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TOPIC: Corruption

Issue in brief – G20 anti-corruption meet and India's framework to fight corruption.
https://timesofindia.indiatimes.com/india/corruption-primarily-involves-selfish-exercise-of-powers-aided-by-opaque-systems/articleshow/98312835.cms

Where in Syllabus:
GS 2: Important aspects of governance, transparency and accountability

❖ Why in news?

- Recently, the *first meeting of the G20 Anti-Corruption Working Group (ACWG)* concludes in Gurugram, Haryana with a call for strengthening Law Enforcement Cooperation for Action against Corruption and related economic crime among other measures.
- As part of the 1st ACWG meeting, *a 'Side Event' was held on Leveraging ICT to curb corruption in public sector*, an area in which India's recent initiatives like the GEM Portal and DBT have been globally recognized.

❖ What is corruption?

- ***Transparency International***: "Corruption is the abuse of entrusted power for private gain. "
- ***World Bank***: "Corruption is the abuse of public power for private benefit or the failure to use public power for the benefit of the citizens."

- According to ***Transparency International's 2022 Corruption Perceptions Index,*** India ranks 85th out of 180 countries assessed, with a score of 40 out of 100.
- India has the highest overall bribery rate (39%) and the highest rate of citizens using personal connections (46%), says the report titled "***Global Corruption Barometer – Asia".***
- As per the ***India Corruption Survey 2019***, Rajasthan and Bihar fared the worst in country with 78% and 75% of respondents admitting to paying bribes, while Telangana topped the list in south India.

- **Impact of corruption:** Corruption erodes trust, weakens democracy, hampers economic development and further exacerbates inequality, poverty, social division and the environmental crisis.

❖ What are the reasons for corruption?

- **Societal:**
  - ✓ Lack of awareness dand education about the negative impact Sf corruption on society.
  - ✓ Cultural and societal norms that prioritize personal gain over collective welfare.
  - ✓ Unequal distribution of wealth and resources, leading to disparities and competition for limited resources (*In India, 5% own more than 60% of country's wealth: Oxfam report*)

- **Economic**:
  - ✓ Economic policies and regulations that create opportunities for rent-seeking and illicit gains.
  - ✓ An informal economy that operates outside of legal frameworks, providing opportunities for corruption and tax evasion.
- **Political**:
  - ✓ Weak governance structures that lack transparency, accountability, and effective checks and balances.
  - ✓ Electoral politics and political funding that rely on money and favors from special interest groups.
  - ✓ Centralization of power and decision-making, which fosters corruption and misuse of authority.
- **Administrative** (**K Santhanam committee report**):
  - ✓ Delays in work.
  - ✓ Govt. arrogating to itself more than it could handle by regulatory functions.
  - ✓ Scope of discretion in the exercise of powers vested in state officials.
  - ✓ Cumbersome procedures to deal with issues that impact citizens on day to day basis.
- **Ethical:**
  - ✓ Low ethical standards and moral values among individuals and institutions.
  - ✓ A lack of adherence to codes of conduct and ethical guidelines in professions such as law, medicine, and business.
  - ✓ Tolerance and acceptance of unethical behavior within organizations and society.

❖ **What are the mechanisms to deal with corruption in India?**

Legal Frameworks	• Indian Penal Code, 1860 • The Prevention of Corruption Act, 1988 • The Benami Transactions (Prohibition) Act, 1988 • The Prevention of Money Laundering Act, 2002
Institutional Framework	• Centre – Lokpal, CVC, CAG, CBI, Enforcement Directorate, Serious Fraud Investigation Office. • State – Lokayuktas, Anti-Corruption Bureaus, SVC • PPP model, lateral entries for competition • Performance based promotion, posting, transfers of civil servants
Social Infrastructure	• Provide avenues for citizens to voice their concerns and monitor the functioning of government agencies. • RTI & citizen charters • Grievance redressal mechanism (CPGRAMS). • Social audit laws. Ex - Meghalaya.
Using technology	• Simplification of process, identifying and implementing systematic improvement measures, removal of discretionary power and increasing transparency. • They reduce leakages and ensure that benefits reach the intended recipients. • Eg: Online ticket reservation system, online payment of property taxes, faceless assessment of Income taxes, JAM trinity, DBT etc.
Promoting Public participation	• These mechanisms provide channels for reporting and addressing corruption and encourage citizens and organizations to take an active role in promoting transparency and accountability. • Complaint management system • Whistleblower mechanisms • Integrity pledge for citizens & organizations • Vigilance awareness weeks

❖ **Why it is difficult to fight corruption in India?**

- ***Complex bureaucratic structures***: The Indian government bureaucracy is large and complex, with multiple layers of administration, which can lead to inefficiencies, delays, and opportunities for corruption.
- ***Weak legal and regulatory frameworks***: Although India has laws and regulations in place to combat corruption, they are often weakly enforced and can be subject to manipulation.
- ***Culture of bribery***: In some sectors, bribery is seen as an accepted part of doing business, which can make it difficult to change attitudes and behaviour.
- ***Limited resources***: India is a large country with a growing population, and resources are often stretched thin, making it difficult to allocate sufficient resources to tackle corruption effectively.
- ***Political interference***: Corruption can be deeply ingrained in India's political system, and those in power may lack the will to address the problem, leading to limited progress in the fight against corruption.
- ***Lack of transparency***: There is often a lack of transparency and accountability in India's government and public institutions, which can make it difficult to detect and expose corrupt practices.
- ***Retaliation and intimidation***: Individuals who speak out against corruption may face retaliation or intimidation, which can make it difficult to expose corrupt practices and hold those responsible accountable.

❖ **Way Forward**

- ***NCRWC (National Commission to Review the Working of the Constitution) has recommended Partial state funding of elections***: This can help in reducing corruption by reducing the dependence of political parties and candidates on donations from individuals and corporations, which can create conflicts of interest and lead to favors being granted in return for donations. State funding can help level the playing field and reduce the influence of money in elections.
- **Strengthen international cooperation:** International cooperation is essential to combat corruption, including through mutual legal assistance, asset recovery, and sharing best practices and expertise. Eg: *G20 anti-corruption group* – share best practices, development of anti-graft strategies; *IMF Integrity Hotlines* which is a confidential reporting mechanism for employees to report any unethical, fraudulent, or corrupt behavior they witness within the organization.
- **Bring political parties under RTI** can help increase transparency and accountability in political parties, which can help reduce corruption. It can also make the decision-making processes of political parties more open and democratic, reducing the influence of backroom deals and corrupt practices.
- **Code of ethics for judiciary, politicians, bureaucrats** can help establish clear standards of behavior and accountability for those in positions of power. A strong code of ethics can discourage corrupt practices and provide a framework for investigating and punishing those who engage in corrupt behavior.
- **Rationalize Art 310, 311:** Article 310 and 311 of the Indian Constitution provide for job security and other protections to civil servants. However, these provisions have also been misused by corrupt officials to avoid accountability and punishment. Rationalizing these provisions can help prevent such misuse and ensure that civil servants are held accountable for their actions.
- **Legislation on lines of US False Claims Act:** The US False Claims Act provides for rewards to whistleblowers who report fraud against the government. This encourages people to report corruption and increases the likelihood of successful prosecutions. Enacting similar legislation in India can encourage whistleblowers to come forward with information about corruption and provide an effective mechanism for prosecuting corrupt officials.

Basic terms/related concepts and fact:

- ***Prevention of Corruption Act, 1988:*** It is an anti-corruption law in India that provides for the prevention of corruption and the prosecution of corrupt public officials. The act criminalizes bribery and the abuse of official position, and establishes punishment for those found guilty.

- ***Prevention of Money Laundering Act, 2000:*** It is a law that provides for the prevention and control of money laundering and the confiscation of proceeds of crime. The act criminalizes money laundering and the financing of terrorism, and provides for the establishment of a financial intelligence unit to monitor and investigate suspicious financial transactions. The act also establishes the procedure for the attachment and confiscation of property obtained through illegal means.

- ***Central Vigilance Commission*** is an apex Indian governmental body created in 1964 to address governmental corruption. It is charged with monitoring all vigilance activity under the Central Government of India.

Practice Questions

Prelims:

Q. With respect to Central Vigilance Commission, consider the following statements:

1. It is a statutory body formed under the Prevention of Corruption Act, 1988.
2. It exercises superintendence over the functioning of CBI insofar as it relates to the investigation of offences under the Prevention of Corruption Act, 1988.

Which of the statements given above is/are correct:

a) 1 only
b) 2 only
c) Both 1 and 2
d) None of the the above

Answer: b)

Mains: (Level-Moderate)

Q. "Corruption is a pervasive and systemic problem that has far-reaching consequences for society. Discuss the various measures that can be taken to curb corruption in India and address this persistent issue."   **[10 marks, 150 words]**

TOPIC: ELECTION COMMISSION OF INDIA

Issue in brief – The Supreme Court has ruled for the formation of a special committee for the appointment of the Chief Election Commissioner (CEC).
https://www.thehindu.com/news/national/election-commissioner-supreme-court-explained-judgment-reform-appointment/article66571964.ece

Where in Syllabus:
GS 2: Constitutional and Non-Constitutional bodies

❖ Why in news?

- Supreme Court ruled that the appointment of the Chief Election Commissioner (CEC) and Election Commissioners by the President will be based on the advice of a three-member high-level committee comprising the *Prime Minister, the Leader of the Opposition in the Lok Sabha and the Chief Justice of India (CJI).*
- This new system will be in force until Parliament enacts a law for selection of Election Commissioners.
- The objective of the judgement is to secure the independence of the Election Commission from the government of the day.

❖ What are the recent changes ordered by Supreme Court?

- On the question whether process of removal should be same for CEC and the ECs, SC stated that it cannot be same as CEC has special position and article 324 becomes inoperable without CEC.
- The ruling appealed to the government to urgently provide for **a permanent Secretariat** and to ensure that the **expenditure is charged to the Consolidated Fund of India.**
- SC said it is **up to the Union of India to seriously consider making the necessary changes,** the ruling stated.

❖ How does CEC and EC currently get appointed?

- The Election commission of India is **a permanent, autonomous, quasi-judicial** and constitutional body created under **Article 324 in part XV** of the constitution.
- **Appointment:** Currently the appointment of Election Commissioners falls under the purview of Article 324(2) of the Constitution, which states, "the appointment of the Chief Election Commissioner and other Election Commissioners shall, subject to the provisions of any law made in that behalf by Parliament, be *made by the President*."
- The Law Minister suggests a pool of suitable candidates to the Prime Minister for consideration. The **President makes the appointment on the advice of the PM.**

- When any other election commissioner is so appointed, the chief election commissioner shall act as the chairman of the election commission.
- They have a tenure of **6 years**, or up to the age of **65 years**, whichever is earlier.
- **Historical Background:**
  - ✓ Till 1989, the election commission was a single-member body consisting of only the Chief Election Commissioner when two more election commissioners were appointed, again between 1990 and 1993 the election commission was a single-member body. Presently the **Election Commission has a Chief Election Commissioner and two other election commissioners**.

❖ What are the important powers and functions of Election Commission?

- **Free and Fair Election:** Constitution provides that the power of superintendence, direction, and control of elections to parliament, state legislatures, the office of the president of India, and the office of vice-president of India shall be vested in the election commission.
- **Prepare Electoral rolls:** The commission prepare electoral rolls and update the voter's list from time to time. Notifications of dates and schedules of election for filing nominations are issued by the commission.
- **Allotment of Symbols to Political Parties:** The election commission has the right to allow symbols to the political parties. It gives recognition to the national parties, state parties and regional parties.
- **Advisory role:** Advice the President and Governor on election matters and disqualification of legislators.
- **Quasi- judicial:** Act as a court for settling disputes related to granting of recognition to political parties and allotment of election symbols to them.
- **Determine the code of conduct** to be observed by the parties and the candidates at the time of elections.

❖ How does the executive affect the independence of the Election Commission?

- There are *three stages at which the government could affect the independence of high officials*:
  - ✓ *At the time of appointment*: Discretion of the executive during appointment.
  - ✓ *During their tenure by affecting the conditions of service or by premature termination*.
  - ✓ And *by providing inducements after the term ends*: The Constitution has not debarred the retiring election commissioners from any further appointment by the government

❖ Why the independence of the Election Commission has been questioned?

- *No full term*: Successive governments have 'completely destroyed' the independence of the Election Commission of India (ECI) by ensuring no CEC gets the full six-year term to head the poll body since 1996.
- *No law in place*: The Constitution Bench has pointed out that the original intent of the Constitution makers was that the manner of appointment should be laid down in a parliamentary law. Article 324 says the President should appoint the CEC and Commissioners, subject to any law made in that behalf by Parliament. However, successive regimes have failed to enact a law.
- *Political Influence*: One example of political influence on the Election Commission was during the 2019 Lok Sabha elections when several opposition parties complained that the commission was biased towards the ruling party. The opposition parties alleged that the commission did not take adequate action on complaints of violation of the Model Code of Conduct by the ruling party.
- *Malfunctioning of EVMs has been alleged many times* which raises the question of the Election Commissioner, who is responsible to ensure the smooth and fair administration of the elections.
- *The influence of money and muscle power is also common in our country*, as the entry of many moneyed and powerful candidates in the Parliament and the state legislature is often criticized. Voter

bribery, booth capturing and manipulation by the media are some of the unethical techniques which prevent the elections to go freely and fairly for which the Election Commissioner is responsible.

❖ Will appointment of EC through collegium system make Election Commission more neutral and independent?

- The appointment of Election Commissioners through the collegium system could potentially make the Election Commission more neutral and independent. ***However, it is not a panacea for all the challenges faced by the Election Commission.***
- *It can help in ensuring that the appointment process is more transparent and free from political interference.* It can also ensure that the appointment of Election Commissioners is based on merit and not on political considerations.
  - ➢ However, the effectiveness of the collegium system in ensuring the independence of the Election Commission would depend on the specific details of how it is implemented. *For example, the criteria for selecting members, and the process for making decisions are crucial factors that can impact the effectiveness of the system.*
- *The collegium system can also provide for a greater level of diversity in the appointment of CEC.* For example, a collegium comprising of different individuals with diverse backgrounds can bring in a range of perspectives and ensure that the Election Commission is better equipped to deal with the challenges of conducting free and fair elections*.*
  - ➢ *However, it is important to note that implementing the collegium system alone may not be sufficient to ensure the independence of the Election Commission.* There may be other factors that could influence the functioning of the Election Commission, such as the legal framework under which it operates, the powers and resources available to it, and the broader political environment in which it operates.
  - ➢ *Let us take the example of judges of the Supreme Court.* The Constitution explicitly provides security of tenure (by placing a very high bar for removal) and conditions of service. The Supreme Court subsequently interpreted the Constitution to place the selection process in the hands of a collegium of senior judges. However, there is no bar or cooling period for post-retirement positions such as being appointed as a Governor or being nominated or elected to Parliament*.*
- Relevant question is whether the presence of the CJI in the selection panel is the only way in which an institution's independence can be preserved. There is no clear proof that the independence of the CBI director, who is appointed by a panel that includes the CJI, or his nominee, has been preserved or enhanced. The CJI is now a party to the selection process, which may have political implications. Further, in case of a legal challenge, other judges may find it difficult to review a decision taken by a committee including the CJI.

