market and quality development**.
- **Ministry of Commerce & Industry Schemes:** (a) The Ministry has initiated several schemes like Trade Infrastructure for Export Scheme (TIES), Market Access Initiatives (MAI) Scheme etc.; (b) Assistance to the exporters of agricultural products is also available under the Export Promotion Schemes of APEDA, Marine Products Export Development Authority (MPEDA), Tobacco Board, Tea Board, Coffee Board, Rubber Board and Spices Board; (c) It has synergized with the Ministry of Food Processing for effective utilization of **Operation Green scheme**; (d) The Ministry has also **collaborated with the Ministry of Civil Aviation and the Railways** (and 5 other Ministries) in utilization of **Krishi Udan** and **Krishi Rail** respectively, to ease out pressure of high freight rates. The effort resulted in smooth movement of perishables to the important Middle East, EU and South East Asian markets.
- **APEDA:** It was formed in 1986 for the development of the exports of the agriculture sector. The main functions include fixing standards for the scheduled products, carrying out inspections, training and advisory services to the exporters etc.
- **Agri-Cells:** The Government has set up **13 Agri-Cells** in Indian embassies in USA, UAE, Singapore, China, Japan etc. to provide inputs to **improve Indian exports at these destinations** by promoting trade, tourism, technology and investment goals.
- **Cluster Development:** As part of the Agriculture Export Policy, **46 unique product-district clusters** have been identified for export promotion. 29 Cluster Level Committees have been formed in different clusters like Varanasi (Fresh Vegetables), Ananthpur (Banana), Nagpur (Orange), Lucknow (Mango) etc.

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companies; **(b)** Capital raised; **(c)** Number of investor accounts with brokers and depositories; **(d)** Value of assets held in the depositories account.

What are the challenges in the functioning of the MIIs? – (1) They

have to make a profit for the share-holders and perform regulatory functions. There is a possible conflict between two functions; **(2)** Misgovernance is another challenge with MIIs. Appointment of key management personnel is influenced by the Government; **(3)** Lately, MIIs have begun to function in a bureaucratic manner. The decisions are delayed and the decision-making process has several hierarchical levels. This has hampered operational efficiency.

Market Infrastructure Institutions (MIIs)

- **Exchanges:** SEBI has listed 7 Exchanges as MIIs including BSE, NSE, **Multi Commodity Exchange of India** and the **Metropolitan Stock Exchange of India**.
- **Depositories:** They are charged with the **safekeeping of securities** and enabling their trading and transfer. **Central Depository Services Ltd.** and the **National Securities Depository Ltd.** has been listed as MIIs.
- **Clearing Houses:** They help **validate and finalise securities trades** and ensure that both buyers and sellers **honour their obligations**. SEBI lists 7 Clearing Houses as MIIs including the **Multi-Commodity Exchange Clearing Corporation**.

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Why are governance norms critical in the regulation of MIIs? – Any failure of MIIs could result in an overall **economic downfall** that could potentially extend beyond the boundaries of the securities market. Hence, the governance and oversight of MIIs is critical, and high standards must be ensured e.g., SEBI has set out norms **stipulating timelines within which a stock exchange has to take action in the event of failure of technology**, including rules for a switchover to back up servers as part of the disaster recovery in an institution that enables transactions running into thousands of crores of rupees daily.

What are some key recommendations of the committee on MIIs? – **(1)** The regulatory framework should ensure that MIIs, in pursuit of their **business objectives**, should **not lose sight of the regulatory roles** vested in them as the first-line regulators; **(2)** Tightening the norms should not deter innovation or customer focused service provision by MIIs. Hence, the committee calls for a **review of the requirements related to the appointment** and the **role and responsibility of Directors** on the board and key managerial personnel (KMPs); **(3)** The Committee has also proposed: **(a)** Steps to improve the **transparency and accountability** in the functioning of MIIs; **(b)** Metrics for the **monitoring of their performance** and measures for the safekeeping and sharing of information held by them; **(c)** Independent directors must constitute two-thirds of the total strength of the board; **(d)** Roles and responsibilities of the directors should be clearly defined. The board should play an **active role in the risk management framework** of the MIIs; **(e)** **Periodical assessment** of the performance of the board and its members by an external agency; **(f)** SEBI meetings with independent and non-independent directors once a year.

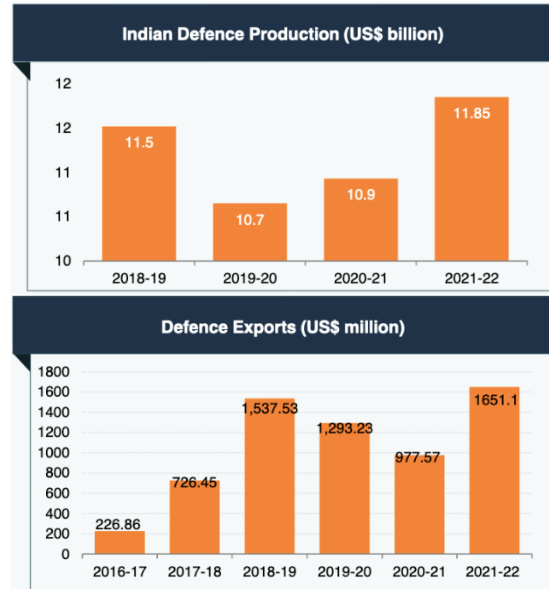
6. India's Defence Manufacturing Sector

News: India's Defence Manufacturing Sector has witnessed consistent growth over the last few years.

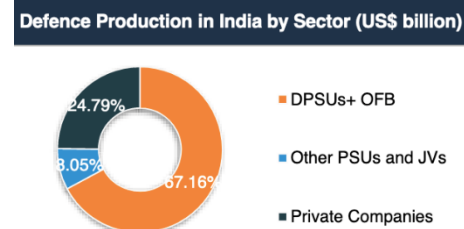
What is the current status of the Defence Sector? – **(1)** Defence production in FY2021-22 stood at INR 92,708 crore (US\$ 11.85 billion). The Government of India has set the defence production target at US\$ 25 billion by 2025 (including US\$ 5 billion from exports by 2025); **(2)** In FY2021-22, India exported US\$ 1.6 billion worth of defence exports. The exports stood at US\$ 227 million in FY2016-17. India's defence exports have grown eight times in the last 5 years. India is providing Made in India defence equipment and services to more than 75 countries; **(3)** The value of defence imports stood at US\$ 463 million for FY2019-20. As per recent data of Stockholm International Peace Research Institute (SIPRI), **India is the second largest arms importer** just behind Saudi Arabia. According to another SIPRI report; **Russia (49%), France (18%) and Israel (13%) were India's top arms suppliers between 2016-20.**

What is the need to focus on indigenous production? –

(1) **National Security:** Possessing domestic defence manufacturing capabilities reduces external dependence. Strong R&D can help create new weapons not available to the rival nations, unlike imported technologies e.g., BrahMos missile has certain unique features which are not matched by any other missile in the world. Defence Equipment imported from abroad are **susceptible to espionage** and sensitive information can be leaked; (2) **Import Bill:** It will help in reducing the import bill as India is currently one of the largest importers of defence equipment. This will help in saving forex outflow and strengthen the Indian Rupee; (3) **Employment Generation:** A robust defence manufacturing sector will generate livelihood opportunities and reduce the burden of unemployment. This will also help in structural transition of employment from primary sectors like agriculture to the secondary sector boosting overall labour productivity of the economy (Refer EPIC August 2022 for The Issue of Jobless Growth in India); (4) **Outdated Technology:** The imported equipment and technology can be old and outdated e.g., the aircraft carrier INS Vikramaditya inducted into the Indian Navy in 2014, was originally commissioned by the Soviet Navy in 1987 and de-commissioned in 1996 (as Admiral Gorshkov). India had bought it in 2004, but was inducted into the Indian Navy 10 years later. Moreover, India remains dependent on the supplier countries for maintenance, servicing and spare parts of defence equipment which also contribute forex outflow; (5) **Aatmanirbhar India:** The vision of Aatmanirbhar India can't be truly achieved unless robust domestic defence manufacturing capability is developed.



What factors are favourable to domestic defence production? – (1) **Technological Prowess:** India is referred as an IT giant with a huge pool of IT professionals who can develop state-of-the-art products for the defence forces. Cyber Security has become a 'weapon of war' and a matter of 'national security' which warrants advanced technological solutions for the armed forces. India has the talent pool to meet the needs; (2) **Government Support:** The Government has changed its stance on maintaining a monopoly in defence production. It is now welcoming private sector participation in the sector; (3) **Growing Demand:** The Russia-Ukraine crisis is a testimony of the growing demand for defence products in the future for every nation. Further the lingering issues like the Kashmir dispute, Left wing insurgency, Terrorism and an increasingly aggressive neighbour etc. create more demand for defence products; (4) **India's Friendly Image:** India is one of the few countries that enjoys friendly relations with many countries including Russia and the US. This would allow the private Indian defence manufacturers to collaborate with and access state-of-the-art technology and allow them to export in many countries; (5) **Culture of Entrepreneurship:** India is now host to the 3rd highest number of unicorns in the world. New start-ups are coming up in the defence and space sector showing promise for the sectors.



What are the challenges faced by the Sector? – (1) **Procedural Requirements and Red-Tapism:** Despite promoting ease of doing business in India; the procedural requirements pose significant hurdle in setting-

up new manufacturing units; (2) **Lack of Technology Transfer:** Not all imported defence equipment involve technology transfer. This sustains reliance on imported equipment and impedes domestic manufacturing; (3) **Quality:** The goods produced by some manufacturers fail to meet the international standards. Quality is sometimes compromised for cost reduction. This reduces their export potential; (4) **Poor Implementation:** The budgetary allocation often remains unspent due to delay in disbursement. This creates barriers for optimum utilization of the allocated funds for the development of the defence industry.

Steps Taken for Defence Manufacturing

- **Innovations for Defense Excellence (iDEX):** Initiative by the Government to modernize the nation's Defense industry. It will empower a culture of technology co-creation and co-innovation in the sector and boost innovation among the start-ups.
- **Defence Corridors:** The **UP Industrial Defence Corridor** and **Tamil Nadu Defence Corridor** will evolve as the hub for private industries, subcontractors, skilled manpower and R&D for manufacturing military systems and technologies.
- **Budget 2022-23:** It has set aside nearly 70% of the capital allocation for the domestic industry. 25% of the defense R&D budget has been earmarked for the private sector, including the industry, start-ups and academia.
- **Positive Indigenization List:** The 3rd positive indigenisation list of sub-system/assemblies /sub-assemblies /components has been notified by the Ministry of Defense in December 2021. The list is part of the efforts to minimize defence imports. It contains 2,500 imported items which have already been indigenised and 351 imported items which will be indigenised in the next 3 years.
- **SRIJAN Portal:** It is a one stop shop online portal that provides access to the vendors to take up items for indigenization.
- **FDI Relaxation:** The limit has been increased to **74%** under the **automatic route** and **100% FDI** through the **Government route**.
- **Defence Production and Export Promotion Policy, 2020:** The Government formulated the policy to provide impetus to self-reliance in defence manufacturing under the 'Atmanirbhar Bharat' scheme. The Ministry aims to achieve a turnover of INR 175,000 crore (US\$ 25 billion) in the aerospace and defence goods and services by 2025.
- **Corporatization of Ordnance Factory Boards:** 7 defense public sector undertakings (PSUs) were created through the restructuring of the **Ordnance Factory Board (OFB)**. This would improve functional autonomy, efficiency, growth potential and innovation in the defence sector.

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What more should be done? – (1) The Government should **gradually expand the positive indigenization list** so that greater support is provided to domestic manufacturers; (2) The success of the Made in India brand necessitates **rigorous testing and trials** of Indian products as per international standards. For this, **an independent nodal umbrella body** should be created for meeting the wide-ranging requirements of trial, testing and certification; (3) A **monitoring mechanism** under DG-Acquisition should be created to monitor the budget earmarked, specifically for private industry and start-ups. It should have representatives from all the three services; (4) The **quality assurance process** should be reformed and made non-intrusive, prevention based and free from 'Inspector-Raj'; (5) **Joint projects with a commitment of technology transfer** should be encouraged as done in case of Brahmos Missile with Russia. This would augment independent and indigenous production in future.

A strong developed domestic defence manufacturing sector is becoming a strategic necessity in the context of **increasing geopolitical risks** and an unstable neighbourhood. It will have added benefits of providing jobs to growing young population and lead the structural transformation of the labour market. The Government must take all necessary steps to support the defence manufacturing sector and realize the dream of an *Atmanirbhar Bharat*.

7. Role of C-DOT in India's 5G Roll-out

News: The Centre for Development of Telematics (C-DOT) has is playing a major role in the roll-out of 5G Services in India.

What is the Centre for Development of Telematics (C-DOT)? – (1) It was established in 1984 as an autonomous Telecom R&D centre of the Department of Telecommunications. It is a registered society under the **Societies Registration Act, 1860**; (2) It is also a registered **public-funded research institution** with the Department of Scientific and Industrial Research (DSIR), Ministry of Science & Technology.

How did C-DOT help in India's telecom revolution? – C-DOT research has focused on the design and production of 'Made in India' telecom technology suited to the Indian landscape. This helped India to: (1) Set up reliable telecom infrastructure that allowed public call offices or PCOs to mushroom nationwide; (2) Establish digital exchanges; (3) Create network infrastructure that supported successive waves of 2G, 3G and 4G rollouts; (4) It has designed a **fully indigenous Non-Standalone (NSA) 5G-core** in record time. This

NSA core has been installed at the state-owned telecom company, BSNL's premises in Chandigarh; **(5)** As of August 2022, India had 1.17 billion telecom connections, of which 98% were mobile phone connections, and an estimated 65% were smartphones. This rise over the past three decades in an economically distressed nation is credited to C-DOT.

PT BOX

5G Core

The 5G core is the heart of a 5G mobile network. The core domain handles a wide variety of **essential functions** in the mobile network, such as **connectivity** and **mobility management**, authentication and authorisation, subscriber data management etc.

Why is C-DOT essential for India's ongoing 5G rollout? – (1) Development of standalone (SA) 5G core: At present C-DOT is working on the development of India's first-ever indigenously built standalone (SA) 5G core. It is a technological improvement on the NSA core. The NSA core technology leverages existing networking infrastructure, but the SA core modernises network infrastructure to suit the myriad needs of enterprises; **(2) Need for SA Core:** **(a)** The SA core will be necessary for achieving optimal capability in many of the classic use cases of 5G that have been showcased by both the government and industry; **(b)** Only an SA Core can provide a long list of high-tech applications, ranging from robotics, advanced manufacturing and remote surgery, to advanced retail and logistics operations, requires ultra-low latency; **(3) 5G Radio and Antennas:** C-DOT is also set to launch the first domestically developed 5G radio and antennas in the next 6 months; **(4) 5G Radio Access Network (RAN):** RAN is a key part of a mobile network system that uses cellular radio connections to link individual devices to other parts of a network. 5G RAN allows the disaggregation of network equipment components, enabling a telecom company to source hardware and software from different vendors for network building; **(5) 5G Alliances Program:** Under it, C-DOT has set up 10 consortiums to deliver a complete suite of 5G products by 2024. This helps in quickly identifying export opportunities for India's telecom tech.

What are the present challenges faced by C-DoT? – (1) Commercialising the newly developed technologies remains the bigger challenge; **(2)** C-DOT has often struggled to hire the required number of researchers. Further, researchers often have to get into administrative roles which drains their time.

8. COP15 of the Convention on Biological Diversity (CBD)

News: The 15th Conference of Parties to the UN Convention on Biological Diversity concluded recently in Montreal, Canada. The Kunming-Montreal Global Biodiversity Framework (GBF) was adopted.

What is the Convention on Biological Diversity (CBD)? – (1) It was the outcome of the 1992 Rio Earth Summit (United Nations Conference on Environment and Development (UNCED)) along with the UN Framework Convention on Climate Change (UNFCCC) and the Convention to Combat Desertification (CCD); **(2)** The CBD came into force in December 1993. India became a party to the convention in February 1994. With 196 Parties, the CBD has near universal participation among countries; **(3)** The Convention **seeks to address all threats to biodiversity and ecosystem services** through: **(a)** Scientific assessments; **(b)** Development of tools, incentives and processes; **(c)** Transfer of technologies and good practices; **(d)** Full and active involvement of relevant stakeholders including indigenous peoples and local communities, youth, women, NGOs, sub-national actors and the business community; **(4) Protocols:** There are two protocols under the Convention: **(a)** The **Cartagena Protocol on Biosafety** seeks to protect biodiversity from genetically modified organisms by ensuring their safe handling, transport and use; **(b)** The **Nagoya Protocol on Access and Benefit Sharing** deals with the commercial utilisation of biological and genetic resources.

What are the outcomes of COP15? – (1) Global Biodiversity Framework (GBF): (a) It contains **4 goals** and **23 targets** that need to be **achieved by 2030**. This will replace the failed **2010 Aichi Biodiversity Targets**; (b) **2050 Vision**: The vision of the framework is a world of **living in harmony with nature** where ‘By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all’; (c) **2030 Mission**: It aims to take urgent action to **halt and reverse biodiversity loss** to put nature on a path to recovery for the benefit of people and planet by conserving and sustainably using biodiversity; (2) **Subsidies**: The COP15 agreed on reducing harmful subsidies, such as subsidies for fossil fuel production, agriculture, forestry and fisheries etc by at least US\$ 500 billion per year; (3) **Pesticides and highly hazardous chemicals**: The COP15 has reached a consensus on reducing the overall risk from pesticides and highly hazardous chemicals by at least half by 2030; (4) **30×30 Target**: The Conference agreed to a commitment to **protect at least 30% of the world’s lands, oceans and coastal areas by 2030**. A related commitment is to ensure that **restoration activities** would be started on at least 30% of degraded land or marine ecosystems by 2030; (5) **Financial Package**: The GBF hopes to see at least US\$ 200 billion raised per year from all sources (domestic, international, public and private), towards **implementation of the national action plans**. The developing countries should get at least US\$ 20 billion a year by 2025 and at least US\$ 30 billion by 2030 through contributions from developed countries. The **Global Environment Facility (GEF)** has been asked to establish in 2023, and until 2030, a Special Trust Fund to support the **implementation of the GBF**. The COP15 have agreed to establish within the GBF a **multilateral fund for the equitable sharing of benefits** between providers and users of **Digital Sequence Information** on genetic resources (DSI), to be finalised at COP16 in Türkiye in 2024; (6) **Reducing Food Wastage**: A commitment has been made to reduce global food wastage by half; (7) **Reduction in Extinction**: Another goal is to ensure a **ten-fold reduction** in extinction rate of species.