❖ WAY FORWARD

- ***The NCRCW in 2002 suggested a committee*** consisting of the Prime Minister, the Leaders of Opposition in the two Houses of Parliament, the Speaker of Lok Sabha and the Deputy Chairman of Rajya Sabha.
- ***The expenses of ECI must be charged expenditure on Consolidated Fund of India.***
- ***Providing structural and institutional support*** as SC suggested separate secretariat for the functioning of ECI, increasing the budgetary allocation for the Election Commission and ensuring that it has access to adequate human, financial, and technical resources.

- ***Ensuring Sufficient Powers:*** Implementations of reforms like power to deregister political parties (Sec29A of RPA, 1951), legal backing to Model Code of Conduct *(Indrajeet Gupta Committee)*
- ***Promoting Public Awareness and Trust****:* Democratic consciousness of voters needs to be upgraded as it determines caliber of democracy.

Practice Questions

Prelims:

Q. Consider the following statements with respect to the Election Commission of India:

1. The Constitution has specified the 6 years' tenure of the members of the Election Commission.
2. The CEC can be removed from his office in same manner and on the same grounds as a judge of the Supreme Court.
3. The Constitution has debarred the retiring election commissioners from any further appointment by the government.

Which of the statements given above is/are correct?
a) 2 only
b) 1 and 2 only
c) 1 and 3 only
d) 2 and 3 only

Answer: a)

Mains: (Level-Moderate)

Q. Critically evaluate the current system for appointing Election Commissioners along with other factors that undermine the Commission's independence. Also, discuss the measures that can be taken to strengthen the Commission's autonomy and effectiveness. **[15 marks, 250 words]**

TOPIC: Punchhi Panel's recommendation w.r.t. Centre State Relation

> **Issue in brief –** The Union Ministry of Home Affairs (MHA) has decided to start the process of seeking the states' comments on the Punchhi Commission's report on Centre-state relations.
> https://indianexpress.com/article/political-pulse/punchhi-panel-work-centre-state-views-8472376/
>
> **Where in Syllabus:**
> **GS 2: Issues and Challenges Pertaining to the Federal Structure**

❖ Why in news?

Nearly five years after announcing that its work on the **Punchhi Commission's report on Centre-state relations** is "complete", the Union Ministry of Home Affairs (MHA) has decided to start the process of seeking the states' comments on the issue afresh.

❖ Why was the Punchhi Commission constituted?

- The Punchhi Commission was constituted by the then Manmohan Singh-led UPA government in April 2007 under the chairmanship of former Chief Justice of India (CJI) Madan Mohan Punchhi.
- It was required to look into the *issues of Centre-State relations* keeping in view the sea-changes that have taken place in the polity and economy of India since the Sarkaria Commission had last looked at the issue of Centre-State relations over two decades ago.
- In 2010, the Commission submitted its report to the Centre in seven volumes.

❖ What is the status of implementation of the recommendations of the Commission?

- The Punchhi panel's recommendations were considered by the Inter State Council's Standing Committee at its meetings held in April 2017, November 2017 and May 2018.
- Following the meeting of the ISC's Standing Committee on May 25, 2018, the Centre announced that the "work on Punchhi Commission Report, that had been pending for the last eight years, has been completed.
- The finalized recommendations were to be placed before the Inter-State Council for decision.
- However, the Centre decided to obtain updated comments of the State Governments/UT Administrations on the recommendations of the Standing Committee in order to develop consensus among states.

❖ What are the major issues in Centre- State relations?

- **BSF jurisdiction**: In the states of Assam, West Bengal, and Punjab where the BSF jurisdiction has been extended without consulting the states.
- **Centre has repealed Art. 370** without consulting the state.
- **The Citizenship (Amendment) Act, 2019** was passed by the Parliament without adequate debate and scrutiny.

- **Division of functions enshrined under Seventh Schedule** got increasingly eroded over a period of time. An item from the state list moving to the concurrent list, or an item from the concurrent list moving to the Union list, represents centralization.
- **Inter- State Council** has met only once in the last six years. Since, its constitution in 1990, the body has met only 11 times, although the procedure states it should meet at least 3 times every year.
- **National Integration Council (NIC),** an apex body mandated to fight communalism, casteism, regionalism and parochialism, has not met since 2013. NIC was formed in 1962. It has held 16 meetings so far.
- **Governor's Role:**
  - ➢ Governors have been seen as acting on the behest of the central government in power at the time, and have been accused by state governments, especially those in opposition, as acting as "*agents of the Centre*"
  - ➢ There have been bitter and acrimonious exchanges between state governments and Governors. *For instance, in Maharashtra, Governor has withheld the appointments of 12 MLAs in Upper House recommended by the council of ministers since past 3 years.*
  - ➢ Delay in passing the bill: In Tamil Nadu, the Governor forwarded the Bill for exemption from the NEET to the President after considerable delay.
- **Economic federalism:**
  - ➢ *GST Concern*: The implementation of the Goods & Services Tax (**GST**) has to curtail the **state** government's **autonomy** on their revenues.
  - ➢ *The southern states' fears that the 15th Finance Commission (*FC) award* will be biased against the states that have pursued population control.

❖ What were the major responsibilities of the Punchhi Commission?

The key study point of the M.M. Punchhi Commission was to examine the possibility of giving *'sweeping powers' to the Central Government to deploy union forces in the states and investigation of criminal matters affecting national security.*

➢ *To inspect the possible role, obligations, jurisdiction and responsibilities of the Centre* during major communal violence conflagration like violence and other social societal conflicts.

➢ *To find out if there is a need for setting up a "Central Law Enforcement Agency" to take the criminal matters* up that are of national, interstate or international importance. Or matters that have implications on national security.

➢ *To look into the practicality of deploying central forces in the stat*e whenever needed wherein the Centre takes Suo moto cognizance of the matters.

➢ *To study the Centre's responsibilities and obligations towards the states* in the efficient delegation of power and autonomy to the Panchayati Raj institutions and other establishments which are considered local government bodies.

➢ *To examine matters pertaining to the Centre-State relations*. These should include matters like taxation and linking of rivers.

➢ *To encourage independent budgeting and planning at the district level*. To create a link between Central assistance of States and the performance of the States.

➢ *To study the roles and responsibilities and the removal procedures with respect to Governors.*

➢ *To establish unified domestic marketing by examining the relevance of separate taxes* for freeing the inter-state trade.

❖ **What are the Major recommendations of Punchhi Commission?**

Communal Violence Bill	• There should be an amendment in the Communal Violence Bill. According to this amendment, the Centre will have the right to deploy its forces in the State without the consent of the State for a limited period of time. • Such deployment of forces can last *only for a week* and after that week 'post-facto' consent should be taken from the state.
Article 355 and Article 356 of the Indian Constitution	• Article 355 and Article 356 of the Constitution should be amended. • Article 355 talks about the duty of the Centre to protect the state against any external aggression and Article 356 talks about the implementation of President's rule in case of failure of the machinery of the state. • The recommendation seeks to protect States' interest by curbing centre's misuse of powers. It specified that the Centre should rather than bringing the whole state under emergency, bring only the troubled area under its jurisdiction. • The time period of an emergency should not be more than ***3 months***.
Subjects in the Concurrent List	• The Commission recommended that the States should be consulted through the inter-state council before bills are introduced on matters that fall in the concurrent list.
Appointment and Removal of Governors	• The incumbent should stay away from active politics (even at a local level) for at least two years prior to his appointment. • There should be a say of the State's Chief Minister while making the Governor's appointment. • A committee should be formed that is entrusted with the task of appointment of governors. This committee may comprise the Prime Minister, the Home Minister, the Lok Sabha's speaker and the concerned Chief Minister of the State. • The term of appointment should be five years. • Recommendation of provision for the Governor's impeachment by State Legislature. • The convention of appointing governors as chancellors of universities must also come to an end.
Appointment of Chief Ministers	• Clear guidelines should be made with regard to the appointment of chief ministers so that the governor's discretionary powers are limited in this aspect. • A pre-poll alliance is to be considered as a single political party.
Veto Power	• A provision should be made according to which the President's decision to exercise his Pocket Veto Power is ***communicated within a period of six months to the respective State***.

❖ **Conclusion**

The M.M. Punchhi Commission has given us an insightful report with wonderful recommendations for the flawless working and cooperation between the Centre and the State. These recommendations should be implemented with a proper framework to extract the most benefit we can out of them.

Basic terms/related concepts and facts:

• *Inter-State Council*
- ✓ Set up on the recommendation of Sarkaria Commision.
- ✓ Article 263 of the Constitution of India provides for the establishment of an Inter-State Council.
- ✓ The President can establish such a council at any time it appears to him that public interest would be served by its establishment. He is also authorized to define the nature of duties to be performed by such a council and its organization and procedure.
- ✓ The Prime Minister as Chairman and Chief Ministers of all States and six Union Ministers as members.
- ✓ The inter-state council is a recommendatory body that has been empowered to investigate and discuss subjects of common interest between the Union and state(s), or among states.

• *Standing Committee of ISC*
- ✓ It was set up in 1996 for continuous consultation and processing of matters for the consideration of the Council. Chairman is Union Home Minister.

Practice Questions

Prelims:

Q. With reference to Inter-State Council,**c**onsider the following statements:
1. It is a constitutional body set up on the recommendation of Punchhi Commission
2. The Prime Minister is authorised to define the nature of duties to be performed by such a council and its organization and procedure.
3. Its decisions are not binding in nature.

Which of the statements given above is/are *incorrect*?
a) 2 and 3 only
b) 1 and 3only
c) 1 and 2 only
d) 1,2 and 3

Answer: c)

Mains: (Level-Moderate)

Q. Highlighting the major issues in centre state relation, discuss how far the recommendations of Punchhi Commission can improve the relation between centre and state.

[15marks, 250 words]

TOPIC: Reservation For Women In Politics

Issue in brief – The Women's Reservation Bill (WRB) is a proposed legislation that aims to reserve one-third of the total number of seats in state Assemblies and Parliament for women in India. Despite the hopes of the national movement, women are still under-represented in Parliament.
https://www.thehindu.com/news/national/explained-on-reservation-for-women-in-politics/article66624358.ece

Where in Syllabus:
GS 2: Government Policies and Interventions for Development in various sectors

❖ Why in news?

- *Recently*, Bharat Rashtra Samithi (BRS) leader **began a day-long hunger strike** in New Delhi, demanding passage of the Women's Reservation Bill (WRB). The Bill will reserve one-third of the total number of seats in state Assemblies and Parliament for women.
- Multiple Bills that would have boosted women's participation in the political process have failed to clear Parliament. While the present Lok Sabha has the largest-ever presence of women MPs, the fact remains that women continue to be marginalised in the political stakes.

❖ What happened to all the women's reservation bills?

1996
- First introduced in the Lok Sabha as the 81st Amendment Bill by the Deve Gowda-led United Front government.
- But the Bill lapsed with the dissolution of the Lok Sabha.

1998
- In 1998, the Atal Bihari Vajpayee-led NDA government reintroduced the Bill in the 12th Lok Sabha. The Bill failed to get support and lapsed again.
- The Bill was reintroduced in 1999, 2002 and 2003.

2008
- The manmohan singh-led united progressive alliance government tabled the bill in the rajya sabha and it was passed with 186-1 votes on march 9, 2010.
- However, the bill was never taken up for consideration in the lok sabha and lapsed with the dissolution of the 15th lok sabha.

❖ **Why women's political reservation is important?**

• **The issue of reservation for women in politics can be traced back to the Indian national movement**. The issue of women's reservation came up in Constituent Assembly debates as well, but it was rejected as being unnecessary. It was assumed that a democracy would accord representation to all groups.

• **Committee of the Status of Women in India, set up in 1971**, commented on the declining political representation of women in India.

• **The National Perspective Plan for Women recommended in 1988** that reservation be provided to women right from the level of the panchayat to that of Parliament.

• **Legislative representation is fundamental to political empowerment**, enabling participation in the law-making process.

• **Women's representation in the national parliament is a key indicator** of the extent of gender equality in parliamentary politics.

• **Sustainable Development Goals (SDGs) of which Goal 5 seeks to** "achieve gender equality and empower all women and girls", ensuring "women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life."

• **Representation of diverse voices**: Women come from diverse backgrounds and represent a wide range of perspectives and interests. Reservation can ensure that a more diverse set of voices and experiences are represented in parliament.

❖ **What is the status of women's participation in politics in India and in other countries?**

• **Status of women's participation in politics in India**

➢ **Pre Independence:** The Indian freedom movement, starting with the *swadeshi* in Bengal (1905-08) also witnessed the impressive participation of women, who organised political demonstrations and mobilised resources, as well as occupied leadership positions in those movements.

➢ **Post-Independence:** The Constitution guaranteed equal status for men and women in all political, social and economic spheres.

➕ **Representation in parliament:** Currently, women make up only 14.94% of the members of the lower house of parliament (Lok Sabha) and around 14.05% of the members of the upper house (Rajya Sabha).

➕ **India ranks 144 out of 193 countries** in the representation of women in Parliament, according to the Inter-Parliamentary Union's latest report.

➕ **The number of women candidates and MPs varies greatly across states and parties**. In the present Lok Sabha (17th), Uttar Pradesh and West Bengal have the highest numbers of women MPs.

➕ **Reservation for women:** India has introduced reservation for women in local government bodies through the 73rd and 74th Constitutional Amendments, which mandate that at least one-third of the seats in these bodies are reserved for women.

• **Status of women's participation in politics in other countries**

➕ **The global average of female representation in national parliaments was 26.2 percent.** The Americas, Europe, and Sub-Saharan Africa have women's representation above the global average; and Asia, the Pacific Region, and The Middle East and Northern Africa (Mena) region, are below average.