Objectives and Structure of the CBD

Objectives

- Conservation of biological diversity.
- Sustainable use of resources.
- Fair and equitable sharing of benefits arising out of the use of these resources and associated traditional knowledge.

Structure

- The Conference of the Parties (COP) is the governing body of the CBD. It includes **all nations that have ratified the treaty**.
- it meets **every two years** to review progress, set priorities and commit to work plans.
- The Secretariat of the Convention on Biological Diversity (SCBD) is based in **Montreal, Canada**.
- Its main function is to **assist governments** in the implementation of the CBD and its programmes, organise meetings, draft documents, and coordinate with other international organizations.
- The Executive Secretary is the head of the Secretariat.

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Paris moment for nature

The UN Biodiversity Summit has approved a landmark deal to protect nature and direct billions of dollars towards biodiversity conservation. Highlights of the deal

2030 limit

The Kunming-Montreal Global Biodiversity Framework contains 23 action-oriented targets, which have been divided in three broad categories:

Reducing threats to biodiversity

Meeting people's needs through sustainable use and benefit-sharing

Tools and solutions for implementation and mainstreaming

KEY TARGETS



Conserve area: At least 30% of terrestrial, inland water, and coastal, marine areas, are conserved



Restore ecosystems: At least 30% of areas of degraded ecosystems are under restoration



Reduce harmful subsidies: Identify, and eliminate incentives harmful for biodiversity

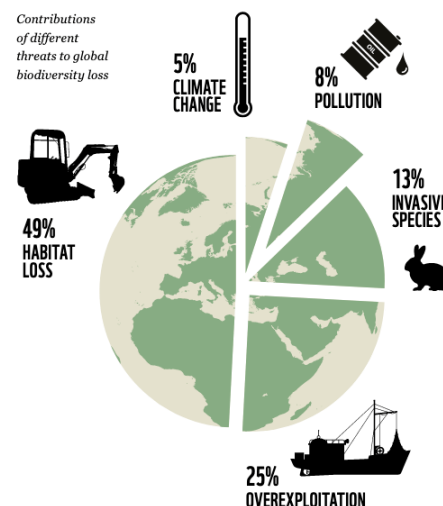


Officials at the United Nations Biodiversity Conference (COP15) in Montreal. AFP

DIVERGENCES REMAIN: Division over how to fund efforts led to intense negotiations, with China, chair for COP15, disregarding objections from the delegation of the DRC

What are the challenges to protecting Biodiversity? – (1) Population growth and Overexploitation: Rapid rise in population and the expanding demand from biological resources has led to over-exploitation of natural resources. Rapid deforestation especially in the Amazons (and other evergreen forest regions) is responsible for large-scale extinction of species; (2) **Habitat Degradation:** The major threats to biodiversity that result from human activity are habitat **destruction, fragmentation, degradation, overexploitation** of

species for human use, introduction of **exotic species**, and increased **spread of diseases**. Most threatened species face at least two or more of these threats, speeding their way to extinction and hindering efforts to protect them; **(3) Climate Change**: Climate change is disturbing the fragile **ecological balance** leading to extinction of species e.g., a study has found that Australia's Great Barrier Reef has lost more than half of its corals since 1995 due to warmer seas driven by climate change; **(4) Exotic Species**: Introduction of exotic species (deliberate or inadvertent) leads to poses a threat to native species. According to the **CBD**, Invasive alien species have contributed to nearly **40% of all animal extinctions since the 17th century** for which the cause is known; **(5) Government Policies**: Government policies, in pursuit of development and without adequate safeguards, have contributed to loss of biodiversity e.g., the major reasons for deforestation in Amazons is due to exploitative policies of the Brazilian Government.



What are the major concern associated with the Global Biodiversity Framework? – **(1)** The World Wide Fund for Nature (WWF) warns that the agreement's goal of reversing biodiversity loss by 2030 could be undermined if **weak language in critical areas** (like the protection of intact ecosystems, tackling unsustainable production and consumption) is not addressed at the national level; **(2)** It lacks a **mandatory ratcheting mechanism** that undertakes **periodic review and upgradation** of targets. Ratchet mechanism is part of the Paris Agreement wherein NDCs are reviewed and updated after 5 years; **(3)** The Aichi Targets remain unfulfilled. In the absence of proper implementation mechanisms, the targets agreed under COP15 many end up the same way.

What should be done going ahead? – **(1)** Protection and sustainable use of biodiversity requires the participation of all stakeholders and ministries responsible for such areas as agriculture, forestry, fisheries, energy, tourism, trade and finance; **(2)** There is need to **mainstream the conservation and sustainable use** of biological resources across all sectors of the national economy, the society and the policy-making framework; **(3) Integrated management of natural resources**, based on the **ecosystem approach**, is the most effective way to promote the conservation of biodiversity; **(4)** It is essential that the all countries take necessary steps to establish good governance, including rule of law and improvement in the economic and social management capacity. This can **check unregulated exploitation** of biological resources; **(5)** The **private sector must recognise that profit and protection go hand-in-hand**: **(a)** The Food and Agriculture industry should shift towards sustainable production and natural means of pollination, pest control and fertilisation; **(b)** The timber, chemicals, building and construction industries should account for impacts of their activities on nature in their business plans; **(c)** Biotech and pharmaceutical industries should equitably share benefits fairly and equitably; **(6)** International financial institutions and multilateral development banks should **align their portfolios with the conservation**, and sustainable use of biodiversity.

The outcomes of COP15 are promising and provide hope that the rapid loss of biodiversity can be reversed. Global Biodiversity Framework (GBF) is expected to act as the new guiding force for the conservation efforts in the coming decade. However, the focus now has to be on implementation and achievement of targets or else GBF will also end up like rest of the global agreements and protocols that promised a lot but delivered a little.

9. Countering Terror Financing

News: The Third Ministerial of 'No Money for Terror' (NMFT) on countering terror financing was held recently in New Delhi. Counter terror financing is the most crucial aspect in countering terrorism.

What is the meaning Terror Financing?

– (1) Terrorist financing involves the solicitation, collection or provision of funds with the intention that they may be used to support terrorist acts or organizations; (2) Funds may stem from both legal and illicit sources. According to the **International Convention for the Suppression of the Financing of Terrorism**, a person commits the crime of financing of terrorism “if that person by any means, directly or indirectly, unlawfully and wilfully, provides or collects funds with the intention that they should be used or in the knowledge that they are to be used, in full or in part, in order to carry out an offense within the scope of the Convention”; (3) The primary goal of individuals or entities involved in the financing of terrorism is to conceal both the financing and the nature of the financed activity.

Purpose of Terror Financing

- **Operations:** Terror organizations require the funds to carry out terrorist attacks including underlying operations. This includes undertaking surveillance, making fake documents, acquiring weapons and explosive devices like IEDs.
- **Propaganda and Recruitment:** Terrorist organisations require funding to successfully recruit members. This includes running social media accounts, publishing magazines and newspapers, and purchasing internet domain names and administer websites.
- **Training:** All terrorist organisations seek funds to enable training of operatives and sympathisers in a number of areas including, weapons training, bomb-making, clandestine communication and ideology.
- **Salaries and Member Compensation:** Funding is required for the salaries of their members, as well as for the families of jailed or deceased members. Providing financial security cements commitment to the organisation's goals and ideology.
- **Social Services:** Many terrorist groups use their financial resources to establish or subsidise social institutions that provide health, social, and educational services. This is done to build support within local populations and aid recruitment efforts.

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What are the major sources of Terror Financing? – (1) **Private Donations:** Wealthy private donors and sponsors sympathetic to the ideology of terror organizations are major source as noted by the FATF reports; (2) **Abuse and Misuse of Non-profit Organizations (NPOs):** Funds raised through Non-profit Organizations, many times a front for terrorist organizations, are diverted towards terrorist activities and supporting recruitment etc.; (3) **Proceeds of Criminal Activity:** Terrorist organisations engage in a variety of illegal activities to generate funds like **commit identity theft** to undertake credit card, insurance and loan fraud, **drug trafficking, extortion, kidnapping for ransom, smuggling of products and selling of antiques and cultural artefacts**; (4) **Extorting Local and Diaspora Populations and Businesses:** FATF reports have recognised that terrorist organisations extort local populations as a way to sustain their activities e.g., the Islamic State of Iraq and the Levant (ISIL) used to extort the income of all inhabitants in areas where it operated. It also extorted ‘taxes’ from movements of goods under its territory; (5) **Self-funding:** Several FATF reports have recognised that the amounts of money needed to fund small attacks can be raised by individual terrorists and their support networks using savings, access to credit or the proceeds of businesses under their control; (6) **Legitimate Commercial Enterprise:** Several law enforcement investigations have found evidence of diversion of revenues from legitimate commercial enterprises (like restaurant franchisees) to support terrorism; (7) **State-Sponsorship of**

Steps Taken to Counter Terrorism Financing

The Financial Action Task Force (FATF)

- An inter-governmental body to **counter global money laundering and terrorist financing**. Sets international standards (FATF Standards) to prevent funding of illegal activities. Works to generate the necessary political will to bring about national legislative and regulatory reforms in these areas.

Financial Intelligence Units (FIUs)

- A system for **global coordination framework** for fight against money laundering and terror financing. Core Function is the receipt, analysis and transmitting information related to **suspect financial transactions and implementation of the Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT)** obligations. **Egmont Group of FIUs** established in 1995 to enhance the exchange of intelligence between jurisdictions.

Counter-Terrorism Committee (CTC)

- Established through **Resolution 1373** (in 2001) of the UNSC. Comprises of all 15 UNSC members, monitors implementation of Resolution 1373 which requested countries to **implement counter-terrorist activities** in their jurisdictions.

The United Nations Office of Counter-Terrorism (UNOCT)

- Main functions include enhancing coordination across the **Global Counter-Terrorism Coordination Compact** entities to ensure implementation of the **4 pillars of the UN Global Counter-Terrorism Strategy**; Improve visibility, advocacy and resource mobilization for United Nations counter-terrorism efforts.

International Convention for the Suppression of the Financing of Terrorism (1999)

- Makes it illegal to fund terrorist acts. Facilitate law enforcement agencies to work together to stop and punish financing of terrorism.

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Terrorism: The **Gilmore Commission** of the US Congress gave the following definition of **State-sponsored Terrorism**: *The active involvement of a foreign government in training, arming, and providing other logistical and intelligence assistance as well as sanctuary to an otherwise autonomous terrorist group for the purpose of carrying out violent acts on behalf of that government against its enemies.* Organizations like Hamas and Hezbollah are heavily dependent on state support; **(8) Fundraising through Social Media:** Social networks are widely used by terrorist organisations to spread their propaganda, reach out globally to sympathisers and raise funds; **(9) Crowdfunding:** Crowdfunding is an Internet-enabled way for businesses, organisations, or individuals to raise money, from donations or investments, from multiple individuals. Crowdfunding is vulnerable to exploitation for illicit purposes (true purpose is masked); **(10) Virtual Currencies (VCs):** VCs allow for anonymous transfer of funds internationally and pose a risk of terror funding; **(11) Exploitation of Natural Resources:** Terrorist Orgs could use natural resources as a means to raise funds by controlling their sources (like gas, oil, timber, diamonds etc.) in regions where the Governments lack effective control of territory and its resources.

What are India's domestic efforts to combat Terror Financing? – **(1)** The Government has strengthened the provisions in the **Unlawful Activities (Prevention) Act, 1967**. The Government has criminalized the production, smuggling or circulation of high quality **counterfeit Indian currency** as a terrorist act. It has also enlarged the scope of proceeds of terrorism to **include any property** intended to be used for terrorism; **(2) A Terror Funding and Fake Currency (TFFC) Cell** has been constituted in the National Investigation Agency (NIA) to conduct focused investigation of terror funding and fake currency cases; **(3)** An advisory on terror financing has been issued in April 2018 to States/UTs. Guidelines have also been issued in March, 2019 to States/UTs for investigation of cases of high quality counterfeit Indian currency notes; **(4)** Training programmes are regularly conducted for the State Police personnel on issues relating to combating terrorist financing; **(5) FICN (Fake Indian Currency Notes) Coordination Group (FCORD)** has been formed by the Ministry of Home Affairs to share intelligence among the security agencies of the States/Centre to counter the problem of circulation of fake currency notes; **(6)** Intelligence and security agencies of Centre and States work in tandem to keep a close watch on the elements involved in terror funding activities and take action according to the law.

Challenges in Countering Terror Financing

- There is **lack of coordination** between international organisations. A coordinated effort between several global counter-terrorism initiatives is missing.
- As highlighted in the recent Third NMFT Conference, **State-support to terrorism prevents effective counter-terrorism response**. Some countries have made terrorism their **"State Policy"**.
- The **limitations of the domestic institutional frameworks** hamper the implementation of international standards at a national level.
- Making a **distinction between terror-related financial activities and legitimate financial flows** is difficult for the agencies. It is easy to **blend terror-financing transactions with genuine business activity** due to high volumes of financial transactions taking place globally.
- Genuine businesses are forced to share funds with terrorist groups to carry on their regular business activities e.g., Mining Companies in India's red corridor. Law enforcement agencies face the challenge regarding treating these companies as victims of terrorism or the associates of terrorists.
- Terror groups (mis)use **front organizations** (disguised as Non-Profit Organizations) to provide financial and logistical support, encourage recruitment, and spread propaganda. Government action on such organizations is criticized as **'human-rights violation'** or **'abuse of power'**.

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What should be done going ahead? – **(1)** There is a need to enhance **financial intelligence sharing between countries** and coordination between national Governments, public and private sector; **(2)** The Union Home Minister has proposed a **'five-pronged'** approach to counter terror financing at the NMFT Conference. This includes **(a) "Monitoring Framework"** for cooperation between intelligence agencies; **(b) "Beyond-border cooperation"**; **(c)** The need for **"complete transparency"** among countries in sharing intelligence among others; **(3)** The State-sponsorship of terrorism has to be effectively curbed. At the NMFT Conference, India's External Affairs Minister and Home Minister have called for **'rising above geo-political interests'** to counter terrorism. Despite multitude of efforts to counter-terrorism, financing of terror groups has continued unabated. Emerging Technologies like cryptocurrencies are posing new challenges to the agencies. The Governments need to overcome their political differences to combat the scourge of terrorism.

Factly

Polity

1. Procedure for Addition of New Communities to Scheduled Tribe List

News: The Union Government has put on hold a proposal to change the procedure for adding new communities to the Scheduled Tribe (ST) List. The new procedure has been in the pipeline for ~8 years.

Current Procedure for adding communities to the ST List

The proposal for the inclusion of a community as an ST originates from the relevant State Government and is sent to the Ministry of Tribal Affairs. The Ministry sends it to the office of the Registrar General of India. Once approved by the office of the RGI, it is sent to the National Commission for Scheduled Tribes. After its approval, the proposal is sent to the Cabinet.

Problems with the Current Procedure

The Government of India constituted a **Task Force on Scheduling of Tribes** in 2014 headed by the then Tribal Affairs Secretary, Hrusikesh Panda. The Task Force observed that: **(a)** The present procedure ‘defeats the Constitutional agenda for affirmative action and inclusion’ and is ‘**cumbersome**’ and ‘**time-consuming**’; **(b)** The current procedure is preventing at least 40 communities from being listed as ST e.g., several tribes pronounced or spelt their community’s name in different ways; some communities were split when new States were created leaving them as ST in one State and not in the other, and some tribes people were forcibly taken as indentured labour to other States where they were left out of the ST list.

Government’s Decision

The Government of India has decided to put on hold a proposal to change the procedure. Instead, it will continue with the existing longer procedure. The Government justified its decision by saying that the current procedure was followed for decades and was scientific.

2. Proposed Amendments to Registration of Birth and Death Act, 1969

News: The Union Ministry of Home Affairs has proposed an amendment to the Registration of Birth and Death (RBD) Act, 1969.

About the Registration of Birth and Death (RBD) Act, 1969

The **registration of birth and death is mandatory** under the Act. It was enacted to promote uniformity and comparability in the registration of Births and Deaths across the country. The events of births, stillbirths and deaths are registered at the place of occurrence of the event i.e., where the event took place.

A birth/death **should be registered within 21 days**. After 21 days, birth/death can be registered under the RBD Act with an order of a First-Class Magistrate issued after verifying the facts about the birth or death.

Proposed Amendments

(a) It is proposed that the Chief Registrar (appointed by the States) would maintain a unified database at the State level. It would then integrate it with the data at the “national level,” maintained by the Registrar General of India (RGI). This implies that the Centre will be a parallel repository of data. This database at the national level may be used to update the **Population Register**, the **Electoral Register**, and the **Aadhar**, ration card, passport and driving license databases.

(b) It has been proposed to **make birth certificates a mandatory document** for multiple purposes like admission in educational institutions, inclusion in the voter list, appointment in Central and State government jobs, issue of driving licenses and passports etc.

(c) It will be mandatory for hospitals and medical institutions to provide a copy of all death certificates, stating the cause of death, to the local registrar apart from the relative of the deceased.

3. Amendments to the Multi-State Cooperative Society Act, 2002

News: A Bill has been introduced in the Parliament to amend the Multi-State Cooperatives Society Act, 2002. The Bill has been referred to a Joint Committee of the Parliament.

About the Multi State Cooperatives (MSCs)

According to the International Cooperative Alliance (ICA), cooperatives are **people-centred enterprises jointly owned and democratically controlled** by and for their members. It realises their common **economic, social and cultural needs and aspirations**. Multi-State cooperatives have operations in more than one State e.g., a Farmer-Producers Organisation (FPO) which procures grains from farmers from multiple States.

Issues faced by the Multi State Cooperatives

(a) Lack of checks and balances; (b) Weak institutional infrastructure of Central Registrar; (c) Poor grievances redressal system.

Key Changes in the Bill

The amendments have been introduced to improve **governance**, reform the **electoral process**, strengthen **monitoring mechanisms** and enhance **transparency and accountability**.

(a) The Bill also seeks to improve the **composition** of the board and ensure **financial discipline**, besides enabling the raising of funds in multi-State cooperative societies.

(b) The Bill provides for the creation of a **central Co-operative Election Authority** to supervise the electoral functions of the MSCs.

(c) It also envisages the creation of a **Co-operative Rehabilitation, Reconstruction and Development Fund** for the revival of sick multi-State co-operatives societies.

(d) In order to make the governance of MSCs more **democratic**, the Bill has provisions for appointing a Cooperative Information Officer and a Cooperative Ombudsman.

Policy

1. Maternal Mortality Ratio (MMR) in India

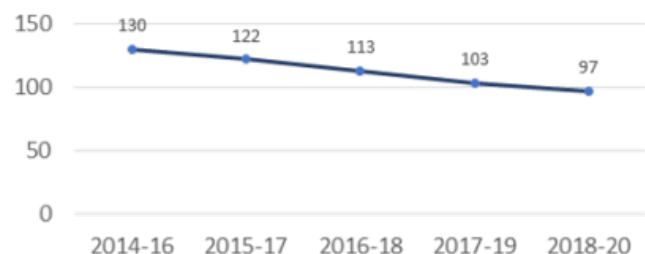
News: The Office of the Registrar General of India has released a Special Bulletin on the Maternal Mortality Ratio (MMR) in India.

About Maternal Mortality Ratio (MMR)

The Maternal Mortality Ratio (MMR) is defined as the number of maternal deaths during a given time period per 100,000 live births.

Key Highlights from the Special Bulletin on MMR

Maternal Mortality Ratio (MMR): It has declined from 130 per lakh live births in 2014-16 to 97 per lakh live births in 2018-20.



India has accomplished the National Health Policy (NHP) target for MMR of less than 100 and is on the right track to achieve the Sustainable Development Goal (SDG) target of MMR less than 70 by 2030.

States with lowest MMR: Kerala has the lowest MMR of 19 per lakh live births followed by Maharashtra at 33 and Telangana at 43.

States with highest MMR: Assam has the highest MMR of 195 followed by Madhya Pradesh (173) and Uttar Pradesh (167).

States which have achieved SDG MMR Target: The number of states which have achieved SDG MMR targets has risen from 6 to 8. These eight states are **Kerala, Maharashtra, Telangana, Andhra Pradesh, Tamil Nadu, Jharkhand, Gujarat and Karnataka.**

Steps Taken by the Government to reduce the MMR

Under the **National Health Mission (NHM)**, India has made a concerted effort to provide **accessible quality maternal and new born health services** and minimize preventable maternal deaths.

Government schemes such as 'Janani Shishu Suraksha Karyakram' and 'Janani Suraksha Yojana' have been modified and upgraded to more assured and respectful service delivery initiatives like **Surakshit Matritva Aashwasan (SUMAN)**.

Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) has focused on identifying high-risk pregnancies and facilitating their appropriate management.

LaQshya and Midwifery initiatives concentrate on promoting quality care in a respectful and dignified manner ensuring the choice of birthing to all pregnant women. (Refer EPIC March 2022 for The Decline in the Maternal Mortality Ratio in India).

2. National Suicide Prevention Strategy

News: The Union Ministry of Health and Family Welfare has announced the National Suicide Prevention Strategy.

Purpose of the Strategy

The Strategy seeks time-bound action plans and multi-sectoral collaborations to achieve reduction in suicide mortality by 10% by 2030. The strategy is in line with the **WHO's South East-Asia Region Strategy for suicide prevention**.

Key Features of the Strategy

- (a) Establish **effective surveillance mechanisms** for suicide within the next 3 years.
- (b) Establish **psychiatric outpatient departments** that will provide suicide prevention services through the District Mental Health Programme in all districts within the next 5 years.
- (c) Integrate a **mental well-being curriculum** in all educational institutions within the next 8 years.
- (d) Develop guidelines for **responsible media reporting** of suicides and **restrict access to means of suicide**.
- (e) Develop community resilience and societal support for suicide prevention.

Status of Suicide Cases in India

In India, more than one lakh lives are lost every year to suicide. Suicide is the top killer in the 15-29 years category. In the past three years, the suicide rate has increased from 10.2 to 11.3 per 100,000 population. The most common reasons for suicide include family problems and illnesses, which account for 34% and 18% of all suicide-related deaths.

3. Digi Yatra

News: The Government has launched the Digi Yatra App for 3 Airports in Delhi, Varanasi and Bengaluru.

About Digi Yatra

Digi Yatra is conceived to achieve **contactless, seamless processing of passengers** at airports based on **Facial Recognition Technology (FRT)**. With this, passenger data will be processed automatically based on a facial recognition system at various checkpoints at the airport.

The project is being implemented by the **DigiYatra Foundation**, a joint-venture company registered under the Companies Act, 2013. Airports Authority of India has 26% stake. The 74% stake is held equally by Bengaluru, Delhi, Hyderabad, Mumbai and Cochin Airports.

At present, Digi Yatra can be used only for domestic flights. The facial recognition system installed at airports will validate identity and travel documents of passengers.



Benefits of Digi Yatra

- (a) **No storage of data:** There is no central storage of Personally Identifiable Information (PII). The information is stored in passenger's smartphone. The uploaded data will utilize blockchain technology and all the data will be purged from the servers within 24 hours of use.
- (b) **Faster movement:** Elimination of ID checks at check-in will result in faster passenger movement. It is expected that 40% time will be saved during check-in.
- (c) **Enhanced security:** The App will be tracking the air passenger with the PNR, enhancing security.

4. Tribal Development Report, 2022

News: Bharat Rural Livelihood Foundation (BRLF) has released the Tribal Development Report, 2022.

About the Tribal Development Report, 2022

The report focuses on the status of tribal communities at an all-India level and Central India in particular. Central India is home to 80% of the tribal communities in the country.

Key Findings of the Report

Tribal Population: India's tribal communities form 8.6% of the country's population (2011 Census). Of the 257 Scheduled Tribe districts, 230 (90%) are either forested or hilly or drylands. They account for 80% of India's tribal population.

Tribals most deprived: Tribals are at the bottom of the country's development pyramid. They lack access to basic amenities like sanitation, education, nutrition, or access to drinking water and education.

Reason for deprivation: Tribal areas have faced a lot of disturbance and conflict. Government welfare schemes and policies have been unable to make an impact due to issues in implementation.

Tribal rights and environment: During British colonial rule, the bond between Adivasis and their relation of symbiosis with their immediate environment was ruptured. After the enactment of the **Forest Conservation Act (1980)**, the conflict came to be seen as between environmental protection and the needs of local Adivasi communities, driving a wedge between people and forests. The domestic requirements of local people were explicitly recognised for the very first time in the **National Forest Policy (1988)**. The Policy emphasized safeguarding their customary rights and closely associated Adivasis in the protection of forests. But the movement towards a people-oriented perspective has not been matched by reality on the ground.

PT BOX

Bharat Rural Livelihood Foundation (BRLF)

BRLF was set up by the Government of India in 2013 as an independent society under the Union Ministry of Rural Development to scale up civil society action in partnership with Union and State Governments.

Way Forward suggested by the Report

It is important to **understand the special characteristics of tribal communities** to frame policies for them. There are many tribal communities that prefer isolation and silence. Policymakers need to understand this trait and work towards the welfare of Adivasis.

5. Prevention of Cruelty to Animals (Amendment) Bill, 2022

News: The Government has introduced the Prevention of Cruelty to Animals (Amendment) Bill, 2022. The Bill will amend the Prevention of Cruelty to Animals Act, 1960.

Key Provisions of the Bill

Bestiality as a Crime: The draft includes ‘bestiality’ as a crime under the new category of ‘gruesome cruelty’. ‘**Bestiality**’ means any kind of sexual activity or intercourse between a human being and animal. **Gruesome cruelty** has been defined as “An act that leads to extreme pain and suffering to the animals which may cause lifelong disability or death”.

Punishment for Gruesome Cruelty: The fine imposed may vary from INR 50,000 to INR 70,000. The imprisonment term can be between 1-3 years.

Punishment for killing an animal: The draft proposes a maximum 5-year imprisonment, along with a fine, for killing an animal.

Freedom to Animals: The draft proposes the insertion of a new Section 3A which provides ‘**five freedoms**’ to animals. Every person having charge of an animal has to ensure: (a) Freedom from thirst, hunger and malnutrition; (b) Freedom from discomfort due to the environment; (c) Freedom from pain, injury and diseases; (d) Freedom to express normal behaviour for the species; (e) Freedom from fear and distress.

Community animals: The local government shall be responsible for their care. Community animal is any animal born in a community for which no ownership has been claimed excluding wild animals as defined under the Wildlife Protection Act, 1972.

Need for Amendments

The Supreme Court, in ‘**Animal Welfare Board of India vs A Nagaraja & Others (2014)**’, had said that “Parliament is expected to make a proper amendment of the PCA Act to provide an **effective deterrent**” and that “for violation of Section 11, adequate penalties and punishments should be imposed”. Section 11 deals with cruel acts on animals. In 2020, a **group of MPs** cutting across party lines wrote to the Animal Husbandry Minister urging that the punishment in the 1960 Act be increased.

Concerns regarding Amendments

- (a) Increasing the quantum of punishment may not be enough to stop cruelty against animals.
- (b) Already marginalized communities like ‘*madaris*’ (who perform with animals) and ‘*saperas*’ (snake charmers) may be disproportionately affected.
- (c) Focusing on the individual act of ‘cruelty’, such as farmers putting up electric fences around their fields, is an incomplete approach. Steps are needed to mitigate the larger issues of **vanishing animal habitats** and **climate change exacerbating man-animal conflict**.

Economy

1. Status of Fiscal Deficit in States

News: The RBI has released the 7th edition of its statistical publication titled ‘Handbook of Statistics of Indian States 2021-22’.

Key Highlights from the RBI Data

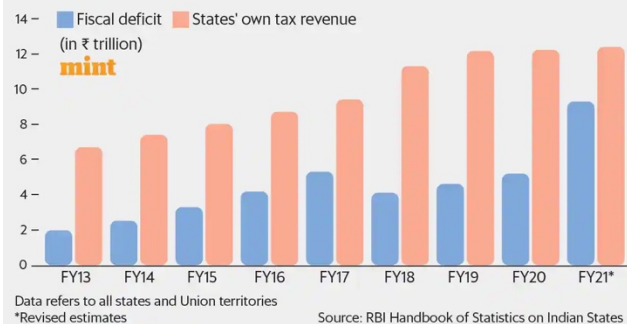
State’s Fiscal Deficit: The Gross Fiscal Deficit of the Indian States rose nearly 78% after the lockdown in FY2020-21. The Fiscal Deficit increased from INR 5.2 trillion in FY2019-20 to INR 9.3 trillion in FY2020-21. In FY2021-22, the deficit fell to INR 8.1 trillion but stood much higher than the pre-pandemic level. In FY2020-21, the highest fiscal deficit was recorded in **Tamil Nadu** followed by **Maharashtra** and **UP**.

States Tax revenue: Karnataka, Kerala, Madhya Pradesh and Maharashtra witnessed a marginal decline in their tax revenue receipts in FY2020-21. The highest fall in own tax revenue was seen in Kerala.

Centre’s Fiscal Deficit: In the case of the Union Government, the fiscal deficit jumped from 4.6% in FY2019-20 to 9.3% of the GDP in FY2020-21. (Refer EPIC July 2022 for The State of State Government Finances).

State finances

States’ fiscal deficit shot up in FY21 as tax revenue receipts stayed steady and expenses mounted.



2. Issues Raised by States in Pre-Budget Meeting

News: The Finance Ministers of States and UTs held pre-Budget Meeting with the Union Finance Minister.

Issues raised by the States

Cess and Surcharge: Cesses and surcharges as a % of gross tax revenue, have increased from 10.4% in FY2011-12 to 26.7% in FY2021-22. Cesses and surcharges do not form a part of the divisible pool of taxes. This has deprived the States of their legitimate share of revenue collected by the Union Government. States have urged the Union government to **make cess and surcharge part of the divisible pool** of Central Taxes.

Centrally Sponsored Schemes (CSS): The States’ financial autonomy is getting compromised as their contribution to centrally sponsored schemes has increased. States have demanded that the **Centre and State funding ratio should be 90:10** (rather than 60:10) in CSS.

Higher Borrowing Limit to States: Given the financial difficulties faced by States, the borrowing limit for States should be at 4% of GSDP for another year. The Union Government has set the borrowing limit at 4% of GSDP for FY2022-23 with another 50 bps window if States carry out reforms in the power sector.

GST: States like Tamil Nadu also raised concerns about pending dues from the 5-year GST compensation window for States that expired on June 30, 2022. States have also demanded that the GST revenue share of

States should be raised to 60% from the present 50% as the States are going through severe financial problems.

Old Pension scheme: Chhattisgarh Chief Minister asked the Centre to resolve the issue of refunds of the corpus given to the National Pension Scheme, as the State has restored the old pension scheme.

3. 'Friendshoring'

News: The US Treasury Secretary has pushed for 'friendshoring' to diversify trade away from countries facing geopolitical risks.

About Friendshoring

Friendshoring is also called '**allyshoring**'. It is a strategy where a country sources raw materials, components, and manufactured goods from **countries that share its values**. The dependence on the countries considered a 'threat' to the stability of the supply chains is gradually reduced.

Friendshoring is getting manifested in the way Western companies are diversifying supply chains and investing beyond China e.g., Apple has announced to shift its iPhone manufacturing facilities from China to India.

Implications of Friendshoring

Friendshoring may push the world **towards a more isolated place** for trade and reverse the gains of globalization. It is a part of the '**de-globalization**' process.

Global Supply Chains have allowed firms to manufacture products at the cheapest price. Hence it enhances affordability. Friendshoring can change the dynamics of the global supply chain, restricting manufacturers and ultimately increasing costs for consumers.

4. Loan Write-off by Banks

News: According to the RBI, Banks have written-off more than INR 10 Lakh Crore in loans over the last 5 years. They have been able to recover 13% of the amount.

About Loan Write-off

Writing-off a loan essentially means it will **no longer be counted as an asset**. By writing off loans, a bank can **reduce the level of non-performing assets (NPAs)** on its books. The loan write-off does not take away the **bank's right of recovery from the borrower through legal means**.

Reasons for Write-offs

The Bank writes off a loan after the borrower has defaulted on the loan repayment and there is a very low chance of recovery. The lender then moves the defaulted loan, or NPA out of the assets side and **reports the amount as a loss**.

After the write-off, banks are supposed to continue their efforts to **recover the loan using various options**. The tax liability will also come down as the written-off amount is reduced from the profit (treated as loss).

Amount Written-off

Private banks wrote off loans worth INR 2.7 lakh crore in the last 5 years in their effort to bring down NPAs. This works out to 27.3% of the total write-off of the last five years. Public sector banks have written-off INR 7.34 lakh crore accounting for 72.7% of the total write-offs.

5. Energy Conservation Amendment Bill, 2022

News: The Rajya Sabha has passed the Energy Conservation Amendment Bill, 2022. The Bill had been passed by the Lok Sabha in August 2022.

About the Bill

The Bill proposes to amend the **Electricity Conservation Act 2001** (last amended in 2010), to introduce changes such as incentivising the use of clean energy by issuing carbon-saving certificates.

Key Provisions of the Bill

Obligation to use non-fossil sources of energy: The Act empowers the Union Government to specify energy consumption standards. The Bill adds that the Government may require the **designated consumers** to meet a minimum share of energy consumption from **non-fossil sources**.

Carbon trading: The Bill empowers the Union Government to specify a **carbon credit trading scheme**. Carbon credit implies a tradeable permit to produce a specified amount of carbon emissions.

Standards for vehicles and vessels: Under the Act, the energy consumption standards may be specified for equipment and appliances which consume, generate, transmit, or supply energy. The Bill expands the scope to include vehicles (as defined under the Motor Vehicles Act, 1988), and vessels (including ships and boats).

Applicability to residential buildings: Under the Act, the energy conservation code applies to **commercial buildings**. Under the Bill, the new energy conservation and sustainable building code will **also apply to office and residential buildings** meeting the certain criteria.

Composition of the governing council of BEE: The Bill strengthens institutions such as the BEE by amending the composition of the governing council of BEE. (Refer EPIC August 2022 for Amendments to Energy Conservation Act and Carbon Markets).

PT BOX

Designated Consumers

Under the **Section 14(e)** of the Energy Conservation Act 2001, the Central Government can notify certain designated consumers. Industrial units from **9 energy intensive sectors** viz., **Aluminium, Cement, Chlor-Alkali, Fertilizer, Iron & Steel, Paper & Pulp, Railways, Thermal Power and Textile** have been notified as Designated Consumers.

6. High Subsidy Bill

News: The Union Government has sought the approval of the Parliament for fresh expenditure of INR 2.14 lakh crore towards subsidies, over and above INR 3.17 lakh crore budgeted for 2022-23.

High Subsidy Bill

The INR 5.32 lakh crore spending on subsidy in 2022-23 would be the second highest after the INR 7 lakh crore spent in 2020-21. In 2020-21, the spike in subsidies was on account of a one-time provision to **clear all dues** to the Food Corporation of India (FCI) and fertilizer companies.

The overshooting of subsidies in 2022-23 has been due to **COVID-19** and the **Russia-Ukraine war**. The pandemic has resulted in a record offtake of rice and wheat through the PDS under various welfare schemes like the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY).

Table 1: Centre's major subsidies in Rs crore

	Food	Fertiliser	Petroleum	TOTAL
2014-15	117671.16	71075.62	60268.82	249015.60
2015-16	139419.00	72415.17	29999.00	241833.17
2016-17	110172.96	66312.94	27538.71	204024.61
2017-18	100281.69	87000.07	24460.48	211742.24
2018-19	101326.99	70604.80	24836.95	196768.74
2019-20	108688.35	81124.32	38528.78	228341.45
2020-21	541330.14	127921.74	36754.65	706006.53
2021-22*	288968.54	153658.11	3421.07	446047.72
2022-23**	206831.09	105222.32	5812.50	317865.91
Apr-Oct 2021	155166.39	53477.06	1272.31	209915.76
Apr-Oct 2022	135079.75	102721.44	1107.84	238909.03

*Provisional; **Budget Estimate.

In fertilizer and petroleum, the higher subsidy outgo has been due to surge in global prices – from September–October 2021 and, more so, after the Russian invasion of Ukraine.

International Relations

1. Pangong Tso Lake

News: The Indian Army has deployed new landing docks and speedboats for patrolling on the Pangong Tso lake in Eastern Ladakh, matching the Chinese deployments on the lake.

About Pangong Tso Lake

Pangong Tso Lake is an endorheic lake (land-locked) located in eastern Ladakh. It lies partly in India's Ladakh region and partly in Tibet. The lake is formed from Tethys geosyncline. The Karakoram Mountain range which crosses Tajikistan, Afghanistan, Pakistan, China and India ends at the north bank of Pangong Tso.

The lake's water is crystal clear but brackish. The lake freezes during the winter allowing some vehicular movement on it as well.



Control of Pangong Tso

Nearly two-thirds of the lake is controlled by China with just about 45 km (out of 135-km long lake) under Indian control. The Line of Actual Control (LAC) running north-south cuts the western part of the lake, aligned east-west. Over the years, the Chinese have built motorable roads along their banks of the Pangong Tso.

The lake has mountain spurs of the Chang Chenmo range jutting down referred to as 'fingers'. India and China have a different understandings of where the Line of Actual Control (LAC) passes through. India has maintained that the LAC passes through Finger 8, which has been the site of the final military post of China. But Indian forces have not had active control beyond Finger 4. On the other hand, China says the LAC passes through Finger 2. It has been patrolling up to Finger 4 mostly in light vehicles and at times up to Finger 2.