➕ **According to the inter-parliamentary union, women make up at least 50 per cent** of the total membership of the lower chamber of national assemblies in only three countries in the world, led by Rwanda.

❖ **What are the arguments for the Bill?**

For	Against
• *Affirmative action is imperative* to better the condition of women since political parties are inherently patriarchal.	• *The idea runs counter to the principle of equality* enshrined in the Constitution. Women will not be competing on merit if there is reservation, which could lower their status in society.
• *Despite the hopes of the leaders of the national movement, women are still under-represented in Parliament.* Reservations, proponents believe, will ensure that women form a strong lobby in Parliament to fight for issues that are often ignored.	• *Women are unlike, say, a caste group*, which means that they are not a homogenous community. Therefore, the same arguments made for caste-based reservation cannot be made for women.
• In States such as West Bengal and Rajasthan, while women leaders were often rubber stamps of their husbands or fathers*, they were more likely to invest in goods that were important to the interests of women.*	• *Women's interests cannot be isolated* from other social, economic and political strata.
• *India has a high percentage of crimes against women, low participation of women in the workforce, low nutrition levels and a skewed sex ratio.* To address all these challenges, it is argued, we need more women in decision-making.	• *Reservation would restrict voters' choices or "reduce the incentive for an MP to work for his constituency* as he may be ineligible to seek re-election from that constituency" if the reservations followed a policy of rotation and his seat was to be reserved for women in the next polls.
• *Discussion is not about a Bill alone*, but about changing powerful, entrenched interests in India's polity.	• *As men hold primary power as well as key positions in politics,* some have even argued that bringing women into politics could destroy the "ideal family".

❖ **What are challenges in political reservation of women?**

• **There has been resistance to implementing reservation policy** at the state and national levels. Some parties have pointed out that even these may not work as parties may field women candidates in unwinnable seats, or women may contest the elections but not get voted to power, or they may get relegated to a secondary role.

• **The prevalence of patriarchal tendencies and rampant sexism in political parties** and institutions. For example, an MP told a female MP to "go home and cook" instead of being in politics, highlighting the existence of a structured system of oppressive gender hierarchy in politics and a patriarchal attitude that politics is a profession for 'men'.

• **Election campaigns in India are extremely demanding and time-consuming**. Women politicians, with family commitments and the responsibilities of child care, often find it difficult to fully participate.

• **Limited access to resources**: Women in India often have limited access to resources such as money, education, and political networks, which makes it difficult for them to compete with men in political contests.

• **Lack of political will**: Despite some progress in recent years, political parties have been reluctant to field women candidates in winnable seats. Reservation policies can help overcome this challenge by creating a level playing field for women candidates.

• **Intersectionality:** Women from marginalized communities, such as Dalits, Adivasis, and Muslims, face additional barriers to political participation due to discrimination and exclusion.

❖ Way forward

- **Alternate methods** including reservation for women in political parties and dual member constituencies (where constituencies will have two MPs, one of them being a woman).
- **Encouraging political parties to field more women candidates**: Political parties need to be encouraged to field more women candidates in winnable seats. There is also a need to address the cultural and societal factors that discourage women from entering politics.
- **Addressing patriarchal attitudes**: There is a need to create awareness and education campaigns to address these attitudes and promote greater gender equality in society.
- **Increasing leadership positions for women:** Women continue to be underrepresented in leadership positions in political parties. There is a need to encourage and promote women leaders in political parties and ensure that women are given equal opportunities to participate in decision-making processes.
- **Providing greater support and resources to women candidates**: Women in India often have limited access to resources such as money, education, and political networks. The government and civil society organizations need to provide greater support and resources to women candidates to help them compete with men in political contests.

Practice Questions

Prelims:

Q. Consider the following:
1. Preamle
2. Article 326
3. Part III of the Constitution
4. Fundamental Duties

Which of the following grant political equality:
a) 1 and 3 only
b) 2, 3 and 4 only
c) 1, 2, 3 and 4
d) 1, 2 and 3

Answer: d)

Mains: (Level-Moderate)

Q. Discuss the importance of women's reservation in politics and analyze the reasons behind the failure of multiple bills aimed at increasing women's participation in the political process in India.   **[15 marks, 250 words]**

TOPIC: Simultaneous Election

Issue in brief – A brief analysis on simultaneous election.
https://www.thehindu.com/news/national/government-bats-for-simultaneous-polls-lists-out-imperatives-before-idea-is-implemented/article66630868.ece

Where in Syllabus:
GS 2: Issues related with agriculture

❖ Why in news?

Recently, the issue of holding simultaneous elections to the Lok Sabha and the State Assemblies has been referred to the Law Commission for further examination.

❖ What is simultaneous election?

• In popular sense of the term, "simultaneous elections" refers to elections to all the three tiers of the government or Constitutional institutions set up in that country i.e., House of the People (Lok Sabha), State Assemblies (Vidhan Sabha) and Local bodies taking place in a synchronized manner.

• **History of simultaneous elections**

➢ In India, simultaneous elections to the Lok Sabha (House of The People) and Vidhan Sabhas (State Legislative Assemblies) were *held in the years 1951-52, 1957, 1962 and 1967*. Thereafter, however, the schedule could not be maintained and the elections to the Lok Sabha and the Vidhan Sabhas have still not been realigned.

➢ **The main reasons behind the breaking of the cycle of synchronized elections** were the dominance and rule by one National political party and the regional parties were not powerful and influential. The indiscriminate use of Article 356 of the Constitution also contributed to disruptions of simultaneous elections.

➢ However, with the change in Indian polity, the regional political parties not only have increased in number but have also marked their presence in the elections to the concerned State Assemblies. For Example, between 2014-2016, the country witnessed, one general and 15 state elections.

Precedent of Simultaneous elections to Federal and Provincial Legislatures in other countries
• In South Africa, elections to national as well as provincial legislatures are held simultaneously for five years and municipal election are held two years later.
• In Sweden, election to National Legislature (Riksdag) and provincial legislature/county council (Landsting) and local bodies/municipal Assemblies (Kommunfullmaktige) are held on a fixed date i.e., second Sunday in September for four years (last was held on 14 September, 2014 and the forthcoming one is slated on 9 September, 2018).
• In the U.K., the term of the Parliament is governed by the Fixed-term Parliaments Act, 2011.

❖ Why India should go for Simultaneous Election?

• **To save public money:** Presently, the cost of holding elections for Lok Sabha and Legislative Assemblies of States and UTs has been pegged at Rs. 4500 crores by the ECI.

• **Elections lead to imposition of Model Code of Conduct (MCC) in the poll** bound State/area and as a result, the entire development programme and activities of the Union and State Governments in the poll bound State would come to a standstill. Frequent elections lead to imposition of MCC over prolonged periods of time which affects the normal governance.

• **Frequent elections lead to disruption of normal public life and impact the functioning of essential services.** If simultaneous elections are held, this period of disruption would be limited to a certain pre-determined period of time.

• **It would free the crucial manpower which is often deployed for prolonged periods on election duties**. For example, the 2014 Lok Sabha elections which were held along with State Assembly Elections in Odisha, Andhra Pradesh, Sikkim and Arunachal Pradesh was spread over ten phases and 1077 in situ companies and 1349 mobile companies of Central Armed Police Force (CAPF) were deployed.

• **Education's Perspective**: The polling booths are most often located in schools, whether Government or private. The school staff and teaching personnel are directed to proceed for election duties, compromising their primary duty of imparting education. Apart from the day of poll, the schools remain closed even prior to the day of elections, for preparatory measures.

Various recommendation for simultaneous polls

• The idea of reverting to simultaneous polls was mooted in the annual report of the **Election Commission in 1983** and also in the report of **Law Commission** in the year **1999**.

• In 2015, the Parliamentary Standing Committee on Personnel, Public Grievances, Law and Justice in its 79th Report suggested holding simultaneous elections for the long term good governance.

• In January 2017, NITI Aayog prepared a working paper titled "**Analysis of Simultaneous elections: The What, Why and How**" in which proposal to conduct elections to the House of the People and the State Legislative Assembly, simultaneously was deliberated upon.

❖ What are the challenges in holding simultaneous elections?

The move would require bringing amendments in not less than 5 articles of Constitution, namely,

- o *Art. 83* relating to duration of Houses of the Parliament,
- o *Art 85* relating to sessions of the Parliament, prorogation and dissolution of the House of People by the President,
- o *Article 172* of the Constitution relating to the duration of the state legislature,
- o *Article 174* of the Constitution relating to the sessions of the Parliament, prorogation, and dissolution and
- o *Art. 356* relating to the imposition of the simultaneous elections.

• **It will reduce the accountability of the government** to the people as the elections will be held once in five years.

• **It will, in all probability, benefit the dominant national party** or the incumbent at the Centre while disadvantaging the smaller regional party and issue.

• **Basic issues like no-confidence motion, hung assembly.**

- **'One nation, one election' might sound appealing**, but it will have a number of anti-democratic consequences.
- **As a prerequisite, consensus of all political parties and state Governments** on the issue would be required.
- **The proposed curtailment of extension of the tenure of the legislatures** for synchronising the elections also needs to be examined in light of the basic structure doctorine.
- **Lack of electoral infrastructure:** The ECI felt that simultaneous conduct of elections would require large scale purchase of Electronic Voting Machines and Voter Verifiable Paper Audit Trail (VVPAT) machines. For conducting simultaneous elections, the Commission expects that a total of Rupees 9284.15 crore will be needed for procurement of EVMs and VVPATs. The machines would also need to be replaced every fifteen years which would again entail expenditure.

❖ Way forward

- *Develop a clear legal and regulatory framework*: A clear legal and regulatory framework is essential to ensure that all levels of government have synchronized mandates, and that there is coordination between different electoral bodies. This could involve developing new laws, regulations, and procedures, and ensuring that all stakeholders are informed and involved in the process.
- *Invest in electoral infrastructure and technology*: Holding simultaneous elections requires significant logistical arrangements, including ballot printing, voter registration, and vote counting. It is important to invest in electoral infrastructure and technology to ensure that the process runs smoothly and efficiently.
- *Engage with stakeholders*: A focused group of stakeholders comprising Constitution and subject matter experts, think tanks and government officials and representatives of various political parties need to come together and work out appropriate implementation details.
- **Election Commission recommended:**
- ✓ **Replacing the 'no-confidence motion' with a 'constructive vote of no-confidence'**, through appropriate amendments. In a constructive vote of no confidence, the government may only be removed if there is confidence in an alternate government.
- ✓ **If no party secures a majority to form the government**, it may result in a hung House/ Assembly. In order to prevent this, the Commission recommended that the President/ Governor should give an opportunity to the largest party along with their pre- or post-poll alliance to form the government. If the government can still not be formed, an all-party meeting may be called to resolve the stalemate. If this fails, mid-term elections may be held. The Commission recommended that appropriate amendments be made to provide that any new Lok Sabha/Assembly formed after mid-term elections, will be constituted only for the remainder of the previous term, and not the entire five years.

Practice Questions

Prelims:

Q. Consider the following with reference to no-confidence motion:

1. Private member can also move a No-confidence motion .
2. No Confidence motion can only be moved in the Lok Sabha and not in Rajya Sabha.

Which of the statements given above is/are *incorrect*?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Answer: d)

Mains: (Level-Moderate)

Q. Analyse the feasibility of holding simultaneous elections in India? **[15 marks, 250 words]**

TOPIC: Environmental, Social and Governance (ESG) Regulations

Issue in brief – Analysis on ESG regulations as they have gained prominence globally, including in India, as businesses are increasingly expected to consider sustainability and responsible practices.
https://epaper.thehindu.com/ccidist-ws/th/th_delhi/issues/28379/OPS/GBRAVTHUR.1+G3NAVTQ8R.1.html

Where in Syllabus:
GS 2: Government Policies & Interventions in Various Sectors

❖ Why in news?

• *Over the last decade,* regulators and corporations around the world have embraced the idea that businesses should be measured not just on traditional economic metrics such as shareholder return, but also by their environmental impact, commitment to social issues and the soundness of their corporate governance and protection of shareholder rights.

❖ What is ESG regulations?

• **ESG regulations** encompass a range of policies, laws, and guidelines that focus on various aspects of sustainability and responsible business practices.
• The **U.K. Modern Slavery Act, for example**, requires companies with business in the U.K. and with annual sales of more than £36 million to publish the efforts they have taken to identify and analyse the risks of human trafficking, child labour and debt bondage in their supply chain; establish internal accountability procedures; evaluate supplier compliance and to train supply chain managers regarding these issues.

3 pillars of ESG

Environmental	Social	Governance
▪ Energy usage and efficiency	▪ Fair pay and living wages	▪ Corporate governance
▪ Climate change strategy	▪ Equal employment opportunity	▪ Risk management
▪ Waste reduction	▪ Employee benefits	▪ Compliance
▪ Biodiversity loss	▪ Workplace health and safety	▪ Ethical business practices
▪ Greenhouse gas emissions	▪ Community engagement	▪ Avoiding conflicts of interest
▪ Carbon footprint reduction	▪ Responsible supply chain partnerships	▪ Accounting integrity and transparency
	▪ Adhering to labor laws	

❖ **How ESG differs from CSR?**

ESG regulations	Corporate Social Responsibility (CSR)
• ESG is a *quantifiable assessment* of sustainability and business practices.	• The nature of CSR is *qualitative*. CSR can also be seen as the precursor to ESG. Companies self-regulate and commit to sustainable practices with the aim of making a positive impact on society
• ESG regulations often include *standardized reporting requirements*, with defined metrics and frameworks that businesses must adhere to. This ensures transparency, comparability, and accountability in ESG disclosures.	• CSR initiatives typically involve *self-assessment and self-reporting* by companies. They may choose to disclose their CSR activities through sustainability reports or other forms of public communication.
• ESG regulations, however, tend to focus on specific aspects within the broader ESG framework, such as environmental impact, labor practices, human rights, and corporate governance.	• The list of qualifying CSR activities is intentionally broad, ranging from supporting the protection of historically important sites to promoting safe drinking water.
• Implemented through *measurable goals and audits*.	• Implemented through *corporate culture, values and brand management*.

❖ **Why is ESG important in India?**

• **India has long had a number of laws and bodies regarding environmental**, social and governance issues. New initiatives in India go further, establishing guidelines that emphasise monitoring, quantification and disclosure, akin to ESG requirements found in other parts of the world.

• **Sustainability:** In the Paris Agreement of the United Nations Climate Change Conference in 2021, India's Prime Minister committed to achieving net zero emissions by 2070. Accordingly, corporate entities must integrate ESG principles to safeguard the environment, the interests of various stakeholders, and business sustainability as a whole.