2. No Money for Terror Conference (NMFT)

News: The Third 'No Money for Terror' (NMFT) Ministerial Conference on Counter-Terrorism Financing was held in New Delhi, India.

About the NMFT Ministerial Conference

The 'No Money for Terror' conference was started in 2018, as an initiative of the Government of France to focus on **cooperation between countries to choke terror funding**. Its aim is to provide a unique platform for participating nations and organisations to deliberate on the effectiveness of the current international regime on Counterterrorism Financing and the steps required to address emerging challenges. In 2019, the conference was held in Australia. The focus areas of 3rd Conference were on Global trends in terrorism and terrorist financing, the use of formal and informal channels of funding terrorism, emerging technologies and terrorist financing, and requisite international cooperation to address related challenges.

Key Highlights from India's Address

On Afghanistan: India has urged the international community to take cognisance of threats emerging from regime change in Afghanistan. Previous regime change in 1990s had led to the 9/11 attacks.

On Terrorism: India stressed that the international community should never ignore terrorists' safe havens or their resources. It is important to expose the double-speak of such elements who sponsor and support them. India has called for a need of international watchdog on terror financing and money laundering to continuously monitor the tendencies of some countries to sponsor terrorism.

On modes of Terrorism financing: Terrorists and terrorist groups understand the nuances of modern weapons and information technology such as the Dark Net and Cryptocurrency very well. The transformation of terrorism from dynamite and AK-47 to metaverse and virtual assets is a matter of concern for the countries. Hence, each country can and must act against the part of the chain within reach.

Countries supporting Terrorism: Certain countries support terrorism as part of their foreign policy. They offer political, ideological and financial support to them. There must be a cost imposed upon countries that support terrorism. Organisations and individuals that try to create sympathy for terrorists must also be isolated.

3. Article 4 of NATO Treaty

News: There was brief scare of a wider conflict in Europe after Poland alleged Russian missiles had hit its territory. There were talks of invoking Article 4 of the NATO Treaty.

About Article 4 of NATO

Article 4 of the NATO charter says that **member states will consult together** whenever, in the opinion of any of them, the **territorial integrity, political independence or security of another member is threatened**.

It establishes a consultation mechanism among members to exchange views and information and discuss issues prior to reaching an agreement and taking action.

Member states are not obligated to act if Article 4 is invoked, although deliberations could result in a decision to take joint NATO action.

About Article 5 of NATO

Article 5 is a **collective defence clause**. It states that the parties to the NATO treaty agree that an *armed attack against one or more of them in Europe or North America shall be considered an attack against them all*. It says that each member of NATO must take such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area.

This clause has been invoked only once, after the attacks in the United States on September 11, 2001.

4. India-France Defence Dialogue

News: The 4th India France Annual Defence Dialogue was held recently.

Key Takeaways Dialogue

Defence Cooperation: The two countries discussed ways to strengthen defence industrial cooperation with focus on 'Make in India'. They agreed that the technical groups from both the countries should meet early next year and take the key cooperation issues forward.

Military Cooperation: Increasing military-to-military cooperation by expanding the scope of bilateral exercises also came up during the dialogue. In 2021, the Navies of the Quad grouping (India, the US, Japan and Australia) conducted maritime drills in the eastern Indian Ocean Region as part of a French Navy-led exercise called "**La Pérouse**" for the first time.

5. China-Indian Ocean Region Forum

News: China has convened the 1st China-Indian Ocean Region Forum in Kunming, China.

About the China-Indian Ocean Region Forum

It has been organized by the China International Development Cooperation Agency (CIDCA). Its theme was 'Shared Development: Theory and Practice from the Perspective of the Blue Economy'.

The forum was attended by 'high-level representatives' and 'senior officials' from 19 countries: Indonesia, Pakistan, Myanmar, Sri Lanka, Bangladesh, Maldives, Nepal, Afghanistan, Iran, Oman, South Africa, Kenya, Mozambique, Tanzania, Seychelles, Madagascar, Mauritius, Djibouti, and Australia.

Australia and Maldives have released statements stating that they did not participate officially.

Outcome of the forum: The forum issued a "Joint Press Statement" that noted China's proposal to establish a marine disaster prevention and mitigation cooperation mechanism between China and countries in the Indian Ocean region.

China's plans for the Indian Ocean Region

The China-Indian Ocean Region Forum has underlined China's stepped-up interest in the Indian Ocean Region (IOR). China is already a major trading partner for most countries and where lie sea routes vital to China's economic interests. China has already set up its **first-ever overseas military facility in Djibouti**. Chinese military ships, tracking vessels, and submarines have been visiting ports in the IOR with greater frequency.

The Chinese Navy has a **long-term plan to deploy 6 aircraft carriers** to secure China's maritime interests, and 2 of them will be based in the Indian Ocean Region.

India's view the China-Indian Ocean Region Forum

India has viewed China's recent moves in the region suspiciously including the recent visit of a Chinese military tracking vessel, the Yuan Wang 5 to Sri Lanka. India sees the **Indian Ocean Rim Association (IORA)** as an already established platform for the region which has 23 members including Australia and Maldives with 10 dialogue partners which include China, Japan, Russia, the UK and the US.

6. US Inflation Reduction Act

News: The President of France has raised concerns over the UN Inflation Reduction Act (IRA). European Countries believe that the Act is discriminatory to non-US Companies.

About the US Inflation Reduction Act (IRA)

The Inflation Reduction Act is a US\$ 430 billion package of federal spending, tax breaks, credits, and levies aimed at fighting climate change, reducing healthcare costs and making large corporations pay their fair share in taxes.

Key Provisions of the Act

Healthcare: The Act extends expiring Medicare subsidies to 13 million Americans and aims to bring down the cost of prescription drugs, for which Americans pay 2-3 times more than citizens of other countries.

Tax code: The Act aims to make the U.S tax code fairer by imposing a minimum tax of 15% on America's wealthiest, most profitable corporations.

Electric Vehicles: The Act features tax credits for electric vehicles that will only apply if the product is assembled in the US and the majority of components are sourced domestically or from a free trade partner.

Tax credit: The Act offers tax credits to build clean technology manufacturing facilities and grants for refurbishing existing auto manufacturing facilities to make zero-emission vehicles.

Europe's Concerns about the IRA

EU member countries fear that the IRA tax credits and subsidies to EVs and other green product makers in the US put European companies at a disadvantage.

The EU's own new green plan '**Fit for 55**' is targeting to cut CO₂ emissions from cars by 55% and vans by 50% by 2030 and all emissions from cars by 2035. For this, it will need to significantly increase its uptake of electric vehicles. However, IRA raises fears of automakers moving to the US.

U.S. President has said that there is room for 'tweaks' in the IRA to "make it easier for European countries to participate" and it was "never intended" to exclude cooperating countries.

7. India's View on Terrorism

News: India has circulated a concept note at the UN Security Council (UNSC). The Note observed that the era of classifying terrorists as 'Good' or 'Bad' based on 'political convenience' must end.

About India's View on Terrorism

Terrorism as Transnational threat: The terrorist attacks around the world, like in New York, London, Mumbai, Paris, and many parts of West Asia and Africa, highlight that the threat of terrorism is **grave and universal**. A **transnational threat**, terrorism can be defeated only by the **collective efforts** of all Members of the UN.

Use of Technology by terrorists: The **proliferation of digitalisation**, new and emerging **communications** and **financing technologies** have increased the risk of these technologies being used by terrorist groups. The risk of **radicalisation** through the Internet/social media, and terror financing using **crypto-currencies** and crowdfunding platforms, was heightened particularly during COVID-19. The countries have also witnessed the **use of unmanned aerial systems** for the surveillance of targets, **trafficking in drugs and arms** and the launching of terrorist attacks on critical infrastructure and public places.

Suggestions by India to Fight Terrorism

Terrorism in all its forms and manifestations must be condemned.

The era of classifying terrorists as 'bad', 'not so bad' or 'good' on the basis of 'political convenience' must end immediately. There **cannot be an exception or justification for any act of terrorism**, regardless of its motivation and location and time of attack.

8. Projection of Soft Power by India: Parliamentary Committee Report

News: A Parliamentary Standing Committee on External Affairs has recommended that Ministry of External Affairs (MEA) should prepare a policy document for projection of soft power.

About Soft Power

Soft power is the ability to affect others to obtain the outcomes one wants through attraction and persuasion rather than coercion or payment. A country's soft power rests on its resources of culture, values and policies. (Refer EPIC October 2022 for Using Sports to enhance Soft Power).

Problems in India's Soft Power Policy

(a) MEA is yet to put together a **comprehensive statement** detailing **India's Soft Power Strategy**.

(b) **Securing adequate funding** has been a key concern for government agencies. China is estimated to spend about US\$ 10 billion a year just on its Confucius Institutes and soft power promotion whereas Indian Council for Cultural Relations (ICCR) and other agencies put together spend around INR 300-400 crores. Most of India's expenditure goes into establishment and administration.

- (c) Government organizations face a **serious shortage of talent**. Bureaucrats were not always the right pick for cultural diplomacy.
- (d) India's efforts at building soft power have been bedevilled by coordination problems between government agencies. Bodies ranging from the Ministry of Youth Affairs and Sport to the ICCR were conducting separate international outreach activities.

Recommendations given by the Parliamentary Panel

- (a) The MEA should **prepare a policy document on India's soft power projections** delineating India's soft power and the manner in which it is being projected abroad along with a vision statement for the future.
- (b) The government should make concerted efforts to get **recognition of Ayurveda as a system of medicine** and **adopt pharmacopeia of India** so that the products can be exported as medicine.
- (c) **Revamp the focus, structure and functioning of DD India** for its global outreach.
- (d) A **system of common tourist passes** for entry to multiple heritage sites, as is prevalent in most European countries to streamline the process and avoid long queues at sites.
- (e) **Enhanced annual budgetary allocation** of INR 500 crores for the ICCR for conducting India's soft power and cultural diplomacy.
- (f) **Creation of a coordination committee** consisting of representatives from the Ministries of External Affairs, Culture, Youth and Sports Affairs, AYUSH and Science & Technology to overcome the lack of coordination among multiple institutions in projecting India's soft power.

Science and Technology

1. Lab Grown Meat

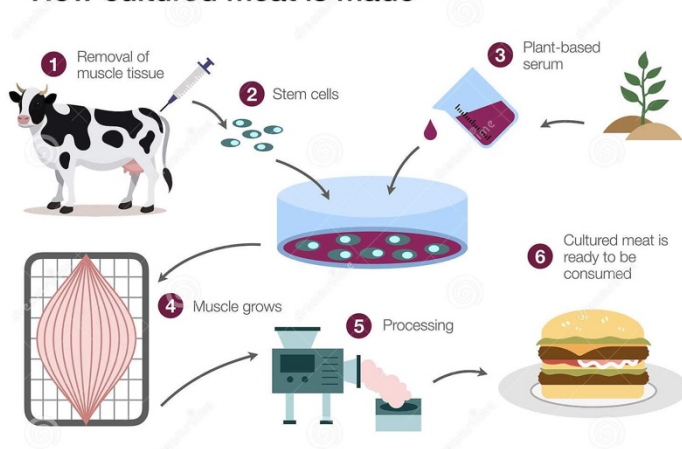
News: The US Food and Drug Administration (FDA) has given safety clearance to lab-grown meat. Till now, only Singapore had approved the sale of cultivated meat products.

About Lab-Grown Meat

Lab-grown meat (also referred to as cultivated or cultured meat) is meat that's grown directly from animal cells. This meat is made without the need to raise and slaughter animals.

Lab-grown meat is made by using the technique of **in vitro muscle tissue growth**. The process starts by taking a few cells from high-quality livestock animals (e.g., a cow or chicken). The cells are put in a clean-and-controlled environment and are provided with the essential nutrients needed for their natural replication and maturity. Essentially, the natural conditions existing within animal's body are recreated so that cells can continue to grow. Once the meat is ready, it is harvested, processed like conventional meat products, packaged and sold.

How cultured meat is made



Benefits of Lab-Grown Meat

Less contamination: Advocates of cultured meat say it's much less likely to be infected by *E. coli* bacteria (found in living animals) and other contaminants found in a meat processing plant.

Fewer antibiotics: Traditionally raised livestock are often given antibiotics to help keep them healthy. This can lead to **antibiotic resistance** (Refer EPIC February 2022 for Study on Superbugs and Anti-microbial Resistance).

Less environmental impact: Cultured meat requires less land and water and causes less pollution.

No killing of animals: While cultured meat requires a small sample of tissue, it does not require an animal to be killed.

Concerns related to Lab-Grown Meat

It's not vegan: Since lab-grown meat contains animal cells, it's not considered vegan.

Its price: Scientists made the first cultured meat hamburger in 2012. It cost US\$ 325,000 to create. But as technology advances, the cost of cultured meat should go down. But it will still be expensive.

2. Base Editing Technique

News: In the UK, a teenage girl's blood cancer has been treated through the Base Editing technique.

About the T-cell Acute Lymphoblastic Leukaemia (T-ALL)

T-ALL affects the stem cells in the bone marrow that produce a particular kind of **White Blood Cells (WBCs)** called T lymphocytes (T cells). These cells **provide a person immunity** by killing cells carrying infections, activating other immune cells, and regulating the immune response.

Typical treatment for T-ALL is similar to that of any leukaemia: **Chemotherapy** and **Stem cell or bone marrow transplant**. Chemotherapy either kills the cancerous cells or stops them from further dividing. If this fails, and the individual is suitable, doctors will conduct a bone marrow transplant.

Doctors have now used a new technology called **base editing**, which was invented ~6 years ago.

About the Base Editing Technique

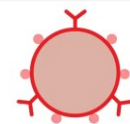
The 4 types of base: **Adenine (A)**, **Cytosine (C)**, **Guanine (G)** and **Thymine (T)** are the building blocks of the **human genetic code**. Just as letters in the alphabet spell out words that carry meaning, the billions of bases in human DNA spell out the instruction manual for every human body.

Base editing allows scientists to zoom into a precise part of the genetic code and then **alter the molecular structure of just one base**, converting it into another and **changing the genetic instructions**.

The doctors in the UK used this tool to engineer a new type of T-cell that is capable of hunting down and killing cancerous T-cells.

How does the treatment work?

1 Alyssa had T-cell leukaemia



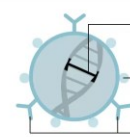
T-cells, a type of white blood cell, destroy threats in the body
Alyssa's were out of control

2 Doctors used 'base editing' to engineer her therapy



Base editing changes one letter in the genetic code

3 Donor T-cells were edited in three ways



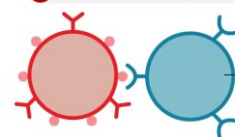
DNA altered to resist chemotherapy
Markings removed to protect donor T-cells
Receptors removed to prevent donor T-cells attacking the body

4 T-cells further modified to attack cancer



T-cell rearmed with new receptors

5 Battle of the T-cells



Modified T-cells find and destroy cancerous T-cells

Source: BBC research

BBC

3. Universal Flu Vaccine

News: Researchers are working on a universal flu vaccine that can work against 20 known Influenza A and B viruses.

Universal Vaccine

There are 20 subgroups of influenza that each represents thousands of viruses. Current vaccines can target 4 subgroups at most. These current vaccines also need to be updated every year to ensure they are a good match for flu viruses in circulation.

But the experimental vaccine includes 20 different types in the hope of **getting the immune system to recognize any flu virus it might encounter in the future**. The idea is to have a vaccine that will give people a baseline level of immune memory to diverse flu strains so that **there will be far less disease and death when the next flu pandemic occurs**.

Significance

This universal flu vaccine is based on the **mRNA technology** used in the highly successful Covid vaccines. But it has only been tested in animals to date, and it will be important to investigate its safety and efficacy in humans. This development is a very promising approach to the goal of producing a universal flu vaccine as well as vaccines that protect against multiple members of other viral families such as rhino and corona-viruses.

4. Draft Food Safety and Standards (Genetically Modified Foods) Regulations, 2022

News: The Food Safety and Standards Authority of India (FSSAI) has released the Draft Food Safety and Standards (Genetically Modified Foods) Regulations, 2022.

About the Regulations

The regulations will be applicable to food ingredients produced from GMOs that contain modified DNA. They will also apply to items that do not contain modified DNA but contain ingredients, additives, processing aids derived from GMOs. (Refer EPIC November 2022 for GM Crops in India: Issues and Challenges).

Key Provisions of the Regulations

Approval of food authority: No person shall manufacture, pack, store, sell, market or otherwise distribute or import any food or food ingredient produced from GMOs except with the prior approval of the food authority.

Labelling of GMO Products: All GMO food products must be labelled with the words 'contains genetically modified organisms'. This is subject to the condition that if the product contains 1% or more of the GM ingredient considered individually. This label must appear on the front of a pack of pre-packaged products. This labelling requirement also applies to the adventitious or technically unavoidable presence of GM ingredients. The labelling requirement will not be applicable to GM-food products in which the modified DNA is not detectable.

5. Small Cells for 5G Deployment

News: The Telecom Regulatory Authority of India (TRAI) has released its recommendations on 'Use of Street Furniture for Small Cells and Aerial Fibre Deployment'.

Small Cells in 5G Deployment

Small cells are low-powered radio access nodes or base stations (BS) that have a coverage range from a few meters up to a few hundred meters. The use of higher frequency bands for 5G rollout will have shorter coverage as **signals in these bands cannot travel through buildings or obstacles**.



Therefore, the macro cells will be required to be complemented with the **extensive deployment of small cells** so as to support all kinds of uses and applications, at all locations.

Advantages Small Cells

Small cells **provide coverage only for a very short distance** and therefore they are installed in a dense or hyper-dense manner. The density can be more than 200/sq. km. for good network coverage for high-capacity broadband.

Due to their lower level of radiation, **small cells require less stringent security** and installation practices, so it is **easy to install and operate**.

The small cells **can be mounted on any existing street furniture** like poles, bus stands, traffic lights, buildings, etc. This can obviate the need for erecting thousands of new towers resulting in the economical and fast deployment of small cells.

Issues in the Deployment of Small Cells

The issues include identifying the suitable street furniture based on the **availability of backhaul**, power, capabilities of street furniture for mounting suitable equipment, scalability and concerns related to local approval and safety.

TRAI Recommendations

- (a) Government should do away with the requirement of obtaining a permit for the installation of small telecom gear.
- (b) The Department of Telecom (DoT) should exempt Low Power Base Transceiver Stations (LPBTS) with effective radiation power of less than 600 watts from seeking clearance under mobile tower rollout rules.
- (c) DoT should make necessary provisions in the Gati Shakti Sanchar Portal to incorporate bulk application filing and processing for all categories of small cells.
- (d) Power distribution companies (DISCOMS) should make provisions to provide connections for telecom sites to service providers on priority basis and they should charge telecom operators on the basis of the running load and not on the sanctioned load.
- (e) Set up a broadband Steering Committee, State Broadband Committee and District or Municipal Monitoring Committee to evaluate and assess the progress of small cell roll-out.

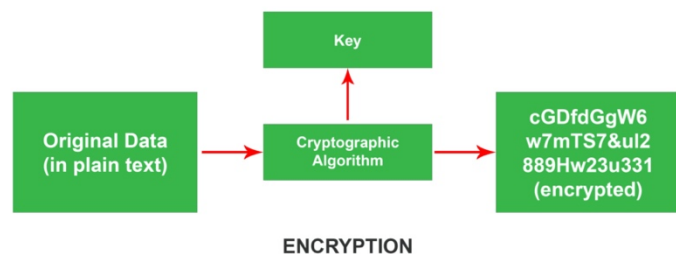
6. End-to-end Encryption

News: Apple has announced that it will increase the number of data points protected by end-to-end encryption on iCloud from 14 to 23 categories.

About End-to-end Encryption

End-to-end encryption is a communication process that **encrypts data being shared between two devices**. It **prevents third parties** like cloud service providers, Internet Service Providers (ISPs) and cybercriminals from **accessing data** while it is being transferred.

The process of end-to-end encryption uses an algorithm that **transforms standard text into an unreadable format**. This format can only be **unscrambled** and read by those with the **decryption keys**, which are only **stored on endpoints** and not with any third parties including companies providing the service.



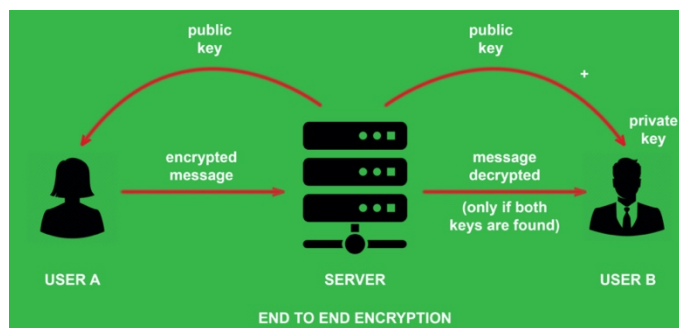
Usage of End-to-end Encryption

End-to-end encryption is used to **secure communications**. Some of the popular instant-messaging apps that use it are Signal, WhatsApp, iMessage, and Google messages.

Apple has stated that the total number of data breaches has more than tripled between 2013 and 2021. Hence, it is trying to address this rising threat by implementing end-to-end encryption.

End-to-end encryption is also seen as a technology that **secures users' data from snooping by government agencies**, making it a sought-after feature by activists, journalists, and political opponents.

Government agencies has expressed concerns that with end-to-end encryption, it may be difficult track messages shared by terrorists, criminals and other anti-social elements.



7. ChatGPT

News: Artificial Intelligence (AI) research company OpenAI has announced the launch of ChatGPT.

About ChatGPT

ChatGPT is a **dialogue-based AI chatbot** that can **understand natural human language** and **generate natural human-like written text** with impressive detailing. It is the latest evolution of the GPT or **Generative Pre-Trained Transformer**. GPT is a kind of computer language model that relies on **deep learning techniques** to produce human-like text based on inputs.

Working of ChatGPT

ChatGPT is **trained with AI and machine learning** to provide information and responses through a conversational interface instead of already system-generated or “computerized” responses. It is **trained on a huge sample of text taken from the internet**. The dialogue format makes it possible for ChatGPT to answer follow-up questions, admit its mistakes, challenge incorrect premises, and reject inappropriate requests. It can even recall previous comments in a conversation and relay them to the user.

Utility of ChatGPT

ChatGPT can be **used in real-world applications** like generating content for websites, answering customer inquiries, providing recommendations as well as creating automated chatbots. It can even discover new knowledge for the user and can play the role of a virtual assistant.

Limitations of ChatGPT

OpenAI claims ChatGPT will occasionally **produce inaccurate information** and that its **knowledge is restricted** to global events that occurred before 2021. AI technology can also **perpetuate societal biases** like those around race, gender, and culture.

8. New Breakthrough in Nuclear Fusion Technology

News: Scientists in the US have for the first time achieved a net gain in energy from a nuclear fusion reaction.

About Nuclear Fusion

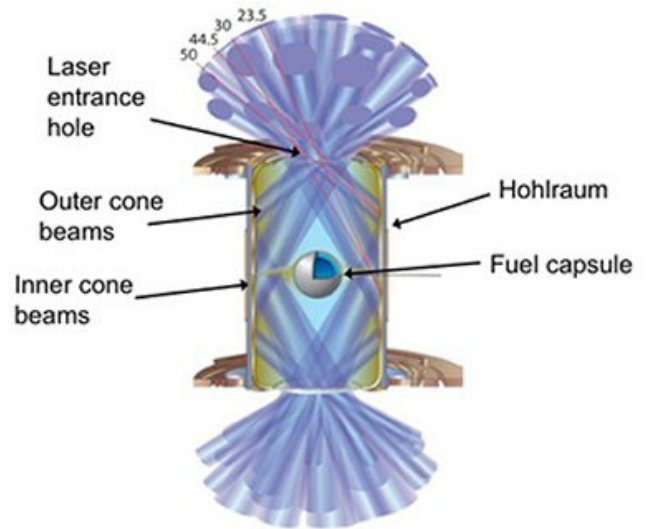
In fusion, nuclei of two lighter elements fuse together to form the nucleus of a heavier element. In this process, immense energy is generated. It is the process by which energy is generated in the Sun and other stars. Energy released in a Fusion reaction is much higher than fission e.g., the fusion of two nuclei of tritium (isotope of hydrogen), produces at least four times energy as the fission of a uranium atom. Nuclear fusion is considered the most dependable source of energy in future.

The challenge with fusion is that very high temperature is required for nuclear fusion to occur. This temperature is difficult to be established and sustained by human efforts. In practice, more energy is used in generating and maintaining such high temperatures than created through fusion.

About the Recent Experiment on Nuclear Fusion

At the National Ignition Facility (NIF) laser fusion experiment, electricity from the grid was sent into the world's largest **array of lasers**. The lasers shot optical energy into a tiny target chamber called a **hohlraum**. Inside the hohlraum is the **fuel capsule**. It contained a mixture of hydrogen isotopes. The powerful beam laser can generate 100 million °C (100,000,000°C) of heat. The laser beam was hotter than the Sun's centre and helped to compress the hydrogen fuel to more than 100 billion times that of Earth's atmosphere. The high temperature and pressure led to **the fusion of hydrogen atoms** releasing energy.

Scientists have been **able to generate higher energy** in a fusion experiment **than the energy applied** for causing the fusion reaction. This has created the possibility of commercial utilization of nuclear fusion in future, although much work remains to be done. (Refer EPIC February 2022 for Breakthrough in Nuclear Fusion Technology).

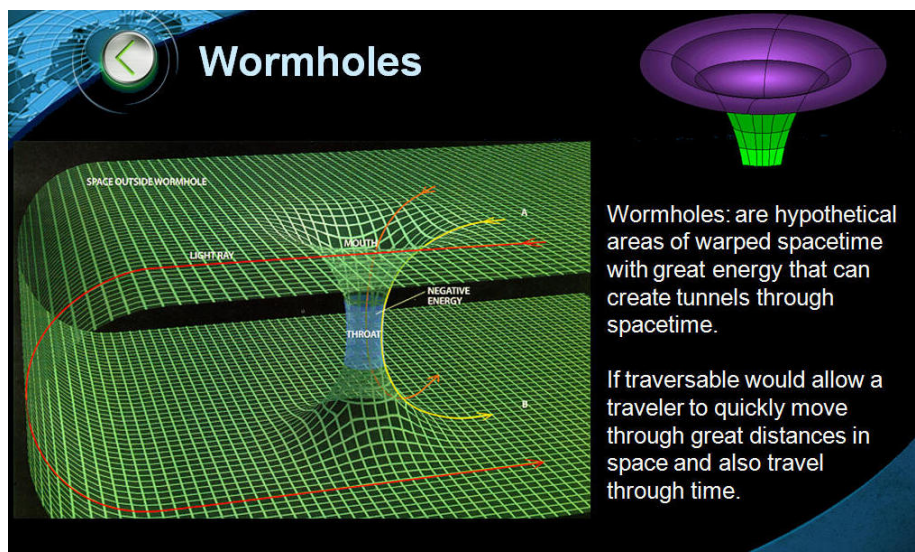


9. Wormholes

News: A team of physicists has created the first-ever wormhole, a tunnel that connects two distant points in space and time.

About Wormhole or Einstein-Rosen Bridge

Wormholes were first theorized in 1935 by Albert Einstein and Nathan Rosen. A wormhole is like a **tunnel between two distant points** in the universe that **cuts the travel time from one point to the other**. Instead of travelling for many millions of years from one galaxy to another, under the right conditions, the travel time can be cut down to hours or minutes using a wormhole.



Because wormholes represent shortcuts through space-time, they could **act like time machines**. A person might emerge from one end of a wormhole at a time earlier than when she entered its other end.

The presence of wormholes **has not yet been established through observation or inference by astronomers**. However, scientists often see wormholes described in the solutions to important physics equations such as Einstein's theory of space-time and general relativity.

10. Contributions of JC Bose

News: The Ministry of Culture has organized an international conference ('JC Bose: A Satyagrahi Scientist') on the contributions of JC Bose on his 164th birth anniversary.

About Jagdish Chandra Bose

Jagdish Chandra Bose (1858 – 1937) was an Indian physicist and plant physiologist. He earned a B.Sc. from University College London, which was connected with the University of London in 1883, and a BA (Natural Sciences Tripos) from the University of Cambridge in 1884.

Contributions of JC Bose

In 1917, he established Bose Institute – Asia's first modern research centre devoted to interdisciplinary studies. He **discovered wireless communication** and was named **Father of Radio Science** by the Institute of Electrical and Electronics Engineering.

He invented the **crescograph**, a **device for measuring the growth of plants**. He for the first time demonstrated that plants have feelings.

He was the first to demonstrate radio communication with millimetre wavelengths, which fall in the 30GHz to 300GHz spectrum.

Bose is considered the **Father of Bengali science fiction**. In 1896, he published *Niruddeshor Kahini*, first work of science fiction in the Bengali language. His other books include *Response in the Living and Non-Living*, *The Nervous: Mechanism of Plants*, etc.

Bose was the **first Asian to be awarded a US patent**. In 1904, he was awarded a patent for his invention of a **detector for electrical disturbances**.

A **crater on the moon** has been named in his honour.

Environment

1. Carbon Border Adjustment Mechanism (CBAM)

News: Indian and other developing countries have opposed the EU proposed Carbon Border Adjustment Mechanism (CBAM).

About Carbon Border Adjustment Tax

A carbon border adjustment tax is a **duty on imports based on the amount of carbon emissions** resulting from the production of the product in question. As a price on carbon, it discourages emissions. As a trade-related measure, it affects production and exports.

About European Union's Carbon Border Adjustment Mechanism (CBAM)

The EU is planning to implement a Carbon Border Adjustment Mechanism (CBAM) from 2026. The proposed import tax would initially apply to five sectors: electricity, iron and steel, fertilizers, aluminium and cement.

This will negatively impact the Indian industry, the EU has been the destination for nearly 17% of total Indian exports between 2012-2021. Around 6% of these exports will fall under the purview of the CBAM. Of these CBAM- implicated Indian exports, the iron & steel sector, followed by aluminium will be the most affected.

Views of Developing Countries

BASIC (Brazil, India, South Africa and China) has said that unilateral measures and discriminatory practices such as carbon border taxes could **result in market distortion** and aggravate the trust deficit amongst countries. It is also against the UN principle of **Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC)**. Under CBDR-RC, richer countries have the responsibility of providing financial and technological assistance to developing and vulnerable countries to fight climate change.

2. Climate Change Performance Index, 2023

News: Climate Change Performance Index, 2023 has been released by Germanwatch, the New Climate Institute and the Climate Action Network.

About the Climate Change Performance Index (CCPI)

It is an independent monitoring tool for **tracking the climate protection performance** of 59 countries and the European Union which together generate over 92% of global Greenhouse Gas Emissions (GHGs). Its aim is to enhance transparency in international climate politics and enable comparison of climate protection efforts and progress made by individual countries.

CCPI assesses each country's performance in 4 categories: **(a) GHG Emissions** (40% of the overall ranking); **(b) Renewable Energy** (20%); **(c) Energy Use** (20%); **(d) Climate Policy** (20%).

Key Findings of CCPI, 2023

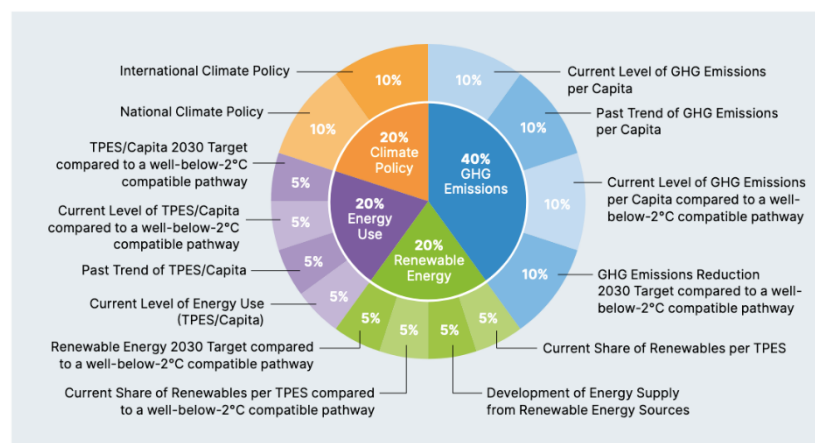
India has been **ranked 8th** amongst a group of 59 countries and the EU. It has risen two spots since last year. India has earned a **high rating in the GHG Emissions and Energy Use** categories with a medium for Climate Policy and Renewable Energy.

India had increased its climate targets in the NDC (Nationally Determined Contributions) and announced a net zero target for 2070. However, India's climate actions were still not consistent with the 1.5°Celsius goal. India has plans to increase its oil and gas production by over 5% by 2030.

Denmark and Sweden have been assessed to be the top performers this year as well.

China has been ranked 51st. It has dropped 13 places mainly because of the country's continued reliance on coal and lack of clarity on long-term climate policies. The **US has been ranked 52nd**. It has risen 3 ranks because of the recent climate measures announced by the US administration.

Components of the CCPI



3. India's Objection to Koronivia Joint Work on Agriculture

News: India has communicated objections to discussions under the Koronivia Joint Work on Agriculture which has sought to expand efforts to reduce emissions of greenhouse gases to the agriculture sector.

About the Koronivia Joint Work on Agriculture (KJWA)

It is a landmark decision recognizing the potential of agriculture in tackling climate change. The KJWA was established at the COP23 in Fiji in 2017 as a new process to advance discussions on agriculture under UNFCCC. The joint work will address 6 topics related to **soils, nutrient use, water, livestock, methods for assessing adaptation**, and the **socio-economic and food security** dimensions of climate change across the agricultural sectors.

India's Opposition to the Discussions

A draft decision under the Koronivia Joint Work mentions **mitigation from the agriculture sector**.

India has opposed this draft and said that these are **not "luxury" emissions but "survival" emissions of the poor**. It blamed the developed countries' **historic emissions** for the current climate crisis.

In most developing countries across the world, **agriculture is done by small and marginal farmers** who are vulnerable to climate change. By seeking to extend the scope of mitigation to agriculture, India has contended, developed countries want the world agriculture, lands and seascapes to become a site of mitigation for their profligate, excessive emissions.

Similar stand has been taken by India on emissions from methane in the farm sector also. It doesn't want any reference to emissions from agriculture because India is highly dependent on agriculture. Nearly half of all Indians depend on farm-derived income.

Key facts and figures

- 1 821 million people in the world suffer from hunger while 2 billion adults are overweight or obese.
- 2 2.4 billion people in the southern hemisphere are threatened by climate hazards.
- 3 Around 750 million people worldwide are exposed to severe levels of food and nutrition insecurity, this is compounded by the COVID-19 pandemic.
- 4 Food systems account for 25 to 30 percent of total global GHG emissions, and can generate other negative effects, such as pollution, biodiversity loss, land degradation, malnutrition and inequity.
- 5 108 million children worldwide work in agriculture, missing out on the opportunity of formal education and exposed to workplace hazards.

4. Dynamic Groundwater Resources of India, 2022 Report

News: The Union Ministry of Jal Shakti has released the Dynamic Groundwater Resources of India, 2022.

Key Findings of the Report

Groundwater: The total annual groundwater recharge for the country this year has increased by 1.29 billion cubic meters (BCM), in contrast with the last assessment conducted in 2020. The total annual extractable groundwater resources have also increased by 0.56 BCM. However, the annual groundwater extraction for irrigation, domestic and industrial uses has decreased by 5.76 BCM during this period.

Major consumer of Groundwater resources: The agriculture sector is the predominant consumer of groundwater resources. About **87% of the total annual groundwater extraction is for irrigation use**. Only 30.69 BCM is for domestic and industrial consumption which is about 13% of the total extraction.

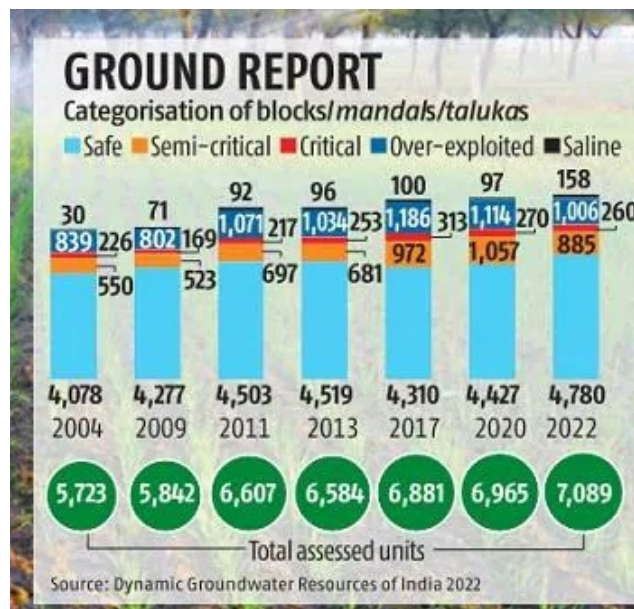
Of the total 7,089 assessment units in the country, (a) 1,006 units or 14% have been categorized as over-exploited, **(b)** 260 units (4%) as critical, **(c)** 885 units (12%) as semi-critical; **(d)** 4,780 units (67%) as safe.