• **Risk Management**: ESG factors play a crucial role in identifying and mitigating risks. Environmental risks, such as extreme weather events or regulatory changes related to carbon emissions, can impact business operations and supply chains. Social risks, such as labour issues or community conflicts, can affect reputation and brand value. Addressing these risks proactively helps companies protect their long-term viability.

• **Investor Demand**: Investors are increasingly considering ESG factors when making investment decisions. They recognize that companies with strong ESG performance are better positioned for long-term value creation and are less exposed to risks. Incorporating ESG considerations can attract a wider pool of investors, enhance access to capital, and potentially lower borrowing costs.

• **Reputation and Brand Enhancement**: ESG practices contribute to building a positive reputation and a strong brand. Consumers are more likely to support and engage with companies that demonstrate a commitment to sustainability, ethics, and social responsibility. By aligning with ESG principles, companies can enhance their brand value and establish trust with stakeholders.

• **ESG can attract new customers for additional growth.** Consumers and business customers who factor ESG considerations into their buying decisions are likely to seek out products or services provided by companies that are focused on ESG.

- **Compliance by Indian companies with the ESG regulations of the U.S., the U.K., the European Union** and elsewhere will be critical if India is to take full advantage of the growing decoupling from China and play a more prominent role in global supply chains and the global marketplace overall.
- **Companies that wish to maximise their opportunities in the global economy need to embrace** these new requirements and adjust their organisations accordingly.

❖ What are the roadblocks to ESG adoption in India?

- **There is no one-size-fits-all answer to ESG issues, and identifying material issues can directly impact stakeholders**. While a manufacturing company might be concerned with emissions and environmental impact, a consumer-facing company may focus on social and governance issues. Alternatively, a startup will have different priorities than a large, established company.
- **ESG strategies that aren't authentic can backfire.** Organizations that focus on ESG inconsistently, use it as a brand image ploy or disconnect it from their business strategy likely won't be successful. *For example, a company that engages in greenwashing -- a term for making false or misleading claims about environmental actions -- could face a customer backlash that affects revenue and the value of its stock.*
- **The lack of skilled ESG professionals is a concern in the industry.** While there is a growing demand for ESG services, the pool of qualified professionals is relatively small.
- **Lack of consistent regulations around ESG reporting**. This makes it difficult for companies to measure and report ESG performance, making it difficult for investors to compare and choose ESG investments in a standard format.
- **The lack of data and transparency makes it difficult for investors to assess** ESG performance of companies and makes it harder for them to make informed investment decisions.
- **Costs of integrating ESG practices:** The investment required to change current operations. This includes anything from energy-efficiency upgrades to implementing new policies and procedures and training employees on new practices.

❖ Way forward

- **Companies which lack qualified internal resources to implement ESG initiatives effectively can rely** on external consultants. While this comes at a cost, it may be an effective way to outsource and comply with the need.
- **Actively engage with stakeholders to understand their expectations, concerns, and feedback regarding ESG practices.** Regularly communicate and seek input from employees, customers, investors, communities, and other relevant parties.
- **Provide ongoing education and training programs to build ESG awareness and capabilities** among employees. Foster a culture of sustainability and responsible business practices throughout the organization
- **The costs of integrating ESG practices into business operations should not be viewed as a hindrance** but as a future investment. Sustainable businesses will be better positioned to weather the challenges of the 21st century and beyond.
- **There is a need for a common language for discussing ESG performance**, and a standard reporting framework would help to fill this gap.

Basic terms/related concepts and facts:

Corporate Social Responsibility

✓ Enactment of Companies Act, 2013 by the Ministry of Corporate Affairs, Government of India was one of the world's largest experiments of introducing the CSR as a mandatory provision by imposing statutory obligation on Companies to take up CSR projects towards social welfare activities. This has made India the only country which has regulated and mandated CSR for some select categories of companies registered under the Act.

✓ The amendments require companies with a net worth of ₹500 crore or a minimum turnover of ₹1,000 crore or a net profit of ₹5 crores in any given financial year spend at least 2% of their net profit over the preceding three years on CSR activities.

Practice Questions

Prelims:

Q. Consider the following statements about Corporate Social Responsibility (CSR):

1. It was introduced in 2013 as a voluntary provision on companies to take up social welfare projects
2. All the Companies are required to spend at least 2% of their net profit over the preceding three years as CSR.

Which of the above given statements are correct:

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 not 2

Answer: d)

Mains: (Level-moderate)

Q. Analyze the implications of ESG regulations for Indian companies in the global marketplace. Discuss the challenges faced in adopting ESG practices and suggest strategies to overcome them.
[15 marks, 250 words]

TOPIC: Universal Health Care

Issue in brief – India is committed to achieving UHC for all its citizens by 2030, which is fundamental to achieving the other Sustainable Development Goals.
https://www.thehindu.com/opinion/op-ed/moving-forward-with-a-newer-concept-of-uhc/article66639340.ece

Where in Syllabus:

GS 2: Issues relating to development and management of Social Sector/Services relating to Health

❖ Why in news?

- Rajasthan became the first state to move a Right to Health Bill, promising health for all its residents, in the state assembly.
- Health is a basic human right; which India's Constitution guarantees under *right to life* that we cannot achieve in its wider definition without addressing health determinants.

❖ What is Universal Health Care?

- **World Health Organization (WHO) definition of health**: A certain totality of health to the realms of mental and social well-being and happiness beyond physical fitness, and an absence of disease and disability.
- **Universal health coverage means** that all people have access to the full range of quality health services they need, when and where they need them, without financial hardship. It covers the full continuum of essential health services, from health promotion to prevention, treatment, rehabilitation and palliative care.
- The determinants of health include:
  - ✓ the social and economic environment,
  - ✓ the physical environment, and
  - ✓ the person's individual characteristics and behaviours.

❖ Why Universal health care is important in India?

- **India's high Out-of-Pocket (OOP) spending —** Health spending through payments at the point of care — at almost 60 per cent, one of the highest in the world. Over two-thirds of OOP spending is on account of out-patient consultations, medicines and diagnostic tests accompanying it.
- **Inequality in Access**: India's healthcare system suffers from significant disparities in access to healthcare services. Rural areas, low-income communities, and marginalized populations often lack adequate healthcare infrastructure, resulting in limited access to essential medical services. UHC can bridge this gap by ensuring equal access to healthcare for all citizens, regardless of their geographic location or socioeconomic status.
- **Rising Non-Communicable Diseases:** India is experiencing a rapid increase in non-communicable diseases (NCDs) such as diabetes, cardiovascular diseases, and cancer. Managing these chronic conditions requires long-term care and often involves high treatment costs. UHC can support comprehensive care

for NCDs, including preventive measures, early detection, and affordable treatment options, reducing the burden of chronic diseases on individuals and the healthcare system.

- **Limited Primary Healthcare Infrastructure:** India's healthcare system is predominantly hospital-centric, with limited focus on primary healthcare. Strengthening primary healthcare, which serves as the first point of contact for individuals seeking medical care, is essential for effective healthcare delivery. UHC can prioritize the development and enhancement of primary healthcare infrastructure, ensuring that individuals receive timely and appropriate care at the grassroots level.
- **Rural Healthcare Challenges:** Rural areas in India face unique healthcare challenges, including inadequate healthcare facilities, healthcare workforce shortages, and limited accessibility to specialized care. UHC can help address these challenges by strengthening rural healthcare infrastructure, deploying trained healthcare professionals, and establishing effective referral systems to ensure comprehensive care for rural populations.
- **High Disease Burden**: India continues to grapple with a high burden of communicable diseases such as tuberculosis, malaria, and HIV/AIDS, along with emerging public health challenges like antimicrobial resistance. UHC can contribute to disease prevention, early detection, and effective treatment, thereby reducing the burden of diseases and improving public health outcomes.

❖ What are the efforts put to achieve Universal Health Care?

- **The slogan "Health for All by 2000" was endorsed by the World Health Assembly in 1977**, implying universalization and non-discrimination based on financial status, gender, race, etc. India committed to this goal through its National Health Policy in 1983.
- **The concept of Comprehensive Primary Health Care (PHC) or PHC Version 2 was introduced** to include the management of chronic and non-communicable diseases at primary health institutions. The National Rural Health Mission (NRHM) in India implemented this approach from 2013, with the Health and Wellness Centre as a model for comprehensive primary healthcare.
- **The National Health Mission with concurrent intersectoral thrusts** on Poshan Abhiyan, National Food Security, the Mahatma Gandhi National Rural Employment Guarantee Act, water sanitation, Sarva Shiksha Abhiyan, etc. is a better model of fully tax-funded Universal Health Care.
- **India has launched Ayushman Bharat** - one of the most ambitious health missions ever to achieve UHC. Ayushman Bharat encompasses two complementary schemes, Health and Wellness Centres and National Health Protection Scheme.
- **The National Digital Health Mission (NDHM), now known as Ayushman Bharat Digital Mission** (ABDM), was launched on August 15, 2020, with an aim to digitally empower India's health-care system by bridging the gap among different health care-related stakeholders.

❖ Why haven't we achieved the goal of universal health care yet?

- **Earlier only primary health care was considered necessary for UHC** while secondary and tertiary care, including non-communicable diseases and chronic conditions, were not adequately addressed, leading to reliance on private healthcare and out-of-pocket expenses.
  For instance, in the International Conference on Primary Health Care, at Alma Ata, 1978, any non-communicable disease, chronic disease including mental illnesses, and its investigations and treatment were almost excluded from primary health care.
- **Patients' health information gets trapped in silos**, unable to be shared with other systems and establishments due to lack of interoperability.
- **The Indian healthcare system is fragmented and lacks coordination** among the different stakeholders involved in delivery of healthcare services.

- **Lack of Infrastructure:** Overall, there is a shortage of 79.5 per cent specialists at the Community Health Centres (CHCS) as compared to the requirement. Simply put, it means that against 10 specialists needed to man CHCs in villages, only two are available.
- **As per reports, while 78% of the Indian population resides in rural areas, only 2% of medical professionals are available in those areas**. Also, the Government-Financed Health Insurance Schemes (GFHIS) often face challenges in implementation.
- **Health insurance coverage in India remains limited**, with a significant portion of the population lacking access to adequate health insurance schemes. According to NFHS 5, about 36 per cent of households in the lowest wealth index are covered under health or insurance schemes.

❖ **Way forward**

- **Increased Investment in Healthcare**: India currently spends about Rs 8 lakh crore ($100 billion) or about 3.2 percent of its GDP on health. This is much lower than the average health spending share of the GDP — at around 5.2 per cent — of the Lower and Middle Income Countries (LMIC).
- **Investing in robust health information systems and data analytics** can provide valuable insights for evidence-based decision-making, resource allocation, and monitoring of health services. Accurate and timely data collection, analysis, and reporting are essential for effective policy formulation and program evaluation.
- **Engaging communities and empowering individuals** in their healthcare decisions can contribute to improved health outcomes. For example, ASHAs are responsible for improving the health of their communities. They work in areas ranging from maternal and child health to communicable diseases.
- **Collaboration with International Partners**: Collaborating with international organizations and partners can provide technical expertise, best practices, and financial support to strengthen healthcare systems and achieve universal health care goals.
- **Technological Innovations**: Embracing digital health technologies and telemedicine can help bridge gaps in healthcare access, especially in remote areas. Integration of electronic health records, teleconsultations, and mobile health applications can improve healthcare delivery, monitoring, and coordination.
- **Prioritizing preventive healthcare measures can** significantly reduce the burden of diseases and promote population health. Awareness campaigns, immunization programs, screening initiatives, and health promotion activities should be implemented at both community and individual levels.

Thailand model of Universal Health Care:

- **Deep technical capabilities in health systems:** This gave policy makers access to well-developed approaches and analytics
- **Saving money by shutting down or consolidating selected hospitals** that had large government budgets but were seeing very few patients because of quality concern.
- **Designed a system** in which primary care was given importance and patients were prevented from seeking higher levels of care without first seeing their designated primary care providers, and, only where necessary, being given a clear reference to a higher and more expensive facility.
- **The value of being intensely pragmatic and politically astute**. For example, they had very few physicians, so they worked with nurses. Since they did not even have a sufficient number of nurses, they hired young women with high school diplomas and gradually grew their health workforce by alternating intensive field experience for them with classroom training and certification.

Basic terms/related concepts and facts:

• **Ayushman Bharat,** a flagship scheme of the Government of India, was launched as recommended by the National Health Policy 2017, to achieve the vision of Universal Health Coverage (UHC).

➢ AB PM-JAY is the largest health assurance scheme in the world which aims at providing a health cover of ₹ 5,00,000 per family per year for secondary and tertiary care hospitalization.

➢ Pre-existing diseases are covered from the very first day.

• **The Ayushman Bharat Digital Mission (ABDM)** aims to develop the backbone necessary to support the integrated digital health infrastructure of the country. It will bridge the existing gap amongst different stakeholders of Healthcare ecosystem through digital highways.

Practice Questions

Prelims:

Q. "Alma Ata Declaration" is related to which of the following:

    a) Primary health care
    b) Biodiversity Conservation
    c) Antibiotic resistance
    d) Food security

Answer: a)

Mains: (Level-Moderate)

Q. Discuss the concept of Universal Health Care (UHC) and its significance in India. Examine the challenges faced by India in achieving UHC and suggest measures to overcome them.

[15 marks, 250 words]

TOPIC: Indo-US Pact - iCET

Issue in brief – India and the United States elevated their strategic partnership with the launch of an initiative on Critical and Emerging Technology or iCET.
https://www.thehindu.com/opinion/op-ed/a-new-chapter-in-defence-and-tech-through-icet/article66536085.ece

Where in Syllabus:
GS 2: Bilateral, Regional & Global Groupings & Agreements Involving India and/or Affecting India's Interests

❖ Why in news?

- *Recently*, the U.S. and India inaugurated their **initiative on critical and emerging technologies** (ICET). The promise of this initiative, if fulfilled, could have a transformative impact on India-U.S. relations.
- The **technological cooperation** between India and the USA generally have failed, primarily because of the mismatch between the two countries on the purposes for which they collaborated.
- The ICET is perhaps better positioned. Unlike the earlier iterations, it comes at a time when India, too, has developed technological and managerial capacities and is emerging as a major economic power.

❖ What is ICET?