State-wise Groundwater Extraction: **(a)** The overall stage of groundwater extraction in the country is 60.08%; **(b)** The groundwater extraction is very high in Haryana, Punjab, Rajasthan, Dadra & Nagar Haveli and Daman & Diu where it is more than 100%; **(c)** In Delhi, Tamil Nadu, Uttar Pradesh, Karnataka and UTs of Chandigarh,

Lakshadweep and Puducherry, the groundwater extraction is between 60-100%; (d) In rest of the states, groundwater extraction is below 60%.

Impact of rock formations: (a) The type of rock formations and their storage and transmission characteristics have a significant influence on groundwater recharge; (b) **Porous formations** such as the **alluvial formations** in the Indo-Ganga-Brahmaputra basin generally have **high specific yields** and are **good repositories of groundwater**; (c) Groundwater occurrence in the fissured formations (occupying nearly 66% of the geographical area of the country), is mostly limited to the weathered, jointed and fractured portions of the rocks.

According to experts, the data may not be accurate. This is because the assessment units are too large in size and too few in number to present a micro-level picture. (Refer EPIC November 2022 for Groundwater Usage in India).



5. Plastic Waste Management Programme

News: UN Development Programme (UNDP) is implementing Plastic Waste Management Programme in India.

About the Plastic Waste Management Programme

The objectives of the programme are: (a) Create a model for taking plastic waste management **from the informal to formal economy** by helping them access government welfare programmes; (b) Establish **Material Recovery Centres** for sustained practices in waste management; (c) Institutionalize *Swachhta Kendras* within governance framework structures and improve the socio-economic conditions of waste pickers.

Achievements of the Programme

- (a) The project is currently operational in 36 cities with 22 Material Recovery Centres (*Swachhta Kendras*) established for sustainable waste management practices.
- (b) The plastic collected and processed so far has already crossed 66,000 metric tonnes.
- (c) The programme ensures the well-being and financial inclusion of the '*Safai Sathis*' or waste-pickers by **linking them to the social protection schemes** like the 'Jan Dhan' accounts, 'Ayushman Bharat', pension schemes, and scholarships for children among others.

Safai Sathis (waste-pickers) are the backbones of traditional waste management in most Indian cities. They are predominantly women. 70% *safai sathis* belong to socially-backward groups and over 60% have no formal education. They have low access to caste, or occupation certificate thwarting any attempts at formalizing their work and limits their access to government social security schemes.

6. Regenerative Agriculture

News: A Report 'Climate Change and Land' by IPCC has emphasized importance of Regenerative Agriculture.

About Regenerative Agriculture

Regenerative agriculture is a holistic farming system that focuses on soil health, food quality, biodiversity improvement, water quality and air quality. This is done through methods like **reducing the use of chemical fertilizers and pesticides, reducing tillage, integrating livestock and using cover crops.**

Need of Regenerative Agriculture

The current intensive agriculture system has led to **soil degradation** and constant losses. There may not be enough soil to feed the world in the next 50 years. **Soil fertility and biodiversity are also decreasing** across the globe.



Benefits of Regenerative Agriculture

Regenerative farming can **improve crop yields** by **improving the health of soil** and its **ability to retain water**, as well as **reducing soil erosion**. It can ensure food security for rising global population. Regenerative farming can also **reduce emissions from agriculture** and turn the croplands and pastures (cover up to 40% of Earth's ice-free land area) into **carbon sinks**. Other benefits of regenerative agriculture include more **efficient water use and fewer pests**, because greater biodiversity makes the land more resilient.

7. Pharmaceutical Pollution

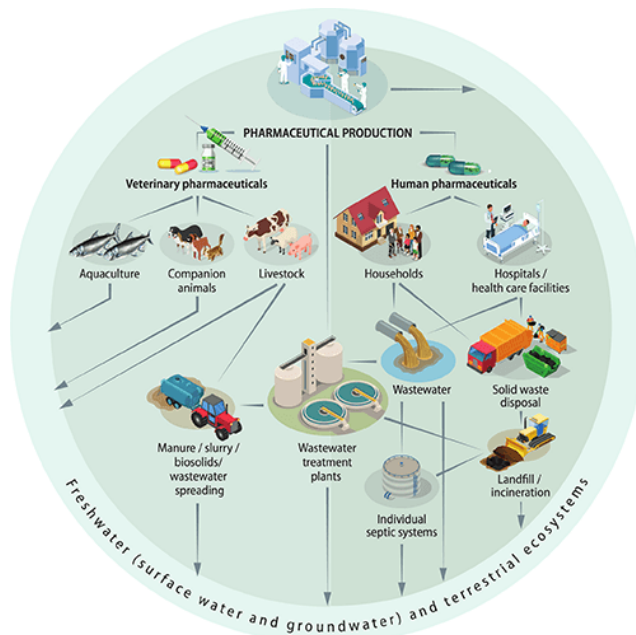
News: According to a Lancet Report, ~43% of world's rivers are contaminated with active pharmaceutical ingredients in concentrations that have disastrous ramifications for health.

About Pharmaceutical Pollution

Pharmaceutical plants are often incapable of **filtering out all the chemical compounds** used in their manufacturing process. The chemicals **seep into the surrounding freshwater systems** and eventually into the oceans, lakes, streams, and rivers.

Untreated discharge of wastewater from pharmaceutical plants into open fields and nearby water bodies increases the pharmaceutical waste (and by-product load) in the environment, landfills, or dumping areas.

The pollutants enter water bodies through pharmaceutical manufacturing plants, hospitals, wastewater treatment plants etc. All this is considered **pharmaceutical pollution**.



Status of Pharmaceutical Pollution in India

India is one of the biggest manufacturers of pharmaceuticals worldwide. It has been estimated that India is the **world's third-largest producer of pharmaceuticals**.

Varieties of pharmaceuticals have been detected on the surface, ground and in drinking water in many Indian cities due to the discharge of waste effluents.

They cause adverse effects on land, water, food, and people's health. Pharma pollution also causes Anti-microbial resistance. It has been estimated that about **60,000 new-borns die annually in India because of multidrug-resistance infections.**

History, Art and Culture

1. Bali Yatra (Bali Jatra)

News: The Prime Minister mentioned *Bali Jatra* during his address to the diaspora at G20 Summit in Bali, Indonesia. The *Yatra* celebrates ancient trade relations between India and Indonesia.

About Bali Yatra

Bali yatra literally means 'voyage to Bali'. It is one of the India's **largest open-air fairs** organized on the **banks of the Mahanadi** in Cuttack, Odisha.

The festival is organized **every year** to commemorate the 2,000-year-old **maritime and cultural links between ancient Kalinga** (today's Odisha) and **Bali and other South and Southeast Asian regions** like Java, Sumatra, Borneo, Burma (Myanmar), and Ceylon (Sri Lanka). The festival starts on the day of **Kartika Purnima** (full moon day in the month of Kartik i.e. October-November).

Ancient Maritime Link between Odisha and Indonesia

The Kalinga Empire (present-day Odisha) is known for its glorious maritime history. Due to the geographical location of Kalinga, the area saw the growth of ports during 4th and 5th century BC. Some of the famous ports, Tamralipti, Manikpatna, Chelitalo, Palur, and Pithunda allowed India to connect with other countries via the sea. The Kalingas constructed large boats called the '**Boitas**' to trade with the Indonesian islands.

Popular items of trade between Kalinga and Southeast Asia included **pepper, cinnamon, cardamom, silk, camphor, gold, and jewellery.**

Odia merchants formed settlements in Bali and influenced its culture and ethics. As a result of these influences, the Balinese also celebrate Hindu Festivals such as *Shivaratri*, *Durga Pooja*, and *Saraswati Pooja*. The '*Masakapan ke Tukad*' festival celebrated in Bali is similar to the Bali Yatra festival in Odisha. Both festivals are celebrated in memory of their maritime ancestors.

Kalidasa in *Raghuvamsa* has referred to the King of Kalinga as 'The Lord of the Sea', indicating maritime dominance of Kalingas.

2. Unakoti

News: Unakoti is famously called the 'Angkor Wat of the North-East'. It is vying for a UNESCO World Heritage Tag.

About Unakoti

Unakoti is located in Tripura. It is a '**Shaiba**' (Saivite) **pilgrimage site** with gigantic rock cut sculptures. The site displays almost the **same mystical charm** as the Angkor Wat temple of Cambodia. Hence, it is called the **Angkor Wat of North-East.**



Unakoti literally means 'one less than one crore' in Hindi and Bengali and it is believed that these many rock carvings (9,999,999) are present here. In the local Kokborok language, **Unakoti** is called Subrai Khung.



About Angkor Wat Temple

Angkor Wat literally means 'city of temples'. It is a temple complex in **Cambodia** and is the largest religious monument in the world. The temple was built by king **Suryavarman II** who is regarded as the Khmer empire's greatest kings.

The temple was originally constructed as a Hindu temple dedicated to the god Vishnu. But it was gradually **transformed into a Buddhist temple** towards the end of the 12th century. As such, it is also described as a 'Hindu-Buddhist' temple.

3. Lachit Borphukan

News: The 400th Birth Anniversary of legendary Assamese General and folk hero Lachit Borphukan was celebrated recently.

About Lachit Borphukan

Lachit Borphukan was a commander in the erstwhile Ahom kingdom. He is known for his leadership in the 1671 **Battle of Saraighat** that thwarted an attempt by Mughal forces to capture Assam. The battle was fought on the **banks of the Brahmaputra** in Guwahati.

He defeated the Mughal Army by brilliant uses of the terrain, guerrilla tactics, clever diplomatic negotiations to buy time, military intelligence and by exploiting the sole weakness of the Mughal forces—its navy.

Significance of Lachit Borphukan

Lachit Divas has been celebrated on November 24, his birth anniversary in Assam since the 1930s. He was the inspiration behind **strengthening India's naval force, revitalizing inland water transport** and creating infrastructure associated with it due to his great naval strategies.

The **Lachit Borphukan gold medal** is awarded to the **best cadet from the National Defence Academy**. The medal was instituted in 1999 to inspire defence personnel to emulate Borphukan's heroism and sacrifices.

4. Sri Aurobindo

News: The Prime Minister has released a commemorative coin and postage stamp to mark the 150th birth anniversary celebrations of Sri Aurobindo.

About Sri Aurobindo

Sri Aurobindo was born on August 15, 1872. He was an Indian philosopher, yogi, maharishi, poet, and Indian nationalist. Aurobindo's pragmatic strategies to get rid of British rule marked him as **'the Prophet of Indian Nationalism'**.



Education: His education began in a Christian convent school in Darjeeling. He entered the University of Cambridge, where he became proficient in two classical and several modern European languages.

In 1890, Aurobindo competed for **Indian Civil Service** (I.C.S) and won the position. He was later disqualified as he came purposefully late to the horse-riding practical exam.

In 1893, he came back to India and joined Baroda state service as a professor of English at Baroda College.

Freedom Movement: The partition of Bengal in 1905 provoked Aurobindo to leave his job in Baroda and plunge into the nationalist movement. He started the patriotic journal **Bande Mataram** to propagate radical methods and revolutionary tactics instead of supplication.

He was arrested thrice by the British — twice for sedition and once for conspiring to ‘wage war’.

In 1908, he was arrested on the charge of the **Alipore bomb conspiracy case** but was acquitted in 1909.

Integral Yoga: Though acquitted, Aurobindo faced a constant threat of jail or exile to the Andamans, forcing him to seek refuge in Pondicherry, a French enclave. Here, he developed a spiritual practice called **Integral Yoga**. The central theme of his vision was the evolution of human life into a divine life in the divine body.

Aurobindo’s Ideas on Second World War: Several Indians saw the WWII as an opportune moment to get rid of colonial occupation; Aurobindo asked his compatriots to support the Allies and ensure Hitler’s defeat.

In 1943, he was **nominated for the Nobel Prize for literature** and in 1950 for the **Nobel Peace Prize**.

Literary works: He was also a journalist and his first philosophical magazine called **Arya** was published in 1914. Among his many writings are **The Life Divine**, **The Synthesis of Yoga** and **Savitri**.

Miscellaneous

1. India Inequality Report 2022: Digital Divide

News: Oxfam has released a report titled ‘India Inequality Report 2022: Digital Divide’. The Report highlights the extent of digital divide in India and its impact of education, health, financial inclusion etc.

About Digital Divide

Digital divide refers to the **gap between individuals, households, businesses and geographic areas** at different **socio-economic levels** with regard to both their **opportunities to access Information and Communication Technologies (ICTs)** and to their use of the internet for a wide variety of activities.

Key Findings of the Report

(a) 61% of men-owned mobile phones in 2021 compared to **just 31% of women**; (b) Only 31% of the rural population uses the Internet compared to 67% of their urban counterparts; (c) The reach of digital technologies remains largely limited to male, urban, upper-caste, and upper-class individuals. 8% of the general caste, **less than 1% of the Scheduled Tribes (STs) and 2% of the Scheduled Castes (SCs)** have access to a computer or a laptop; (d) The use of computer devices

Digital Gender Divide

According to the **UNICEF Gender and Innovation Brief**, there are 3 major reasons for Digital Gender Divide

ACCESS

- Women have lesser access to **digital devices, data and networks** compared to men.
- **Social norms and gender inequality** underpin the digital gender gap.
- Mobile phones are viewed as a **risk to women’s reputation** and as an **interruption to caregiving responsibilities**.
- Women’s online activity is often governed by male relatives.
- In India, families exhibited **preference to sons** in providing access to digital devices/data for online education during COVID-19 pandemic.

DIGITAL LITERACY

- Due to Gender inequality women have lower levels of education and **less practice in using or creating digital content**.
- A UNICEF Study found that African and Asian women with secondary education are **6 times more likely to be online** than women with only primary education or less.
- It is also related to a lack of digital products and services **designed for women**.
- **Digital illiteracy is reinforced by lack of access** to digital technologies. Access is necessary to develop digital literacy.

ONLINE SAFETY

- Risks associated with digital technologies include **online harassment, cyberstalking, unsolicited sexual messages, child sexual exploitation** etc.
- According to UNICEF, 52% of women globally have experienced some form of digital harm.
- 90% of child sexual abuse images are of girls.
- 25% of women who are harassed online do nothing, citing reasons like **‘it’s not worth reporting’** and **‘authorities don’t care’**.
- Limitations in digital literacy make **women more vulnerable** to online risks than men.

Lack of access results in lack of digital literacy, which increases susceptibility to online abuse.

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has decreased in rural areas from 3% of rural population in pre-COVID times to 1% in post-COVID period; **(e)** The employment status seems to be linked to access to digital services as 95% of the permanent salaried workers have phones, as compared to only 50% of the unemployed; **(f)** Digital push during COVID has increased the number of real-time digital transactions to 48.6 billion in 2021. However, the **likelihood of a digital payment** by the richest 60% is **four times** more than the poorest 40% in India; **(g)** **Maharashtra has the highest internet penetration**, followed by Goa and Kerala, while **Bihar has the lowest**, followed by Chhattisgarh and Jharkhand.

Recommendations to Bridge the Digital Divide

(a) Improve internet availability in rural/hard-to-reach areas through community networks, public Wi-Fi/internet access points; **(b) Improve affordability** by investing in digital infrastructure, bringing a strong regulatory framework and lowering taxes on computers, phones; **(c) Conduct digital literacy camps** in rural India, and digitize panchayats/schools; **(d) Grievance redressal mechanism** to handle Ed-Tech and Health-tech related complaints. (Refer EPIC May 2022 for Digital Gender Gap and the Impact on Women's Economic Participation).

2. Network Readiness Index

News: The Network Readiness Index, 2022 has been released.

About the Network Readiness Index

It is prepared by the Portulans Institute, an independent non-profit institute based in Washington DC. Its aim is to rank the network-based readiness landscape of 131 economies based on their performances in 4 different pillars: **(a)** Technology; **(b)** People; **(c)** Governance; **(d)** Impact. It uses 58 different indicators.

Key Takeaways

India: India has improved its position by six slots and is now placed at **61st rank**.

India leads in several indicators. It has secured **(a)** 1st rank in 'AI talent concentration'; **(b)** 2nd rank in 'Mobile broadband internet traffic within the country' and 'International Internet bandwidth'; **(c)** 3rd rank in 'Annual investment in telecommunication services' and 'Domestic market size'; **(d)** 4th rank in 'ICT Services exports'; **(e)** 5th rank in 'FTTH/Building Internet subscriptions' and 'AI scientific publications'.

India has a greater network readiness than would be expected given its income level. India is ranked 3rd out of 36 in the group of lower-middle-income countries after Ukraine (50) and Indonesia (59). India has a score higher than the income group average in all pillars and sub-pillars.

Globally: The United States takes the 1st spot from the Netherlands (4th) as the most network-ready society. The biggest mover is Singapore (2nd) which surged from the 7th rank last year.

3. Global Report on Health Equity for Persons with Disabilities

News: The WHO has released a report titled 'Global Report on Health Equity for Persons with Disabilities'.

Key Highlights from the Report

Persons with Disabilities (PwDs): ~1.3 billion people (16% of the global population) has significant disability. Because of the **systemic and persistent health inequities**, many persons with disabilities face the risk of dying much earlier; even up to 20 years earlier than persons without disabilities. They have more than double the risk of developing conditions such as diabetes, stroke or depression. PwDs have more limitations in functioning – for example, inaccessible health facilities are up to 6 times more hindering for them.

Inequity in Healthcare to PwDs

(a) Hostile attitudes of healthcare providers; (b) Non-comprehensible health information formats; (c) Physical barriers, lack of transportation, or financial constraints that prevent access to a health center.

Recommendations

(a) The report recommends 40 disability-targeted actions in areas like Political commitment, governance, Health financing etc.; (b) It recommends 3 principles for all Governments and Health Sector Partners: (i) Include **health equity** for PwDs at the centre of any health sector action; (ii) Ensure **empowerment** and **meaningful participation** of PwDs in implementing any health sector action; (iii) Monitor and evaluate the extent to which health sector actions lead to health equity for PwDs; (c) Governments, health partners and civil society should ensure **all health sector actions are inclusive of PwDs** so that they can enjoy their right to the highest standard of health.

Barriers to Healthcare

According to WHO, people with disability encounter a range of barriers in accessing health care



Attitudinal Barriers

- Prejudice, stigma, discrimination by health service providers.
- Service providers lack knowledge about needs of the disabled.
- Women with disability face barriers to sexual, reproductive health services and information.



Physical Barriers

- Lack of appropriate infrastructure to access healthcare facilities like ramps to access passages, doorways, toilets on wheelchairs.
- Fixed-height furniture, including examination beds and chairs, can be difficult for people with disability to use.
- Lack of healthcare facilities in remote areas.



Communication Barriers

- Limited availability of written material or sign language interpreters at health services for persons with hearing impairment.
- Lack of information and prescription in accessible formats, like Braille or large print for persons with vision impairment.

Source: WHO



Financial Barriers

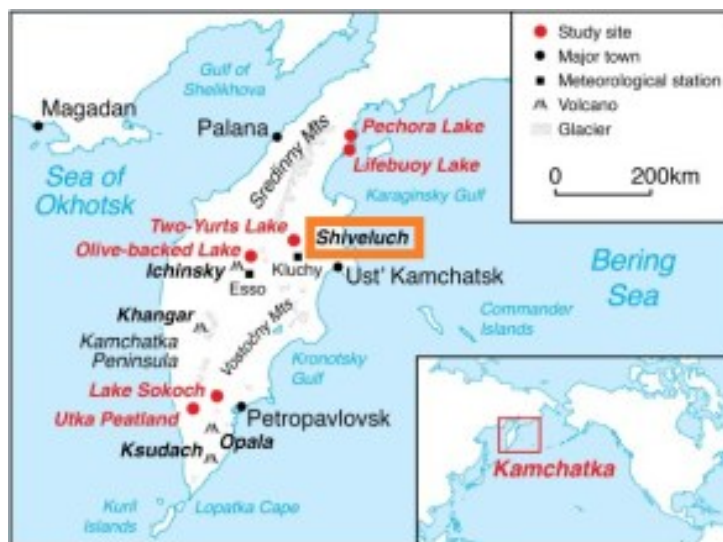
- Over half of all people with disability in low-income countries cannot afford proper health care.
- Inability to afford the costs associated with travelling to a health service and paying for medicine.

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Pointly

1. Shiveluch Volcano

Scientists expect the Shiveluch volcano in **Russia's Far Eastern Kamchatka peninsula** may be gearing up for its first eruption in 15 years. It is one of the largest and most active volcanoes in Kamchatka Peninsula in Russia. It has erupted at least 60 times in the past 10,000 years. It has two main parts: Old Shiveluch (3,283m) and Young Shiveluch (2,800m).



2. Kamchatka Peninsula

Kamchatka Peninsula is a peninsula in the Russian Far East. The **Pacific Ocean** and the **Sea of Okhotsk** make up the peninsula's eastern and western coastlines respectively.

The peninsula has a **high density of volcanoes**, with 29 active volcanoes being included in the **UNESCO World Heritage List** site in the Volcanoes of Kamchatka group. The peninsula is part of a vast belt '**Ring of Fire**' which circles the Pacific Ocean and is prone to eruptions and frequent earthquakes.

3. Semeru Volcano

Semeru volcano has erupted in **Indonesia's Eastern Java Island**. The volcano is also known as Mahameru, meaning '**The Great Mountain**' in Sanskrit. It is located in a **subduction zone**, where the **Indo-Australian plate subducts under the Eurasia plate**. It is the **highest mountain on the island of Java**. Indonesia is prone to seismic upheaval due to its location on the **Pacific's Ring of Fire**.



4. Fujiwhara Effect

The Fujiwhara Effect is any **interaction between tropical storms** formed around the same time in the same ocean region with their **centres or eyes at a distance of less than 1,400 km**. The intensity that could vary between a depression (wind speed under 63 km per hour) and a super typhoon (wind speed over 209 km per hour). The interaction **could lead to changes in the track and intensity of either or both storm systems**. In rare cases, the **two systems could**



merge, especially when they are of similar size and intensity, to form a bigger storm.

5. Lusophone/Community of Portuguese Language Countries (CPLP)

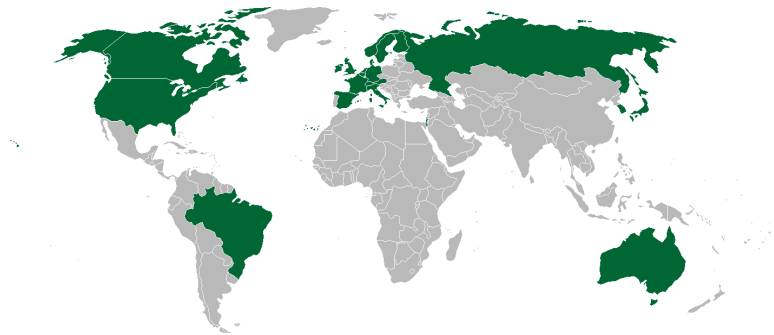
The Ministry of External Affairs (MEA) in partnership with the **Indian Council of Cultural Relations (ICCR)** and the Government of Goa is organizing the **International Lusophone Festival in Goa**. Lusophones are peoples that **speak Portuguese** as a native or as a common second language and nations where **Portuguese features prominently in society**. The Lusophone world is **spread over 9 countries across 4 continents**. CPLP is also known as the **Lusophone Commonwealth (Comunidade Lusofona)**. It is a multilateral forum, **founded in 1996**. **India joined the CPLP as an associate observer in July 2021**.

6. Kuki-Chin Refugees

The Mizoram Cabinet has approved the setting up of temporary shelters and other amenities for Bangladeshi Kuki-Chin refugees. The Kuki-Chin people **share ethnic ties with the Mizos**. They are collectively called the **Zo** people. The Kuki Chin people are settled in the **Chittagong Hill Tracts** (in Southeastern Bangladesh) that borders Myanmar, Tripura and Mizoram. (Refer EPIC March 2022 for The Need for an Asylum Law in India).

7. Paris Club

The Paris Club has proposed a 10-year moratorium on Sri Lankan debt and another 15 years of debt restructuring as a formula to resolve the Sri Lankan debt crisis. The Paris Club is an **informal group of creditor nations** whose objective is to find workable solutions to payment problems faced by debtor nations. It has **22 permanent members** including most of the western European and Scandinavian nations, the US, the UK, and Japan. **India is not a member** of the club.



8. Global Partnership on Artificial Intelligence (GPAI)

It was launched in 2020. It consists of **25 member countries** including India (among founding members), the US, the UK, European Union, Australia, and Canada among others. Its aim is to **bridge the gap between theory and practice on AI** by **supporting cutting-edge research** on AI.

9. Indo-Pacific Regional Dialogue (IPRD)

IPRD is an apex-level international annual conference of the **Indian Navy**. It is organized by the **National Maritime Foundation (NMF)**. NMF was established in 2005. It is the nation's sole **maritime think-tank** that concentrates on India's maritime interests. IPRD is an annual international conference. The Theme of 2022 was 'Operationalising the Indo-Pacific Oceans Initiative (IPOI)'

10. Indo-Pacific Oceans Initiative (IPOI)

The IPOI was articulated by the Indian Prime Minister at the 14th East Asia Summit (EAS) in 2019. It is a comprehensive and inclusive construct for **regional cooperation** that is focused on 7

interconnected pillars: (a) Maritime Security; (b) Maritime Ecology; (c) Maritime Resources; (d) Disaster Risk-reduction and Management; (e) Trade-Connectivity and Maritime Transport; (f) Capacity-building and Resource sharing; (g) Science, Technology and Academic Cooperation.

11. Exercise KAZIND

The 6th Edition of **India – Kazakhstan joint training exercise KAZIND-22** was held at Umroi (Meghalaya). It is an **annual bilateral military exercise**. It was instituted in 2016 as **Exercise Prabal Dostyk** which was later upgraded to a company-level exercise and renamed as Ex Kazind in 2018.

12. Exercise Malabar

The 26th edition of the multinational maritime exercise MALABAR culminated in the seas off Japan. This edition marked the 30th anniversary of the exercise. Exercise Malabar began in 1992 as a bilateral exercise featuring the maritime forces of the US and India. Japan and Australia joined in 2014 and 2020 respectively.

13. Exercise Agni Warrior

Exercise Agni Warrior is a bilateral exercise between the **Singapore and Indian Army**. Other exercises between India and Singapore are **SIMBEX** (naval exercise between the Indian and Singapore) and **SITMEX** (annual maritime exercise between India, Singapore and Thailand).

14. Exercise AUSTRA HIND

It is a bilateral training exercise between the Indian and the Australian Army.

15. Agni-3 Missile

Agni-3 is an **Intermediate Range Ballistic Missile** developed by the DRDO. It was first tested in 2006 but didn't yield expected results then. It has a strike range of over 3,000 km and is capable of carrying both conventional and nuclear warheads.

16. Agni-5 Missile

Agni-5 is a **long-range surface-to-surface nuclear-capable ballistic missile** developed by the DRDO. It has a three-stage solid-fuelled engine. It is a fire-and-forget missile, which cannot be stopped without an interceptor missile. It can strike targets at ranges of 5,000-5,500 km.

17. Kilonova (Macronova)

A kilonova is a transient astronomical event that occurs in a compact binary system when two neutron stars or a neutron star and a black hole merge. Traditionally, kilonova has been associated with short Gamma Ray Bursts (GRBs).

18. Gamma Ray Bursts (GRBs)

GRBs are extremely bright, high-energy short gamma radiations which get released **when massive stars collapse or die in the Universe**. Bursts can last from **ten milliseconds to several hours**. The energy associated with GRBs is many folds larger than what **Sun can emit in its entire lifetime**.

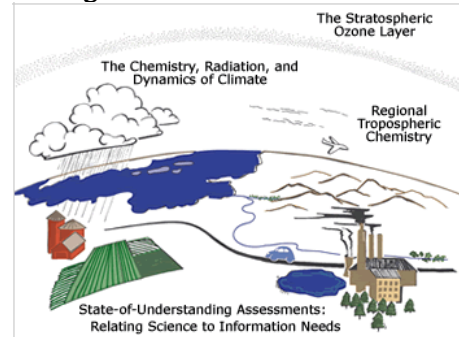


Short GRBs: When a pair of binary compact systems (either two blackholes, dense celestial bodies or neutron stars) rotate in a spiral fashion for billions of years, their ultimate merger leads to release of short GRBs. These emissions last for **less than 2 seconds**.

Long GRBs: When very massive stars die, the event results in the release of long GRBs and the associated gamma radiations last for **more than 2 seconds or longer**.

19. Aeronomy

The term aeronomy was coined and introduced about 60 years ago. It refers to the **scientific study of the upper atmospheric regions of the Earth and other solar system bodies**. It covers the chemistry, dynamics and energy balance of both neutral and charged particles.



20. ISRO's Mission to Venus: Shukrayaan

Shukrayaan-1 is a planned mission to Venus by ISRO to study the surface and atmosphere of Venus. The mission is expected to be launched in 2024. The mission would include an orbiter and an atmospheric balloon probe.

21. Meteor Shower

Meteors are bits of rocks and ice **ejected from comets** as they move in their orbits about the sun. A meteor shower occurs when the **Earth passes through the trail of debris left by a comet or asteroid**. Approximately 30 meteor showers occur each year that are visible to observers on Earth. Some of these showers have been around longer than 100 years.



22. Geminids Meteor Shower

Geminids are one of the best and most **reliable annual meteor showers**. Geminids Meteor Shower comes from the constellation Gemini, from whose location in the sky the meteor shower appears to originate. The Geminids are unique because, unlike most meteor showers, they originate not from a comet, but **from an asteroid, the 3200 Phaethon**. The 3200 Phaethon is named after the Greek mythology character Phaethon, son of the Sun God Helios. It takes 1.4 years to complete one round of the Sun.

23. HAKUTO-R Mission

The Japanese space start-up **Ispace Inc** has launched its own **private lander M1 to the Moon** under its **HAKUTO-R mission** from the SpaceX Falcon 9 rocket. HAKUTO-R is **Japan's first-ever lunar mission** and the first of its kind by a **private company**. The M1 lander will deploy **two robotic rovers**. One of the rover is four-wheeled **Rashid explorer** made by the **United Arab Emirates**.

24. Agnikul Launchpad Facility

Chennai-based space tech start-up **Agnikul Cosmos** inaugurated **India's first private space vehicle launchpad** at the **Satish Dhawan Space Centre (SDSC) in Sriharikota**. It has been designed and will be fully operated by Agnikul Cosmos. The facility has two parts: the **Agnikul launchpad** and the

Agnikul Mission Control Centre. Agnikul is planning to launch its **Agnibaan rocket** from this launchpad.

25. Agnibaan Rocket

Agnibaan is a **two-stage launch vehicle** that is capable of taking payloads of up to 100 kilograms to a **low-earth orbit around 700 kilometres** from the surface of the Earth. The Agnibaan rocket will be powered by the company's **3D-printed Agnilet engines**. Agnilet is the world's first single-piece 3D-printed rocket engine fully designed and manufactured in India. It is a "**semi-cryogenic**" engine that uses a mixture of liquid kerosene and super cold liquid oxygen to propel itself.

26. International Electrotechnical Commission (IEC)

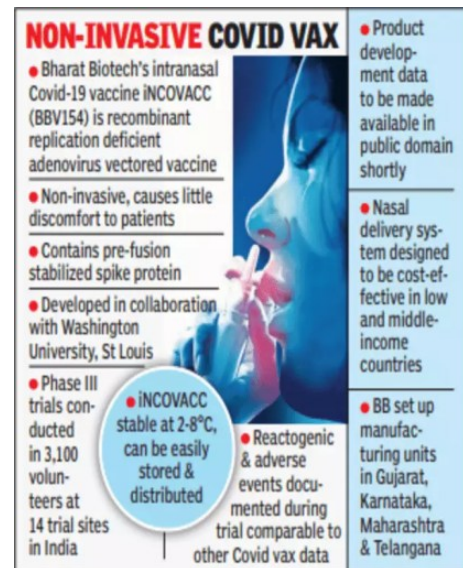
India has won the Vice Presidency of International Electrotechnical Commission (IEC) and Chair of the Strategic Management Board (SMB) for the 2023-25 term. IEC was founded in 1906. It is the world's leading organization for the preparation and publication of **international standards for all electrical, electronic and related technologies** collectively as "**electrotechnology**".

27. Bluebugging

It is a form of hacking that lets **attackers access a device through its discoverable Bluetooth connection**. Once a device or phone is bluebugged, a hacker can **listen to the calls, read and send messages** and **steal and modify contacts**. It can threat laptops, mobile phones and other devices with bluetooth capabilities. Hackers can access devices (with Bluetooth setting in discoverable mode) within 10 m radius.

28. iNCOVACC

The Central Drugs Standard Control Organisation (CDSCO) has approved the World's **first intra-nasal vaccine for COVID** named "iNCOVACC". The approval has been provided for restricted use in emergency situations in the age group of 18 and above. It is a **recombinant replication-deficient adenovirus vectored vaccine** with a **prefusion stabilized spike protein**. It has been developed by the Bharat Biotech International Limited (BBIL). The product development and clinical trials of the vaccine were **funded by the Department of Biotechnology** and BIRAC under the **Mission COVID Suraksha Program**. It is a **non-invasive and needle-free**, and is **easy to administer** as it does not require trained healthcare workers



NON-INVASIVE COVID VAX

- Bharat Biotech's intranasal Covid-19 vaccine iNCOVACC (BBV154) is recombinant replication deficient adenovirus vectored vaccine
- Non-invasive, causes little discomfort to patients
- Contains pre-fusion stabilized spike protein
- Developed in collaboration with Washington University, St Louis
- Phase III trials conducted in 3,100 volunteers at 14 trial sites in India
- iNCOVACC stable at 2-8°C, can be easily stored & distributed
- Reactogenic & adverse events documented during trial comparable to other Covid vax data
- Product development data to be made available in public domain shortly
- Nasal delivery system designed to be cost-effective in low and middle-income countries
- BB set up manufacturing units in Gujarat, Karnataka, Maharashtra & Telangana

29. Lecanemab

Lecanemab is a drug that is currently in clinical trials for the **treatment of Alzheimer's disease**. The trials have indicated that drug is **effective in slowing cognitive decline** for some patients with Alzheimer's disease. Lecanemab belongs to a class of drugs called **monoclonal antibodies**. The Alzheimer's disease is a progressive **neurologic disorder** that causes the brain to shrink (atrophy) and brain cells to die. The disease is the most common **cause of dementia**; a continuous decline in thinking, behavioural and social skills that affect a person's ability to function independently.

30. Zombie Virus

Zombie virus is the term given to a **virus that is frozen in ice** and therefore dormant. Zombie viruses have been dormant for many years due to **being trapped inside the ice** and have **come to life after the ice melted**. French scientists have warned of the **onset of another virus outbreak** after they revived a 48,500-year-old zombie virus buried under a frozen lake in Russia.

31. Deaths due to Bacterial Infections

According to a Lancet report, **Bacterial Infections were the 2nd leading cause of death worldwide**. In India, five bacteria were responsible for at least 6.8 lakh deaths in 2019. Globally, an estimated 1.3 crore people died due to infections globally.

Pathogen	Death counts in 2019	Death rate per 100,000 population, 2019
E.Coli	1.6 lakh	16.1
S-Pneumoniae	1.4 lakh	14.4
K-Pneumoniae	1.3 lakh	13.2
S-Aureus	1.2 lakh	12.8
A-Baumannii	1.1 lakh	11

32. Just Energy Transition Partnership

It is an **initiative of G7 nations**. This partnership is aimed at **helping large developing economies to move away from coal** in their electricity systems and **achieve the Paris climate goals**. **South Africa had signed at JETP at COP26 (Glasgow, 2021)**. South Africa has been promised to finance worth **US\$ 8.5 billion** in the first phase through mechanisms such as grants, loans and investments to meet its Nationally Determined Contribution (NDC) goals. **Indonesia has also joined JETP**. Germany and the US are co-leading the **negotiations with India to join JETP**. India has **refused to put 'coal phase-out'** on the negotiation table and wants to design its own "transition plan".

33. Global Shield Against Climate Risks

The Global Shield Against Climate Risks has been launched at COP27 in Egypt. It is a joint initiative of G7 and V20. **Vulnerable Twenty (V20)** is a dedicated cooperation initiative of countries **systemically vulnerable to climate change**. It was established in 2015 in Lima, Peru. The initiative will provide **pre-arranged financial support designed to be quickly deployed during climate disasters**. It is envisioned as a **social protection and insurance-based finance mechanism for loss and damage** outside the UNFCCC process.

34. The Green Voyage 2050 Project

The Green Voyage 2050 Project is a partnership project between the **Government of Norway** and the **International Maritime Organization (IMO)** launched in May 2019. Its aim is to transform the shipping industry towards a lower carbon future. India is cooperating with Norway as part of the Green Voyage 2050 project. India is a signatory to the **Hong Kong Convention for the recycling of ships**.

35. Wildlife Justice Commission

The Wildlife Justice Commission was set up in 2015. It is an **independent, not-for-profit organization** operating globally to **disrupt and help dismantle organized transnational criminal networks trading in wildlife, timber, and fish**. It is headquartered at The Hague, Netherlands.