- The latest agreement between India and the US in the form of the iCET is a follow-through on the announcement made by the leaders of the two countries during the third Quad Leaders' Summit held in May 2022.
- *The iCET is best defined as an interlinked framework for cooperation on critical and emerging technologies.* The architecture of the iCET is more of a charter or a structure that seeks to catalyze existing corridors of cooperation, create new opportunities, and arrest the present moment in geopolitical change to strike several deals on critical and emerging technologies.
- Under iCET, the two sides have ***identified six focus areas of co-development and co-production***: *strengthening innovation ecosystems*, *defence innovation and technology cooperation*, *resilient semiconductor supply chains*, *space*, *STEM talent*, and *next generation telecom*.
- The two most prominent aims of the iCET are to elevate and expand strategic technology partnerships and defence industrial cooperation between India.
- The objective of iCET is to enhance opportunities for industry and academia in the two countries that now see each other as beneficial for establishing trusted and secure supply chains.

❖ **Phases of India-USA co-operation**

• ***Since 1950s, the U.S. has played a significant role in India's development efforts*** and quest for technological capability. A major driver of the process was the Cold War which persuaded the U.S. to provide sweeping assistance in a range of areas to India. While the Soviet Union emerged as a major player in areas like steel, heavy electricals, petroleum and mining, the U.S. focused on modernising engineering and management education, science and technology (S&T), and agriculture.

• ***In nuclear energy*** where the U.S. helped build India's first reactors for research and power. An entire generation of Indian nuclear scientists were trained in the U.S., including some who subsequently helped in making nuclear weapons. But this cooperation was abruptly ended after India's first nuclear test in 1974. The same could be said, though in a somewhat different manner, for India's space programme.

• ***Education:*** The massive aid provided by the U.S. to modernise Indian education, especially engineering and management, should have led to a growing industrial sector, but the Indian economy stalled in the 1960s and India ended up with a system where IIT and IIM graduates ended up benefiting the U.S. economy. *The one area in which India did get lasting and important benefits was agriculture where American S&T helped trigger the Green Revolution and end an era of food shortages.*

• ***The Bangladesh War of 1971 and the 1974 nuclear tests led to a three-decade estrangement*** and a draconian American technology denial regime whose prime target was India, all in the name of non-proliferation.

• ***Brief respite when, following the Soviet invasion of Afghanistan, the Gandhi-Reagan Science and Technology Initiative led to the 1984 India-U.S. MoU*** on sensitive technologies, commodities and information. This was the outcome of a new American willingness to promote Indian S&T and the arms industry. In 1987, the U.S. agreed to assist India's Light Combat Aircraft (Tejas) programme and allowed the sale of front line GE 404 engine to India. However, broader cooperation stalled because the U.S. was unwilling to let go of its non-proliferation agenda.

• ***After the Soviet collapse, the U.S. pushed for the unconditional extension of the non-proliferation treaty*** and began to arm-twist countries to sign a Comprehensive Nuclear Test Ban Treaty. At this stage, India realised that there was no option but to come out as a declared nuclear weapons power.

• ***There was another round of sanctions after the 1998 nuclear tests***, but by this time the U.S. had begun to get a measure of the challenge it was facing from China. It now decided to play the India card, but to do this, there was need to spit out the nuclear proliferation pill stuck in our joint throats. This is what was done with the India-U.S. nuclear deal of 2008, which is the basis of our current engagement with the U.S.

• ***But despite India's growing proximity to the U.S. since then, there has not been significant movement*** in actual deliverables by way of technology development and co-production. The much-touted Defence Technology and Trade Initiative has little to show for it.

• ***Besides the growing trade numbers, the two countries have institutionalised their relationship*** with regular dialogue formats and engagement architectures led by the 2+2 format at the highest levels on either side.

• ***Beginning with the New Framework for India-US Defense Relations in 2005*** and the resultant intensification in defence trade, joint exercises, personnel exchanges, collaboration and cooperation in maritime security and counter-piracy, and exchanges between each of the three services, the bilateral relationship has touched newer heights with *Comprehensive Global Strategic Partnership initiated in 2013 and Major Defense partner status since 2016*.

• ***India has steadily advanced in status as a friend of the U.S. and has purchased U.S. weapons and systems worth billions of dollars.*** It is now deemed to be a Major Defence Partner, though not a Major Non-Nato Ally, a much more useful designation that Pakistan still retains. The course has not been problem-free — witness the pressure India faced under CAATSA and on account of its oil trade with Russia.

❖ **How iCET is going to be transformative?**

- *The ICET has set up a range of ambitious goals* which mean a great deal for India. Some of them are aspirational, others political.
- *In the emerging and critical technologies domain, the iCET envisages an 'innovation bridge' with India* by joining six of India's Technology Innovation Hubs to support at least 25 joint research projects in areas such as AI and data science and apply its gains to areas such as agriculture, health, and climate.
- *In the defence sector, iCET is expected to bolster cooperation in AI and military equipment*. For both countries, weaving technology with existing defence and security cooperation reflects a recognition of today's rapidly shifting geostrategic environment as well as the need to prepare for a tech-centric future.
- *This is specifically true for the Indo-Pacific than other regions where one of the most intense competitive one-upmanships is likely to play out with China's rapid advances* in the field and the US determined to maintain a considerable tech gap with China together with its Indo-Pacific partners.
- *The iCET also reflects an important characteristic of the emerging tech order in the Indo-Pacific* which locates critical and emerging technologies within an environment shaped by issues of design, development, governance, democratic values and human rights.
- *Open, accessible and secure technology based on mutual trust, confidence and strong institutions* are expected to foster cooperation envisaged within the iCET.
- *The iCET is also intended not just as a conduit for critical and emerging technology cooperation* but is linked with the broader issues of the Indo-Pacific like mutual trust, confidence and an ecosystem of technological cooperation.
- *At institutional level, the iCET is also intended to circumvent bureaucratic obstacles and red tape* which often hinder technological cooperation between the US and India.
- *The iCET, in some ways, seems to be intended to overcome precise impediments in high-tech* and sensitive-tech transfers between India and the US.

❖ **Way Forward**

- After presenting the Union Budget, the *Finance Minister said in an interview, "This is a golden opportunity for India. We should really not miss the bus this time*." The remark is truer of the technology and industrialisation bus that the ICET could be.
- *The iCET will require the private sector, knowledge partners in the industry*, and the academia in both countries to give functional meaning to these very outcomes. Further, it will require line ministries and government agencies in both countries to deregulate, perhaps even coregulate, and provide the necessary strategic and operational assurances to the private sector in India and the United States.
- *While India is in dire need of technology, the US industry remains firmly focused on trade.* India will, therefore, need to leverage its considerable purchases in the arms, energy, civil aviation, nuclear and other sectors in a holistic manner to extract technology from the US.

❖ **Conclusion**

- There is an electricity that has been generated by the iCET that is palpable. From space and defense startups to MSMEs and big industry, the iCET is looked upon as a distinctive framework that could not have been introduced at a better moment in the geopolitics of technology, shaped by the need to diversify and find new markets amongst "trusted technology partners."

Practice Questions

Prelims:

Q. Initiative for Critical and Emerging Technologies has been inaugurated between India and:
a) Australia
b) Russia
c) USA
d) Japan

Answer: (c)

Mains: (Level-Moderate)

Q. Economic and technological partnership between India and US has, so far, lagged behind the growing strategic convergence. Discuss how initiative on critical and emerging technologies has the potential to become a "game changer" in catalysing Indo-US technology cooperation.

[15 marks, 250 words]

TOPIC: India Germany Relations

Issue in brief – German Chancellor's first India visit. Delhi, Berlin to focus on economic ties, green technology, Indo-Pacific strategy
https://indianexpress.com/article/india/german-chancellors-olaf-scholz-first-india-visit-delhi-berlin-to-focus-on-economic-ties-green-technology-indo-pacific-strategy-8463369/

Where in Syllabus:
GS 2: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

❖ Why in news?

1. German Chancellor Olaf Schultz paid a state visit to India on February 25 and 26 traveling to New Delhi and Bengaluru accompanied by a high-powered business delegation.
2. This is the first standalone visit by a German Chancellor to India since the commencement of the Inter Governmental Consultation (IGC) mechanism between the two countries in 2011

❖ India Germany Relations

1) **Economic**
   a) Bilateral trade between the two countries stood at US$24 billion (2021).
   b) Talks of Bilateral Trade and Investment Agreement (BTIA) between India & Germany ongoing (via the EU).
   c) It is also the 9th largest foreign investor in India.
   d) Several German companies, including Siemens, Bosch, and Volkswagen, have a strong presence in India, while Indian firms like Tata Group and Infosys have established their footprint in Germany.
   e) Comprehensive Partnership on Migration and Mobility - meant to ease travel for research, study and work for people in both countries
2) **Geo Political & Geo strategic**
   a) G4 nations (Brazil, Germany, India, and Japan) support each other's bids for permanent seats at UNSC
   b) Both countries share common democratic principles, thrive for rules-based international order and commit to multilateralism
   c) Germany has come on board with the Indo-Pacific Oceans Initiative (IPOI)
3) **Defense**
   a) cooperation in areas such as defence technology, maritime security, and peacekeeping operations
   b) Germany's 2020 Indo-Pacific guidelines - identified India as one of its most important partners in the region
4) **Environmental**
   a) India-Germany Solar Partnership - joint initiative between the Indian and German governments to promote the use of solar energy in India. The partnership was launched in 2015 to increase

cooperation between the two countries in the areas of solar energy research and development, capacity building, and technology transfer.

b) <u>Indo-German Green Urban Mobility Partnership (GUMP)</u> - aims to promote sustainable urban mobility in Indian cities. The initiative focuses on developing and implementing sustainable transport solutions, such as integrated public transport systems, non-motorized transport infrastructure, and electric mobility solutions.

c) <u>Green and Sustainable Development Partnership (GSDP)</u>: Germany to provide Euro 10 billion to India till 2030 to support green growth

d) Indo-German Green Hydrogen Task Force was constituted in 2022

e) Germany cooperates with India to the tune of 1.3 billion Euros a year in development projects (90% of which serves the purpose of fighting climate change)

5) Scientific and Technological

a) <u>Max Planck-India Mobility Grants</u> - joint initiative between the Max Planck Society in Germany and the Department of Science and Technology (DST) in India to promote scientific collaboration between the two countries. The initiative aims to provide funding for short-term research visits by Indian and German scientists to each other's institutions.

b) <u>Indo-German Science & Technology Centre (IGSTC)</u> - is a bilateral initiative launched in 2010 by the Department of Science and Technology (DST) in India and the Federal Ministry of Education and Research (BMBF) in Germany. The center aims to promote collaborative research and development between India and Germany in the areas of science and technology.

c) <u>Triangular Development Cooperation</u>: represents development projects in third world countries (ex - Cameroon Ghana Malawi and Peru) by India and Germany.

d) Vision document to enhance cooperation and Innovation particularly in new technologies such as green hydrogen, fintech, artificial intelligence and 5G + 6G

6) Historic

a) India and Germany have a longstanding relationship that is characterized by mutual respect, cooperation, and shared values. The two countries have been engaging in close diplomatic, economic, and cultural ties since India's independence in 1947.

b) Helped in setting up institutes like IIT Madras

❖ Reasons for convergence in relations

1. <u>Disruptions in global supply chains due to COVID</u>: It has forced countries to diversify their supply chains and look for alternatives. India and Germany have been exploring the possibility of working together in areas such as pharmaceuticals, healthcare, and renewable energy to reduce their dependence on other countries and strengthen their supply chains.

2. <u>Russia-Ukraine war</u>: Ongoing conflict has had a significant impact on the European Union (EU) and its relations with Russia. In response, the EU has been looking to diversify its energy sources and reduce its dependence on Russian energy. This has led to increased interest in India and Germany as alternative energy suppliers, creating opportunities for cooperation between the two countries.

3. <u>Rising influence of China in the Indo-Pacific region</u> – It has led to concerns about its impact on regional security and stability. Both India and Germany share concerns about China's growing assertiveness in the region and have been exploring ways to work together to maintain a rules-based order in the Indo-Pacific.

4. <u>India's push for Atmanirbhar Bharat</u>: It has created opportunities for increased cooperation between India and Germany in areas such as technology, manufacturing, and innovation. Germany has expressed interest in partnering with India in these areas, given India's large market and potential for growth.

5. <u>Germany diversifying relations outside EU</u>: Given the uncertainties surrounding Brexit, Russia Ukraine war and the changing global order. India has been a key partner in Germany's efforts to strengthen ties with countries outside the EU, creating opportunities for increased cooperation between the two countries in areas such as trade, investment, and technology.

❖ Way Forward

1. ***Enhance economic cooperation*** by concluding India-EU BTIA, reducing trade barriers and promoting investment
2. ***Strengthen strategic ties*** through greater security cooperation, collaborating on global issues such as climate change, cybersecurity, and counter-terrorism.
3. ***Encourage innovation and technology collaboration*** in fields like renewable energy, manufacturing etc.

Basic terms/related concepts and facts:

• What is IGC?

➢ IGC stands for the India-Germany Intergovernmental Consultations. It is a bilateral mechanism for high-level consultations between India and Germany, which was established in 2011. The IGC is co-chaired by the Prime Minister of India and the Chancellor of Germany, and it involves the participation of several ministers and officials from both countries.

➢ The IGC is designed to provide a platform for regular and structured dialogue between the two countries on a range of issues, including political, economic, scientific, and cultural cooperation. The consultations cover a broad range of areas such as trade and investment, energy and climate change, education and research, culture and tourism, and strategic and security issues.

➢ The IGC is seen as an important forum for strengthening the bilateral relationship between India and Germany and for advancing shared interests and priorities. It has played a significant role in deepening the strategic partnership between the two countries and in promoting cooperation and collaboration in various areas.

Practice Questions

Prelims:

Q. Consider the following statements:
1. Germany is a landlocked country.
2. BTIA (Bilateral Trade & Investment Agreement) is signed between India & Germany.
3. Spain is largest trading partner of India in European Union.

Which of the statements given above is/are *incorrect*?

a) 1 and 2 only
b) 1 and 3 only
c) 2 and 3 only
d) 1, 2 and 3

Answer: d)

Mains: (Level-Moderate)

Q. India and Germany have been cooperating on climate change and environmental issues. Analyze the key areas of cooperation between the two countries in these field, and suggest measures to enhance their collaboration. **[10 marks, 150 words]**

TOPIC: India-Australia Relations

Issue in brief – Recently Australian Prime Minister Anthony Albanese visited India for the Annual Summit between India and Australia.

https://www.livemint.com/news/india/australian-pm-anthony-albanese-s-4-day-india-visit-begins-today-here-s-what-s-on-agenda-11678241939323.html

Where in Syllabus:
GS 2: India and its bilateral relations

❖ Why in news?