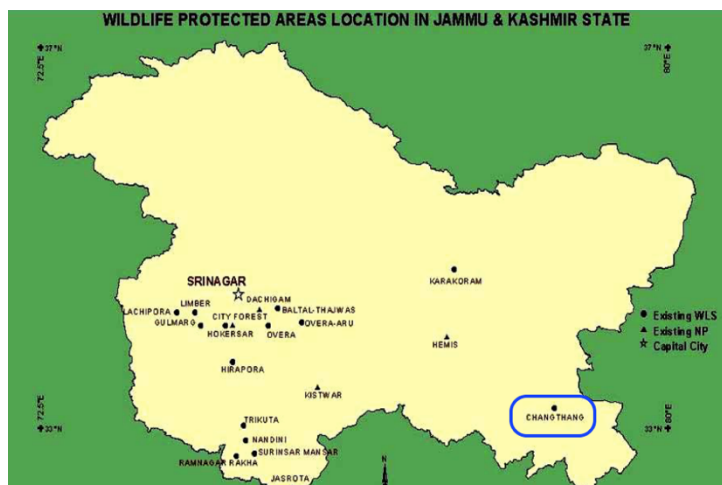
36. Kanger Valley National Park

Around 200 bird species were documented during the Kanger Valley Bird Survey in the State's first-ever systematic interstate bird survey. Kanger Valley National Park is **located in Chattisgarh**. The name of Kanger Ghati National Park is derived from the **Kanger river**, which flows through it.

Kanger Valley National Park is a **mixed humid deciduous type of forest**, in which **the Sal, Saugaun, teak and bamboo trees** are available in abundance.

37. Changthang Wildlife Sanctuary

It is located in Changthang plateau in Ladakh. It has some of the highest-altitude lakes including Tso Moriri. It is also believed to include the world's highest village, **Korzok Village** which draws tourists to the Korzok Monastery. It is famous for being the home of the snow leopard. The Tibetan wolf, wild yak, bharal, brown bear, marmot, Tibetan wild ass and dark-necked crane are also found in the sanctuary. India's Dark Sky Reserve located in Hanle, Ladakh will be part of Changthang Wildlife Sanctuary. (Refer EPIC September 2022 for Dark Sky Reserve).



38. Dalbergia Sissoo

It is commonly known as **North Indian Rosewood or Shisham**. It is a fast-growing, hardy, **deciduous rosewood** tree native to the Indian subcontinent and southern Iran. It is native to the foothills of the Himalayas. It is used as firewood, timber, poles, posts, tool handles, fodder, erosion control and as a windbreak. Oil is extracted from the seed and tannin from the bark. It is included in **Appendix II of the CITES**, thereby requiring countries to follow CITES regulations for the trade of the species. India and other countries had asked for its delisting from CITES Appendix II.



39. Coastal Red Sand Dunes (Geo-Heritage Site)

Geologists have urged the Andhra Pradesh Government to protect the site of Coastal Red Sand Dunes, of Visakhapatnam, Andhra Pradesh. The site is located along the coast and is about 20 km northeast of Visakhapatnam city and about 4 km southwest of **Bheemunipatnam** in Andhra Pradesh. Such **red sand deposits are rare** and have been reported only from 3 places in the tropical regions in South Asia such as **Teri Sands in Tamil Nadu, Erra Matti Dibbalu in Visakhapatnam** and in **Sri Lanka**. This site was declared a **Geo-heritage Site by the Geological Survey of India (GSI)** in 2014.



40. Arittapatti Biodiversity Heritage Site

The Tamil Nadu government has declared the **Arittapatti as the first Biodiversity Heritage Site** in the State. The Site comprises Arittapatti village and Meenakshipuram village in Tamil Nadu

(Madurai District). The site houses around 250 species of birds, including three important raptors; Laggar Falcon, Shaheen Falcon and Bonelli's Eagle. It is also home to wildlife such as the **Indian pangolin**, **slender loris** and **pythons**. The area is surrounded by a chain of seven hillocks or **inselbergs** that serve as a watershed charging 72 lakes, 200 natural springs and three check-dams. The site also features various **megalithic structures**, Tamil Brahmi Inscriptions, Jain Beds and 2200-year-old rock-cut temples. (Refer EPIC November 2022 for Anthropomorphic Sites and Megaliths).

41. Biodiversity Heritage Sites

These are considered as **unique and fragile ecosystems** that can be marine, coastal and inland waters, or terrestrial ecosystems. The criteria include: **(a)** Richness of wild as well as domesticated species; **(b)** High endemism; **(c)** Presence of **rare and threatened species, keystone species, species of evolutionary significance**; **(d)** Wild ancestors of domestic/cultivated species or their varieties; **(e)** Past pre-eminence of biological components **represented by fossil beds** and having **significant cultural, ethical or aesthetic values**. Under **Section 37 of Biological Diversity Act, 2002** the **State Government in consultation with local bodies may notify areas** of biodiversity importance as Biodiversity Heritage Sites (BHS).

42. Great Knot ShoreBird

Great Knot from Russia has been found in Kerala's coast flying over 9,000 km during the journey. Many juvenile great knots have been tagged with MOSKVA rings in the **Kamchatka Peninsula** in eastern Russia. Great Knot (*Calidris tenuirostris*) is a **small wader or shorebird**. It is an **international migratory wading bird** that travels vast distances between the Northern Hemisphere breeding grounds and Southern Hemisphere summer feeding grounds. Its IUCN status is **Endangered**.



43. Wren Babblers

A new species of **Wren Babblers** has been discovered in **remote northeastern Arunachal Pradesh**. It has been named as **Lisu wren babbler** after the **Lisu community of Arunachal Pradesh**. The **Grey-bellied Wren Babbler** (*Spelaornis reptatus*) is found in China (Yunnan), India (Arunachal Pradesh), Myanmar, and Thailand. Its natural habitat is a **subtropical moist montane forest**. Its IUCN status is Least Concern.



44. Black Corals

Black Corals are also known as **Antipatharians** or **thorn corals**. They are an order of soft **deep-water corals**. They can be **recognized by their jet-black or dark brown chitin skeletons**, surrounded by **polyps** (part of coral that is alive). Black corals can be found growing both in **shallow waters** and down to **depths of over 26,000 feet (8,000 meters)**, and some individual corals can **live for over 4,000 years**. Black



corals reproduce both sexually and asexually throughout the lifetime. Black corals act as an important habitat where **fish and invertebrates feed and hide from predators**.

45. Sea Cucumbers

The COP19 of CITES has accepted a proposal to **include sea cucumbers in Appendix II of the Convention**. They are **marine invertebrates** that live on the seafloor (benthic). They are part of **echinoderms**, which also includes starfish and sea urchins. They are found in **virtually all marine environments** from **shallow to deep-sea environments**. Sea Cucumbers are an integral **part of the coral ecosystem** as they act like garbage collectors of the ocean world, **recycling nutrients** that are essential for the survival of the coral reefs. They are treated as an **endangered species** listed under **Schedule I of Wildlife Protection Act of 1972**.



46. Himalayan Yak as Food Animal

The Himalayan Yak has been accepted as a Food Animal by the scientific panel of Food Safety and Standard Authority of India (FSSAI). Himalayan Yak is a species of **long-haired domesticated cattle**. It is found **throughout the Himalayan region** — Arunachal Pradesh, Sikkim, North Bengal, Uttarakhand, Himachal Pradesh, Ladakh and Jammu and Kashmir. Wild Yak is found in Tibet. **Yak milk is highly nutritious**. It is rich in fat and protein and contains many essential minerals **deemed to have medicinal value**. Yak meat is also considered lean.



47. GI Tags for Kerala's Products

5 products from Kerala that have received GI Tag. These are **Attappady Attukombu Avara** (Bean cultivated in the Attappady region of Palakkad), **Attappady Thuvara** (Red gram having seeds with a white coat), **Onattukara Ellu** (sesame), **Kanthalloor-Vattavada Veluthulli** (Garlic, Kanthalloor-Vattavada ares of Devikulam block panchayat in Idukki) and **Kodungalloor Pottuvellari** (Snap Melon, grown in Kodungalloor and parts of Ernakulam).

48. Nicobar Hodi

Andaman & Nicobar Islands has sought GI tag for the Nicobari **Hodi** craft. This is the first application from the Union Territory seeking a GI tag for one of its products. It is **traditional craft of the Nicobari tribe**. It is an **outrigger canoe**, operated in the Nicobar islands. They are made by locals based on **inherited traditional knowledge**. Its length is typically 12-15 times its width. **Hodis** are used for **transporting people and goods** from one island to another. The **Tuhet**, a group of families under a headman, consider the **Hodi an asset**. **Hodi races** are held between islands and villages.



49. Ima Market (Manipur)

Ima Keithel or Mothers Market is an **all-women market in Manipur**. It is said to be the largest such shopping complex in Asia. In this market, 3,000 'Imas' or mothers run the stalls. Items like vegetables, fruits, fish, household groceries, exquisite handlooms, household tools etc. are sold. **Male vendors and shopkeepers are barred**. The Ima Market is centuries-old, and has its origins in *Lallup Kaba*, an ancient bonded labour system. Under the system, Meitei men had to compulsorily serve some time working in the military and on other civil projects, keeping them away from home. The women, thus, were left to manage on their own, and they developed the market system.

50. Divya Kala Mela

It was organized by the Ministry of Social Justice & Empowerment at Kartavya Path in New Delhi. Its aim is to provide a platform for the products and craftsmanship of **Divyang artisans and craftsmen** from across the country. Such platforms help bring self-reliance to the lives of *Divyangjan* and provide them an opportunity to connect with big businessmen.

51. Meitei Script

Newspapers in Manipur are working towards replacing the Bengali script that's currently in use. Meitei script or Meitei Mayek is an abugida (pseudo-alphabet system) used for the Meitei language. According to the Sahitya Akademi, the history of the script dates back to at least the 6th century and was in use till the 18th century. The use declined with the arrival of missionary named Shantidas Gosai to Kangleipak (Manipur) and the use of Bengali script became prevalent. The Manipuri language was included in the **Eighth Schedule** in 1992 but in **Bengali script**. An amendment of the **Manipur Official Language Act in 2021** mandates the **phasing out of Bengali script over the next 10 years**.

52. Singapore Declaration

The 17th Asia and the Pacific Regional Meeting of the **International Labour Organisation** has adopted the **Singapore Declaration**. It has been adopted to deal with the issue of **dwindling wages of workers, inflation and unemployment**. The declaration has given several suggestions such as ensuring labour protection, closing gender gaps, protecting rights of migrant workers etc.

53. Gaslighting

Merriam-Webster, America's oldest dictionary publisher, has chosen '**Gaslighting**' as its Word of the Year. **Merriam-Webster dictionary defines Gaslighting as** "*psychological manipulation of a person usually over an extended period of time, that causes the victim to question the validity of their own thoughts, perception of reality or memories and typically leads to confusion, loss of confidence and self-esteem, uncertainty of one's emotional or mental stability and a dependency on the perpetrator*". Gaslighting involves an imbalance of power between the abuser and the person they're gaslighting. Abusers often exploit stereotypes or vulnerabilities related to gender, sexuality, race, nationality and/or class.

54. Perennial Rice

Farmers in China are now growing a perennial variety of rice (PR23). It is a variety of long-lived rice that is capable of **regrowing season after season without reseeded**. PR23 can yield 8 consecutive harvests across 4 years. It is also cheaper since it requires less labour, seeds, and chemical inputs.

It has environmental benefits due to reduced use of water. India is the **world's second-largest producer of rice**, after China, and the largest exporter with a **40% share in global trade**.

55. Transmission System for Integration of over 500 GW RE Capacity by 2030

The Union Ministry of Power has launched a plan 'Transmission System for Integration of over 500 Gw RE Capacity by 2030'. The plan entails **connecting mega solar parks and wind power zones with the national grid**. It also includes the construction of 8,120 circuit km (ckm) of high voltage direct current **transmission corridors**. The plan envisages installing **battery storage capacity** worth 51.5 GW by 2030 to provide '**round-the-clock power**' to end-consumers.

56. Wet Leasing

The Ministry of Civil Aviation has relaxed rules related to the wet leasing of aircraft. It has allowed the wet leasing for a year as opposed to the six months permitted so far. Wet leasing means **renting the plane along with the operating crew and engineers** while **dry leasing refers to taking only the aircraft on rent**. The technical term for wet leasing is **ACMI which stands for aircraft, crew, maintenance and insurance**. A lot of planes used by airlines in India are leased (not owned). Leasing planes is preferred in order to avoid the massive lump sum payments in buying planes and to quickly increase capacity.

57. First Loss Default Guarantee (FLDG)

FLDG is a **lending model** between a fintech and a regulated entity in which a third party guarantees to compensate up to a certain percentage of default in a loan portfolio of the regulated entities. Under these agreements, the fintech originates a loan and promises to compensate the partners up to a pre-decided percentage in case customers fail to repay.

58. Digital Shakti Campaign

The National Commission for Women (NCW) launched the 4th phase of the Digital Shakti Campaign. It was launched in 2018. Its aim is to help women across the nation to raise the awareness level on the digital front, to build resilience and fight cyber-crime in the most effective ways. **Through this campaign**, over 3 Lakh women across India have been made aware of **cyber safety tips and tricks, reporting and redressal mechanisms, data privacy and usage of technology** for their benefit. (Refer EPIC May 2022 for Digital Gender Gap and the Impact on Women's Economic Participation).

59. Central Depositories Services India Ltd. (CDSL)

Certain services at CDSL were disrupted due to a suspected cyber-attack. CDSL was founded in 1999. It is a **government-registered share depository** alongside its other State-owned counterpart National Securities Depository Ltd. (NSDL). It is a **Market Infrastructure Institution** that is deemed as a crucial part of the capital market structure. A depository is an organization which holds securities (like shares, debentures, bonds, government securities, mutual fund units etc) of investors. It also provides services related to transactions in securities.

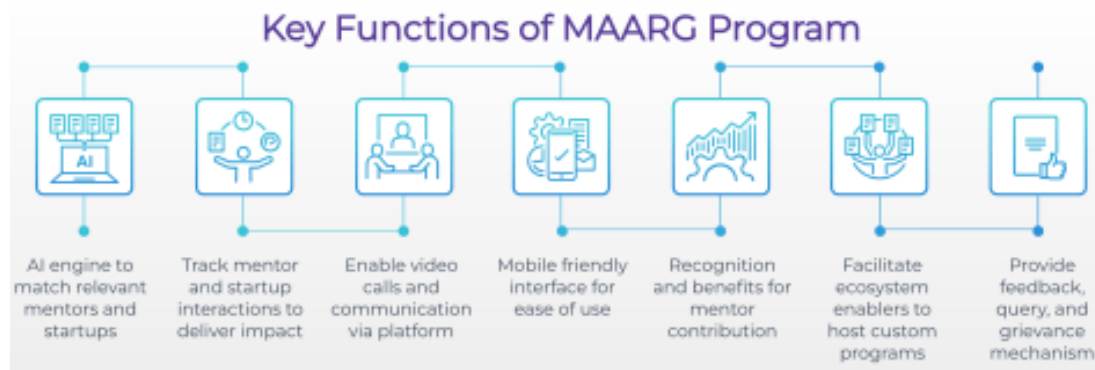
BANK	DEPOSITORY
Holds funds in an account	Holds securities in an account
Transfers funds between accounts on the instruction of the account holder	Transfers securities between accounts on the instruction of the BO account holder
Facilitates transfer without having to handle money	Facilitates transfer of ownership without having to handle securities
Facilitates safekeeping of money	Facilitates safekeeping of securities

60. TRAI's Caller ID System

Telecom Regulatory Authority of India is set to roll out its mobile phone caller identity system verified by KYC details. It will help replace the Swedish caller identification app Truecaller. The feature will be a **consent-based, voluntary programme**. The system will rely on the KYC data that users share with their network providers to avail of their services. Hence, it is expected to be more accurate than Truecaller that uses crowdsourced data. TRAI has also released a consultation paper about the potential introduction of a **Calling Name Presentation** (CNAP) feature.

61. MAARG Portal

MAARG portal is the **National Mentorship Platform by Startup India**. It stands for Mentorship, Advisory, Assistance, Resilience and Growth. It is a one-stop platform to facilitate mentorship for start-ups across diverse sectors, functions, stages, geographies, and backgrounds. Through this portal, startups can connect with academicians, industry experts, successful founders, seasoned investors and other experts from across the globe, through artificial intelligence(AI)-based matchmaking to get personalized guidance on growth and strategy.



62. CSIRT

The Government of India is planning to set up a **Computer Security Incident Response Team** (CSIRT) under the **Central Electricity Authority** to avert cyber-attacks on the country's **power grid**. It will **act as an arm of the Indian Computer Emergency Response Team**, (CERT-In) but will remain under the administrative control of the Central Electricity Authority.

63. PM WANI Scheme

It was launched in 2020 by the Department of Telecommunications. Its aim is to **expand the public WiFi network** in the country and **provide low-cost mass digital connectivity** to the underserved in rural areas and the urban poor. It had aimed to create up to 10 million public WiFi hotspots in India by 2022, but only 132,000 have been activated till now.

64. Agriculture Investment Portal (Krishi Nivesh Portal)

It has been launched by the Ministry of Agriculture and Farmers Welfare. The portal is a **one-stop solution for all investors who are looking to invest in India in agriculture and allied sectors**. The portal highlights the steps for ease of doing business in India. Its objective is to **boost investments in the agriculture sector of India**.

65. National Centre of Excellence for Green Port & Shipping (NCoEGPS)

It is an initiative by the **Ministry of Ports, Shipping and Waterways**. Its purpose is to **develop a regulatory framework and alternate technology adoption roadmap for Green Shipping to foster carbon neutrality and circular economy** in the shipping sector in India. **The Energy and Resources Institute (TERI)** is the knowledge and implementation partner for this project.

66. Nai Chetna

The **Ministry of Urban Development** has launched the **Nai Chetna-Pahal Badlav Ki** Campaign. The campaign is being implemented in Kerala under the umbrella of the Kudumbashree Mission. The campaign has been launched under **Deendayal Antyodaya Yojana-National Rural Livelihood Mission**. It is a community-led **National Campaign Against Gender-Based Discrimination**. This will be an **annual campaign** focussing on specific gender issues each year. The focus area of the campaign this year is **gender-based violence** with the aim to equip women to recognise and prevent violence and make them aware of their rights.

67. GHAR – GO Home and Re-Unite Portal

It has been launched by the National Commission for Protection of Child Rights (NCPCR). It is a portal for restoration and repatriation of children. The portal will digitally track and monitor children who are in the Juvenile Justice system and have to be repatriated to another Country/State/District. It will help in the speedy repatriation of children.

NOTE: With effect from 1st February 2022, the monthly ForumIAS Epic Magazine, for the month will provide wholistic coverage for the said month up to 20th of the month. This ensures that issues / stories that occur after 21st of the month are allowed to fully develop and are covered wholistically in the next month.