- *Recently*, the Australian Prime Minister visited India for the **India-Australia Summit.**
- At the Summit, the leaders discussed trade and investment, renewable energy and technology, and defence and security cooperation.

❖ What are the important outcomes of the meeting?

- Reaffirmed the strength of the multifaceted bilateral ties that have deepened under the India-Australia Comprehensive Strategic Partnership established in June 2020.
- Mou for cooperation in sports and audio-visual co-production.
- Cooperation between Atal Innovation Mission and Australia's Commonwealth Scientific and Industrial Research Organisation.
- Establishment of two task forces one on solar, solar task force and second on Green Hydrogen.

❖ How has been the relationship between India and Australia so far?

Phase 1 (1947-71)	• Lukewarm phase because Australia was in the US camp. • The US and Australia supported Vietnam war while India criticized it. • India's nuclear test was also problematic for India and Australia.
Second Phase (1971-1990)	• Some improvement was there, but India's tilt towards USSR created problems.
Third Phase (1991 onwards)	• India- Australia realtions have been on upswing, despite the 1998 nuclear test. • The Australia-India Council (AIC) was established on 21 May 1992. • The 2000s also saw new reasons for India and Australia to contemplate a deeper security relationship. The first was shared concerns about China's rise and assertive behaviour, which was increasingly being felt in the Indian and Western Pacific Oceans. • The India- Australia nuclear deal was signed in 2014.

❖ **What are the important aspects of India-Australia relationship?**

Trade and economics
- Australia is the 17th largest trading partner of India and India is Australia's 9th largest trading partner.
- India-Australia *Economic Cooperation and Trade Agreement (ECTA).*
- India's imports from Australia amount to 17 US $ billion while its exports to Australia amount to 10.5 US $ billion.
- *Australia-India Economic Strategy 2035:* Australia strive by 2035 to lift India into its top three export markets and make India the third largest destination in Asia for outward Australian investment.
- Both the countries elevated their ties to a "*comprehensive strategic partnership" in 2020*.

Strategic and Defence Co-operation
- The big reason for strategic and defence co-operation is rising China and there is a lot of convergence of interests on Indo-Pacific and counter terrorism.
- Austalia supports India's case in UNSC.
- India and Australia are members of the *Quad, Commonwealth, Indian Ocean Rim Association (IORA), ASEAN Regional Forum, Asia Pacific Partnership on Climate and Clean Development, and have participated in the East Asia Summits.*
- *Joint Exercises-* Pitch Black, Ausindex, Malabar.
- *2+2 Ministerial Dialogue* involving defence and external affairs ministers on both sides.
- *Mutual Logistics Support Agreement (MLSA)* to enhance defence cooperation.
- **Joint Declaration on a Shared Vision for Maritime Cooperation in the Indo-Pacific.**

Cultural relations
- Indian Diaspora accounts for around 3% of the Australian population and it is the 2nd highest tax paying diaspora after British
- Constant flow of Students and Tourists enhancing people to people ties
- *New Colombo Plan*: 900 Australian Graduates Completed Internship in India in 2015-16.
- India and Australia signed a Framework Mechanism for Mutual Recognition of Qualifications that will help ease the mobility of students and professionals between the two countries.

Clean Energy
- Countries signed a *letter of intent on new and renewable energy for cooperation* to reduce the cost of renewable energy technologies, including ultra low-cost solar and clean hydrogen.
- Both the countries committed to USD 5.8 million to the three-year *India-Australia Critical Minerals Investment Partnership*

Scientific cooperation
- **Australia-India Strategic Research Fund (AISRF)**, which was established in 2006, supports collaboration between scientists in India and Australia on cutting-edge research.
- Joint Working Group (JWG) on cooperation in Agriculture has been set up.

❖ **What are the challenges in India-Australia relations?**

- **Australia much more dependent on** the US for its security and on China for its economy than India in either case.
- **Differences over Ukraine war**: India is the only member of Quad, which includes Australia, Japan and the US, that has not condemned Russia's invasion of Ukraine or supported punitive measures against President Vladimir Putin or Russian banks and entities.
- **Violence with Diaspora:** Racial Attacks on Indian Students in Australia.
- **Visa issues:** There have been concerns over visa restrictions for Indian students and professionals seeking to work in Australia.
- **Trade Deficit** because of high reliance on coal. Australia accounts for 80 per cent of that total coking coal in 2021 that India imports to support its significant refining capacity.

- **Lack of Uranium Supply**: The progress on uranium supply has been very low, despite efforts from both sides. In 2017, Australia had sent its first uranium shipment to India but that was cited as " a small sample of uranium" transferred " purely for testing purpose".

❖ Way forward

- **Prioritise their consultative mechanisms** as range of working-level, bilateral and trilateral dialogues will be difficult to sustain, given limited capacity and schedules.
- **Improving interoperability.** This might require, for example, concluding a secure communications agreement, as india has done with the USA.
- **Australia and India should work to expand common ground** on nuclear non-proliferation and disarmament, which might help open the way on uranium sales.
- **Regular strategic dialogue should focus on common interests**, including relating to China, Pakistan, Afghanistan, terrorism and maritime security.

Basic terms/related concepts and facts:

• *Economic Cooperation and Trade Agreement*

➢ Agreement encompasses cooperation across the entire gamut of bilateral economic and commercial relations between the two friendly countries, and covers areas like Trade in Goods, Rules of Origin, Trade in Services, Technical Barriers to Trade (TBT), Sanitary and Phytosanitary (SPS) measures, Dispute Settlement, Movement of Natural Persons, Telecom, Customs Procedures, Pharmaceutical products, and Cooperation in other Areas.

➢ **Benefits under Trade in Goods:**
  - ✓ Indian goods on all tariff lines to get access to Australian market with zero customs duty.
  - ✓ Cheaper Raw Materials, Faster Approval for Medicines.
  - ✓ 90% of Australian exports by value to get zero duty access to Indian market.
  - ✓ 10 Lakh More Jobs, 10 Billion Dollar More Exports in Five Years.

➢ **Benefits under Trade in Services**
  - ✓ More than 1 lakh Indian students in Australia to benefit from post-study work visa
  - ✓ Australian services to get Negative List Treatment after 5 Years.

➢ **Protective Features to guard against Unintended Consequences like rules of origin.**

➢ **End to Double Taxation**

➢ **An Agreement Suiting the Specific Requirements of Indian Economy like** India has not provided access and kept out milk and other dairy products, wheat, sugar, iron ore, apple and walnuts from its offers to Australia

➢ **Total India – Australia trade expected to cross US $ 45-50 billion by 2035.**

Practice Questions

Prelims:

Q. Consider the following statements about recently signed Economic Cooperation and Trade Agreement (ETCA) between India and Australia:

1. Australia is offering immediate duty elimination on 100% of its tariff lines.
2. India has not provided access to many sensitive products such as milk and other dairy products, wheat, sugar etc. under Ind-AUS ETCA.

Which of the above statement(s) is/are correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Answer: b)

Mains: (Level-Moderate)

Q. Mentioning the key areas of cooperation, discuss the evolution of India-Australia relations from limited engagement to a strategic partnership.　　　　　**[15 marks, 250 words]**

DIY: https://pib.gov.in/PressReleasePage.aspx?PRID=1889525

TOPIC: Criteria for Scheduling of Tribes

Issue in brief – The Tribal Affairs Ministry while responding to responding to a question in the Rajya Sabha, which raised concern about the need for a revision in the criteria and procedure for inclusion on the list insisted that the current procedure for inclusion of communities on the Scheduled Tribes list was "adequate".
https://epaper.thehindu.com/ccidist-ws/th/th_delhi/issues/28778/OPS/GDTB0ARR1.1+GSCB0B8VR.1.html

Where in Syllabus:
GS 2: Mechanisms, laws, institutions and Bodies constituted for the protection and betterment of these vulnerable sections
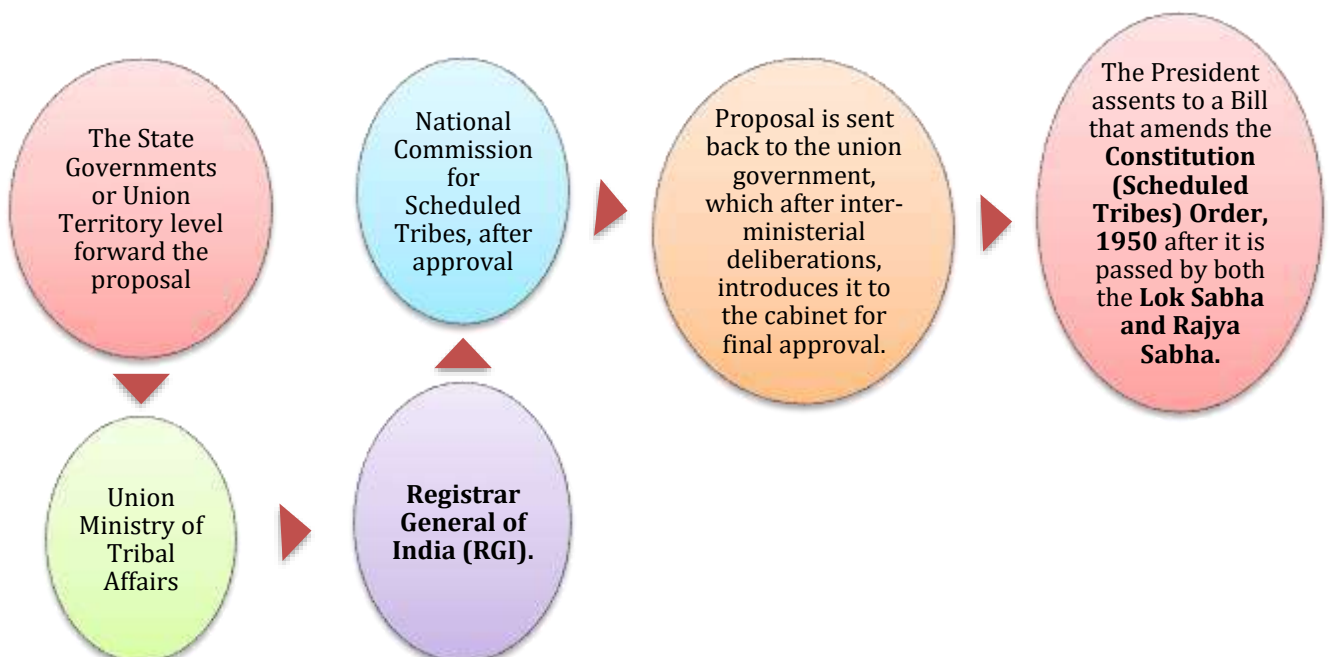
❖ **Why in news?**

• *Recently*, in response to an RTI query, the Office of the Registrar General of India (ORGI) had said that it continues to follow the criteria set out by the Lokur Committee in 1965 to decide whether a community can be included in the ST list.

• Both the procedure and criteria for inclusion of communities had been strongly criticised by an internal government task force formed in February 2014, for being "obsolete", "condescending", "dogmatic" and "rigid".

❖ **What is the current procedure and criteria for the inclusion of communities adopted in the ST List?**

• **Procedure**

The State Governments or Union Territory level forward the proposal

Union Ministry of Tribal Affairs

Registrar General of India (RGI).

National Commission for Scheduled Tribes, after approval

Proposal is sent back to the union government, which after inter-ministerial deliberations, introduces it to the cabinet for final approval.

The President assents to a Bill that amends the **Constitution (Scheduled Tribes) Order, 1950** after it is passed by both the **Lok Sabha and Rajya Sabha.**

- **Criteria:** The Office of the Registrar General of India (ORGI) follows the criteria **set out by the Lokur Committee in 1965** to decide whether a community can be included in the ST list. These criteria include:
  1) Indications of "primitive traits"
  2) Distinctive culture,
  3) Geographical isolation,
  4) Shyness of contact with the community at large.
  5) Backwardness.

❖ What are the issues in the current criteria?

- **Lack of Transparency:** There have been instances where politically influential communities have been included in the ST list without meeting the necessary criteria, while deserving communities have been left out.
- **Inconsistent Criteria**: The criteria for tribal status determination vary across states, leading to inconsistencies. However, the same community is not recognized as a Scheduled Tribe in other states, creating inconsistencies.
- **These criteria "may have become obsolete** considering the process of transition and acculturation".
- **Condescending nature of criteria:** Terms like "primitive and the requirement of primitivity to be a characteristic of Scheduled Tribe indicates a condescending attitude by outsiders". *"What we consider primitive is not considered by the tribals themselves."*
- **The task force pointed out problems with the geographical isolation** criterion, arguing that as infrastructure development continued across the country, "how can any community remain in isolation"?

❖ What are the new criteria suggested by the task force?

- The new criteria under the government's consideration included:
  - ➢ Socio-economic, including educational, backwardness, vis-a-vis, the rest of the population of the State;
  - ➢ Historical geographical isolation which may or may not exist today;
  - ➢ Distinct language/dialect;
  - ➢ Presence of a core culture relating to life-cycle, marriage, songs, dance, paintings, folklore.
  - ➢ Endogamy, or in case of exogamy, marital relationship primarily with other STs (This criterion is for scheduling of a community as ST and not for determining ST status of an individual)
- The draft Cabinet note also proposed, "Communities which have adopted a 'Hindu' way of life will not be ineligible merely on this ground."
- It further recommended considering the population of the new community in relation to the existing ST population of the State, adding that all these criteria had to be looked at holistically and none should take precedence over another.

❖ Way forward

- **Review and Update Criteria:** Conduct a comprehensive review of the existing criteria for tribal status determination and consider the recommendations put forth by the internal government task force. Update the criteria to reflect the socio-economic changes, acculturation, and evolving realities faced by communities seeking ST status.
- **Review and Update Criteria**: Conduct a comprehensive review of the existing criteria for tribal status determination and consider the recommendations put forth by the internal government task force. Update the criteria to reflect the socio-economic changes, acculturation, and evolving realities faced by communities seeking ST status.
- **Transparency and Accountability:** Ensure transparency in the inclusion process by making the criteria and procedures publicly available. Establish clear guidelines on the documentation and evidence required for the inclusion of communities in the ST list. Additionally, introduce mechanisms for accountability to prevent political influence and favoritism.

- **Consistent Criteria across States:** Work towards establishing uniform criteria for tribal status determination across all states. This will address the issue of inconsistencies and ensure that deserving communities receive equitable treatment regardless of the state they reside in.
- **Data-driven Decision-making**: Conduct thorough data collection and research to assess the socio-economic conditions of communities seeking ST status. The data should be collected through rigorous surveys and analysis, considering factors such as income levels, education, healthcare access, infrastructure, and employment opportunities.
- **Community Participation and Empowerment:** Involve tribal communities and their representatives in the decision-making process. Seek their inputs, perspectives, and recommendations during the review and inclusion process. Conduct awareness campaigns.

Basic terms/related concepts and facts:

- The Constitution is silent about the criteria for specification of a community as a Scheduled Tribe.
- **The Constitution of India in Article 366 (25)** prescribe that the Scheduled Tribes means such tribes or tribal communities as are deemed under Article 342 of the Constitution to be Scheduled Tribes.
- **Article 342(1)** empowers the President of India (in consultation with Governor of the state) to notify tribes or tribal communities or part of or groups as a **Scheduled Tribe in relation to that State or Union Territory.**
- **The Fifth Schedule of the Constitution** deals with the administration and control of Scheduled Areas as well as of Scheduled Tribes residing in any State other than the States of Assam, Meghalaya, Tripura and Mizoram.
- **The Sixth Schedule** deals with the administration of the tribal areas in Assam, Meghalaya, Tripura and Mizoram.

Practice Questions

Prelims:

Q. Consider the following statements:
1. The Constitution defines the scheduled tribes.
2. National Commission on Schedule Tribes notify tribes or tribal communities or part of or groups as a Scheduled Tribe.

Which of the above statements is/are correct?
a) 1 only
b) 2 only
c) Both 1 and 2
d) None

Answer: a)

Mains: (Level-Moderate)

Q. Discuss the issues surrounding the current procedure for the inclusion of communities in the Scheduled Tribe (ST) list in India. Suggest measures to reform the procedure and criteria to ensure a transparent, objective, and equitable inclusion process. **[15 marks, 250 words]**

TOPIC: Slowdown in Indian Economy

Issue in brief – Real FDP growth slowed to 4.4% yoy in December quarter (Q3FY22) marking the slowest pace of expansion in FY23 so far.
https://www.livemint.com/news/india/why-gdp-growth-slowed-and-what-is-the-way-out-11677609367386.html

Where in Syllabus:
GS 3: Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment

❖ Why in news?

- Real GDP growth slowed to 4.4% y-o-y in the December quarter marking the slowest pace of expansion in FY23 so far.
- The growth slowdown is largely broad based and a decline in some of the major components of the GDP raises questions on resilience of domestic demand.

❖ What is economic slowdown?

- An economic slowdown *is a period of slower economic growth*, typically characterised by a decrease in the rate of growth of real gross domestic product (GDP).
- In spite of the negative notion of the occurrence, it is still a natural event that takes place in any economy - weak or strong. It is important to note that an economic slowdown is completely separate from a recession.

Difference between economic slowdown and recession

Characteristics	Recession	Slowdown
Definition	Refers to a decline in the GDP for 2 consecutive quarters.	Refers to a situation whereby economic growth occurs but a reduced or slow rate.
Longevity	Affects the stability of the economy for several quarters or years.	Can be resolved in a short time.
Effects on the economy	Leads to very low production levels and high rates of unemployment.	Causes low production levels in the affected sectors and causes unemployment.
Impact	Economies has a worldwide effect	May affect specific countries, economies or globally.

- **Several indicators that can signal an economic slowdown**:
- ✓ ***Gross Domestic Product (GDP) growth*:** Real GDP growth slowed to 4.4% y-o-y in the December quarter marking the slowest pace of expansion.

✓ **_Employment:_** When the number of people employed in an economy starts to decline, it can be a sign of an economic slowdown. High levels of unemployment can indicate that businesses are not hiring or are cutting back on their workforce.

✓ **_Low retail sales_**: When consumers start to spend less money, it can be a sign of an economic slowdown. This can happen when people become more cautious about their spending, or when they are facing financial difficulties.

✓ **_Business investment_**: When businesses reduce their investment in new projects or expansion, it can be an indication of an economic slowdown. This can happen when companies are uncertain about the future of the economy or when they are facing difficulties accessing financing.

✓ **_Trade_**: A decline in international trade can signal an economic slowdown, as it indicates that demand for exports is weakening.

✓ **_Stock market:_** A decline in the stock market can be a sign of an economic slowdown, as investors become more cautious about the prospects for companies and the economy as a whole

❖ What are the reasons for economic slowdown?

- **Base effect:** Much of the growth moderation in Q3 is attributed to an adverse base effect as real GDP grew at 5.2% y-o-y in Q3FY22.

- **Decline in Consumption**: Low private consumption expenditure to a two-year low suggests a softening in household spending demand amid inflationary pressures as post covid pent up demand starts to fade.

- **Aggressive tightening of monetary policies** across the central banks of advanced economies is likely to cause a global slowdown.

- **Decline in Investment**: Due to policy uncertainty, rising borrowing costs, and a lack of access to credit firms are less likely to invest in new projects, which leads to lower economic growth. According to the RBI, *gross fixed capital formation fell from 32.3% of GDP in 2011-12 to 26.9% of GDP in 2020-21*.

- **Decline in Net exports**: Due to global economic uncertainties (Russia Ukraine war, rising oil prices, COVID induced disruptions in global supply chains), trade tensions, and a decline in demand for Indian goods and services in international markets. As a result, the overall demand for Indian goods and services has decreased, leading to a slowdown in economic growth. *According to the Ministry of Commerce and Industry, exports fell by 9.7% in February 2022*.

- **Limited Government expenditure**: Due to fiscal consolidation efforts and a decline in tax revenue, the government is less able to invest in key projects and programs, which can limit economic growth. According to the Ministry of Finance, the fiscal deficit for 2021-22 is estimated to be 9.5% of GDP.

- **On the sectoral side,** there is contraction in manufacturing and there is a sharp moderation in service sector also.

❖ What are the implications of slow economic growth?

- **High unemployment**: When the economy is not growing at a sufficient pace, businesses may not be able to expand and hire as many workers. This can lead to higher levels of unemployment, which can have negative consequences for individuals and families. *The unemployment rate reached a record high of 9.1% in December 2021, according to the Centre for Monitoring Indian Economy (CMIE).*

- **Reduced consumer confidence**: It can lead to a reduction in consumer confidence. When people are uncertain about the future of the economy, they may cut back on their spending, which can further slowdown economic growth.

- **Decreased government revenue**: When the economy is not growing, the government may collect less revenue in the form of taxes. This can lead to budget deficits and make it more difficult for the government to invest in public services and infrastructure.

- **Increased government debt**: In order to stimulate the economy during a period of slow growth, governments may need to borrow money to fund stimulus packages or invest in infrastructure. This can lead to an increase in government debt levels.
- **Reduced investment**: When the economy is not growing, businesses may be less willing to invest in new projects or expand their operations. This can lead to a reduction in innovation and productivity, which can have long-term consequences for the economy.
- **Social unrest:** Slow economic growth can lead to social unrest, as people become frustrated with their economic situation and the lack of opportunities available to them. This can lead to protests, strikes, and other forms of social unrest, which can further damage the economy.

❖ What are the challenges in reversing the economic slowdown?

- **High fiscal deficit of the government** has limited the government's ability to invest. The government in its 2023/24 budget set a fiscal deficit target of 5.9% of gross domestic product for the coming financial year, down from the current year's target of 6.4% of GDP.
- **Non-performing assets (NPAs):** The Indian banking sector is burdened with a high level of non-performing assets (NPAs), which has limited the ability of banks to lend to businesses and households. *The gross NPA ratios of PSBs may swell from 6.5 per cent in September 2022 to 9.4 per cent in September 2023, whereas it will go up from 3.3 per cent to 5.8 per cent for private banks under the severe stress scenario, the RBI said.*
- *Infrastructure*: India's infrastructure is often inadequate, which can limit economic growth and investment.
- **Regulatory environment**: India's regulatory environment can be complex and bureaucratic, which can discourage investment and entrepreneurship. Streamlining regulations and improving the ease of doing business is a key challenge. *According to the World Bank's 2020 Doing Business report, India takes 58 days and costs on average 7.8% of a property's value to register it.* *longer and at a greater cost than among OECD high-income economies.*
- *Inflation*: Inflation can erode the purchasing power of consumers and reduce demand for goods and services. Controlling inflation while also promoting growth is a key challenge for policymakers in India. CPI index is consistently above 6% in last 1 year.
- *External factors*: India is vulnerable to external factors, such as fluctuations in global oil prices, which can have a significant impact on the economy. Managing the impact of external factors while also promoting growth is a key challenge for policymakers.

❖ Way Forward

- **Structural reforms**: India could undertake structural reforms such as improving the ease of doing business, labour reforms, and land reforms. This could help to attract more investment and create jobs.
- **Investment in infrastructure**: Investment in infrastructure such as roads, ports, and airports could help to boost economic activity and create jobs.
- **India has a comparative advantage in abundant supply of labour**. The country will have to switch to large scale labour intensive industries and should specialise in their production and exports. Textiles, apparels, leather, handlooms and handicrafts should be focused for jumpstart the exports.
- **Focus on exports**: India could focus on increasing exports by improving competitiveness, promoting exports of high-value goods and services, and diversifying its export markets.

- **Encourage entrepreneurship and innovation**: The government could create an environment that encourages entrepreneurship and innovation by providing incentives, reducing red tape, and promoting start-ups.
- **Improve the quality of education and skills training**: All the industries should be mandated to take in large numbers of apprentices, even if means the government pays part of the internship payment. This will mitigate problems of skilling.

Basic terms/related concepts and facts:

- ***GDP***: GDP stands for Gross Domestic Product, which is a measure of the total value of goods and services produced within a country's borders during a specific period of time, typically a year. GDP is often used as a key indicator of a country's economic performance and is used to compare the economic performance of different countries.
- ***Base effect***: The base effect is the impact that selecting a different reference point for a comparison between two data points can have on the comparison's outcome. In the context of inflation, the base effect is a distortion in a current inflation figure caused by exceptionally high or low levels of inflation in the previous reference period.

Practice Questions

Prelims:

Q. With respect to GDP, consider the following statements:
1. GDP measures the total value of goods and services produced within a country's borders in a given period of time.
2. GDP includes only the final goods and services and not the intermediate goods and services.
3. GDP is an indicator of a country's economic welfare and social progress.

Which of the statements given above is/are correct:
a) 1 and 2 only
b) 2 and 3 only
c) 1 and 3 only
d) 1, 2and 3

Answer: a)

Mains: (Level-Moderate)

Q. What are the factors contributing to the recent slowdown in India's GDP growth? What measures government should undertake to revive the economy and achieve sustainable growth? Discuss. **[10 marks, 150 words]**

TOPIC: Raising Farm Income

Issue in brief – Knowing the status of farmer's income and revisiting the policies implemented for same after 7 years have passed since the strategy of doubling farmers' income was announced. https://indianexpress.com/article/opinion/columns/how-to-double-indias-farmers-income-8480915/

Where in Syllabus:
GS 3: Issues related to direct and indirect farm subsidies and minimum support prices

❖ Why in news?
- *More than 7 years have passed*, since the dream of doubling farmer's income was announced by our honourable Prime Minister.
- Now, India has completed 75 years of its independence and has entered into 'Amrit Kaal'. Therefore, now is the time to know the status of farmer's income and revisit the policies implemented for same.

Revisiting a Dream of Doubling Farmer's Income

❖ What is the current status of Farmers' income?
The **_most recent NSO survey of farmers is for 2018-19_**. Prior to that, it was in 2012-13.
- ➢ Survey says "*The Average Monthly Income for the period 2012-13 (70th Round) was **Rs 6,426** and the same became **Rs 10,218** in the (77th Round) during 2018-19.*"
- ➢ Nonetheless, the income of farmer households from **_crop cultivation_** declined 1.5% per annum between 2012-13 and 2018-19, similar to what was reported by the national accounts method.
- ➢ The income of farmers does rise, albeit barely by 0.6% per annum, when **livestock income** is included. On adding non-farm income, it shows a growth of 2.8% per annum.
- ➢ Much of this increase in income is thanks to the **_non-farm intake_** of farmer households. Unfortunately, there is no way to estimate farmers' incomes in 2022, as there have been no surveys after 2018-19 and there is unlikely to be one for some time, given that these are generally decennial.
- The only other source of data on income of agricultural households is the survey of rural households as part of the **_NABARD All India Financial Inclusion Survey (NAFIS)_**, which provides incomes for 2015-16. Although its definition of agricultural households and income differs from the NSS, it found that the income of agricultural households from all sources increased 1.7% per annum between 2015-16 and 2018-19, less than half the 3.8% growth rate of the prior period between 2012-13 and 2015-16.

❖ Why doubling farmers' income is considered important?
- **For the long term high growth of the economy**, focusing on agriculture is the right approach because agriculture engages 45.5% of workforce and the manufacturing sector start facing demand constraint soon after meeting the demand of well-off urban consumers.
- **Agriculture provides food and nutritional _security_** to the population.

- ***To promote farmers' welfare, reduce agrarian distress and bring parity*** between the income of farmers and those working in non-agricultural professions.
- ***Rural development***: Increasing farmers' income can also contribute to rural development by creating jobs and economic opportunities in rural areas, reducing migration to cities, and strengthening local communities.
- ***Climate change:*** Sustainable agriculture practices that increase yields and improve soil health can help mitigate the effects of climate change. Doubling farmers' income can provide the resources and incentives needed to adopt these practices and improve the resilience of agricultural systems.
- ***Social equity:*** Agriculture is often the primary occupation of marginalized communities, such as women, indigenous people, and landless farmers. Doubling farmers' income can help reduce social inequalities by providing these groups with greater access to resources, markets, and technologies.
- ***Innovation and entrepreneurship***: Increasing farmers' income can also stimulate innovation and entrepreneurship in agriculture. When farmers have more money to invest, they can experiment with new crops, production methods, and marketing strategies, which can lead to greater efficiency and competitiveness.

❖ What was done to raise farmers' income or to double it?

- ***For doubling farmers' income,*** Government had constituted *an Inter-Ministerial Committee* to examine *issues relating to "Doubling of Farmers Income (DFI)"* and recommended strategies to achieve the same.
- The Committee submitted its final report in 14 volumes to the Government containing the strategy for doubling of farmers' income through various policies, reforms & programmes. To achieve the objective, *the Committee identified following **seven sources of income growth***: -
  - ➢ Increase in crop productivity
  - ➢ Increase in livestock productivity
  - ➢ Resource use efficiency – reduction in cost of production
  - ➢ Increase in cropping intensity
  - ➢ Diversification to high value agriculture
  - ➢ Remunerative prices on farmers' produce
  - ➢ Shift of surplus manpower from farm to non-farm occupations
- ***The premise of the strategy for doubling farmers' income is based on the following primary principles:***
  - ➢ Increasing total output across the agricultural sub-sectors through realising higher productivity
  - ➢ Rationalizing/reducing the cost of production
  - ➢ Ensuring remunerative prices in the agricultural produce
  - ➢ Effective risk management
  - ➢ Adoption of sustainable technologies
- **As per the strategy, Government has adopted and implemented several policies, reforms, developmental programmes and schemes for achieving higher incomes for the farmers directly or indirectly. These include**:
  - ➢ Income support to farmers through PM Kisan.
  - ➢ Pradhan Mantra Fasal Bima Yojana (PMFBY) for addressing problems of high premium rates for farmers and reduction in sum insured due to capping.
  - ➢ Institutional credit for agriculture sector.
  - ➢ Fixing of minimum support price (MSP) at one-and-a half times the cost of production.
  - ➢ Promotion of organic farming in the country.
  - ➢ Micro irrigation fund.

➢ Promotion of farmer producer organisations (FPOS).
➢ Providing soil health cards to farmers.
➢ Setting up of national agriculture market (e-Nam) extension platform.
➢ Launch of the National Mission for Edible Oils – Oil Palm.
➢ Agri-Infrastructure Fund (AIF).
➢ Creation of a Start-up Eco system in agriculture and allied sector.

❖ What are the major issues associated with the policy?

• *High input subsidy and suppressing output trade and marketing policies:* Subsidies on irrigation, fertilizer, crop insurance etc. do help in raising farmers' income. However, output trade and marketing policies like ban on exports of wheat, or 20% tax on rice *suppress* farmers' income.

• *Pro Consumer approach rather than pro-farmer approach*: Unloading of wheat to bring down the market price of the wheat just before the procurement so that the Government can buy at the MSP, which is lower than the market price. These are hidden implicit taxation of farmers' income.

• *Environmental Issue*: The policy of heavy subsidisation especially fertilizer and power, along with assured and open ended procurement of paddy and wheat is playing havoc with environment. They all require rationalisation.

❖ Way forward

• *Make subsidies and support crop- neutral* and if they need to be skewed they should be in favour of crops like millets, pulses, oilseeds etc. that are benign to the plants basic resources.

• *Need to realign farmer support policies keeping in mind environmental outcomes.* Millets, pulses, oilseeds, and much of horticulture could perhaps be given carbon credits to incentivise their cultivation.

• *There is a need for innovations in technologies, products, institutions and* policies for more diversified high-value agriculture that is also planet friendly.

• *Increasing productivity through better seeds and better irrigation* is necessary. It will have to be combined with unhindered access to the best markets for their produce.

• *Diversifying to high-value crops, and even putting solar panels on farmers' fields as a third crop* will be could help to raise income sustainably.

Case Study
No policies can succeed unless farmers' incomes increase.
In Madhya Pradesh, one corporate working on 100 acres to develop medicinal plants, which they have already scaled up to 5,000 acres on farmers' fields. The lands are much poor for wheat or paddy, and farmers are readily adopting these medicinal plants as it gives them better incomes. The corporate is giving them an assured buyback arrangement to reduce their market risk. Another corporate is buying soybean at Rs 6,000/quintal, way above the MSP of Rs 4,300/quintal to make tofu, soya milk powder, soya ice cream, and even frozen soya yoghurt.

Practice Questions

Prelims:

Q. Consider the following pair:

1. Ashok Dalwai Committee   -   Doubling Farmer's Income
2. B Shivaraman Committee   -   Land Leasing
3. T Haque Committee   -   NABARD

 Which of the above given pair is/are not correctly matched?

a) 1 and 2 only
b) 2 and 3 only
c) Both 1 and 2
d) None

Answer: b)

Mains: (Level-Moderate)

Q. Discuss the challenges and opportunities in achieving the goal of doubling farmers' income in India. What measures should be taken to address the implementation challenges, promote equitable distribution of benefits, and ensure the sustainability of agriculture while achieving this goal?   **[15 marks,2 50 words]**

TOPIC: India's Push for Semiconductors

Issue in brief – The push for Semiconductors, or integrated circuit, is far more pressing now, as these chips are found in practically every modern appliance and personal electronics devices.
https://epaper.thehindu.com/ccidist-ws/th/th_delhi/issues/29780/OPS/GN3B1BTE8.1.png?cropFromPage=true

Where in Syllabus:
GS 3: Changes in industrial policy and their effects on industrial growth

❖ Why in news?

• The Indian government has disbursed ₹1,645 crore in performance-linked incentives (PLI) to electronics manufacturers. The aim is to strengthen the domestic electronics supply chain and reduce reliance on China.

• Emphasis is placed on semiconductors, as they are crucial components in modern electronics. This aligns with the global trend of countries diversifying supply chains and developing domestic capabilities in critical industries.

❖ What are semiconductors?

• **Semiconductors** possess unique electrical properties that fall between conductors and insulators.

• They are used to create electronic components like **ICs, diodes, and transistors.**

• **Silicon** is the most common elemental semiconductor, widely used in ICs. Other semiconductor compounds like **gallium arsenide or indium antimonide** are also utilized.

• Semiconductors allow **precise control of electrical flow**, enabling the creation of complex circuits in modern electronics.

• **Applications:**

➢ **Sensors**: Temperature sensors used in air conditioners.

➢ **Digital consumer products** in everyday life such as mobile phones / smartphones, digital cameras, televisions, washing machines, refrigerators and LED bulbs.

➢ **Play a central role in the operation of bank** ATMs, trains, the internet, communications and other parts of social infrastructure, such as the medical network used for the care of elderly, among other things.

➢ **Future ADAS (Advanced Driver Assistance Systems),** more semiconductors are expected to be used.

Where does India stand in the semiconductor market?
• **As per statistics and research metrics, Indian semiconductor market** was worth nearly $23.2 billion in 2021 and is further projected to reach $80.3 billion by the year 2028, growing at the CAGR of 17.10% in the forecast period.
• **As per a report by the India Brand Equity Foundation (IBEF),** India is home to over 200 semiconductor design and embedded software companies.

❖ **Why is the government encouraging semiconductor manufacturing?**

• **Highly capital-intensive undertakings:** Semiconductor fabrication units, or fabs, turn raw elements such as silicon into integrated circuits that are fit to be a part of practically all electronic hardware in the world are highly capital-intensive undertakings, costing billions of dollars for large facilities.

• **Semiconductor manufacturing plays a pivotal role** in transforming industries. It enables advancements in artificial intelligence, machine learning, Internet of Things (IoT), autonomous vehicles, and other emerging technologies. These advancements drive efficiency, productivity, and innovation across sectors.

• **Reducing import dependency:** As India imports 100% of its chips from Taiwan, Singapore, Hong Kong, Thailand, and Vietnam, it poses risks to the country's supply chain security. By promoting domestic semiconductor manufacturing, the government aims to reduce import dependency and enhance self-sufficiency in this critical technology sector.

• **Strategic independence**: Building domestic semiconductor manufacturing capabilities enhances India's strategic independence, reducing reliance on other countries for critical components.

• **More and more nations are trying to turn away from China's dominance** in the space, following geopolitical pressures to de-leverage themselves from supply chain vulnerabilities. *For instance*, The U.S. passed the CHIPS Act, providing upwards of $280 billion in subsidies and investments to manufacturers opening fabs and making semiconductors in the U.S. This has been combined with restrictions and sanctions on the Chinese semiconductor industry.

• **Multiplier Effects**: Developing domestic semiconductor manufacturing capabilities will have a multiplier effect across different sectors of the economy and will contribute significantly to achieving a USD 1 trillion digital economy and a USD 5 trillion GDP by 2025. The initiative will not only boost semiconductor manufacturing but will also help India achieve self-sufficiency, improve data security, and gain digital independence.

• **Job creation:** Creating a robust semiconductor industry in India would offer significant job creation opportunities. The Indian IT industry today contributes $150 billion to the $1 trillion global IT market, and provides around 5.8 million high-quality jobs in the country – around one fifth of the world's semiconductor design engineers are from India.

❖ **What are the advantages and challenges for India in semiconductor manufacturing?**

• **Advantages:**

➢ **Skilled Workforce**: A large part of semiconductor manufacturing involves design and intellectual labour. India has an advantage here, as a large portion of semiconductor design engineers globally are either Indian or Indian-origin; chipmaking firms such as Intel and NVIDIA have large facilities in India that are already flush with Indian talent working on design problems.

➢ **China is losing control** over in the face of sanctions and an ageing population.

➢ **Domestic Market Potential**: With a rapidly growing population and a burgeoning middle class, India offers a huge consumer base for semiconductor products, providing a strong demand driver for the industry.

➢ **Government Support**: The government has launched several initiatives to promote semiconductor production in India. *Production Linked Incentive (PLI) scheme, Design Linked Incentive (DLI)* and various schemes to include *Chips to Startup (C2S)* and *Scheme for Promotion of Electronic Components and Semiconductors (SPECS)* are enabling initiatives in this space.

- **Challenges:**

➢ **Capital-intensive nature of semiconductor manufacturing**: It is highly dependent on Research and Development (R&D) and Intellectual Property (IP) protection, and hence extremely expensive. Though many foreign companies have their R&D divisions in India due to its skilled labour, inadequate IP protection and contract enforcement limit the extent to which such companies can collaborate with Indian companies. Fabrication plants are highly capital-intensive due to ever-changing innovations in manufacturing abilities and reliance on specific equipment and chemicals.

➢ **India's semiconductor subsidy program, also lags** behind the tens of billions of dollars and tax incentives other countries are providing. For instance, €43 billion package in the EU CHIPS Act, $50 billion in the U.S. CHIPS and Science Act, and a $143 billion Chinese plan.

➢ **Raw Materials:** India needs to address its dependency on China for critical metals and alloys used in semiconductor manufacturing. Expanding the domestic mining industry, utilizing India's significant rare earth reserves, would require substantial time and financial investment.

➢ **Uninterrupted Water and power supply:** Chip-making also requires gallons of ultrapure water in a single day, which experts say, could be a task for the government to provide to factories, compounded also by the drought conditions which often prevail in large parts of the country. Besides, an uninterrupted supply of power is central to the process.

➢ **Low Availability of Fabrication Capacities:** India has been dealing with a lack of fabrication (fab) capacities recently. Even though the country has adequate chip design talent, there is no proper chip fab capacity. DRDO and ISRO have their fab foundries. However, they are merely for their requirements and are not equipped with the latest technologies.

➢ **Hazardous Materials:** Semiconductor manufacturing involves the use of various hazardous materials, including solvents, acids, bases, heavy metals, and toxic chemicals. These materials can pose risks to human health and the environment if not properly managed.

❖ **Way forward**

- **Ramping up chip design capabilities and research**. Recently, Meity and Cadence Design Systems have started an incubator called fabless chip design incubator programme (fabci) to support IPR in chip design.

- **Creating a skilled workforce**: The three pillars to achieve this are a supportive policy environment and incentives to promote the production of semiconductors in the country, academia providing a dynamic curriculum relevant to the needs of the industry and industry collaborating with academia.

- **Infrastructure Development**: Investing in state-of-the-art infrastructure, such as semiconductor fabs and cleanroom facilities, is crucial to support advanced manufacturing processes.

- **Waste Minimization and Recycling**: Semiconductor manufacturers strive to minimize hazardous waste generation through process optimization and waste reduction strategies. Recycling and reusing certain waste materials can also be practiced to reduce environmental impact.

- **Resource optimization is crucial for sustainable semiconductor manufacturing.** Effective water management strategies should be implemented, including water recycling and reuse, advanced treatment technologies, and collaboration with local authorities. Increasing reliance on renewable energy sources such as solar and wind power is essential for a reliable and sustainable energy supply.

Basic terms/related concepts and facts:

• **Government initiatives:**

➢ **India Semiconductor Mission (ISM)** is a specialized and independent Business Division within the Digital India Corporation that aims to build a vibrant semiconductor and display ecosystem to enable India's emergence as a global hub for electronics manufacturing and design.

➢ **SPECS scheme**: The Scheme offers financial incentive of 25% of capital expenditure for the manufacturing of goods as per list annexed in the scheme that constitute the supply chain of an electronic product under the Scheme for Promotion of manufacturing of Electronic Components and Semiconductors (SPECS).

➢ **Production linked incentive (PLI) scheme**, allowing for a uniform fiscal support of 50 per cent of project cost for semiconductor fabs across technology nodes and display manufacturing.

➢ **Modified Special Incentive Package Scheme (M-SIPS)** provides financial incentives for setting up new semiconductor manufacturing units in the country. Under the scheme, companies can get a subsidy of up to 25% of their capital expenditure.

Practice Questions

Prelims:

Q. Consider the following statements:

1. Production Linked Incentive Scheme offers a production linked incentive to boost domestic manufacturing and attract large investments.
2. The scheme extends an incentive of 4% to 6% on sales of goods manufactured in India.

Which of the above given statements are correct?
a) 1 only
b) 2 only
c) Both 1 and 2
d) None of the above

Answer: a)

Mains: (Level-Moderate)

Q. Analyze the impact of semiconductor manufacturing on India's economic growth and technological advancement. Discuss how a thriving semiconductor industry can contribute to achieving the government's vision of a USD 1 trillion digital economy and a USD 5 trillion GDP by 2025.   **[15 marks, 250 words]**

TOPIC: India's Effort in Biodiversity Conservation

Issue in brief – India on path to become a biodiversity champion by adopting measures such as expanding protected areas, promoting sustainable agriculture, ensuring community participation in conservation efforts, and integrating biodiversity into policy making.
https://www.thehindu.com/opinion/op-ed/india-can-become-a-biodiversity-champion/article66541444.ece

Where in Syllabus:
GS 3: Conservation, environmental pollution and degradation

❖ More about the news

- To conserve planet's biodiversity, 188 country representatives adopted an agreement to "halt and reverse" biodiversity loss by conserving 30% of the world's land and 30% of the world's oceans by 2030, known as the 30×30 pledge - *UN Biodiversity Conference in Montreal, Canada 2022.*
- India currently hosts 17% of the planet's human population and 17% of the global area in biodiversity hotspots, placing it at the helm to guide the planet in becoming **biodiversity champions**.

- India has only 2.4% of the world's land area, *its share of the global species diversity is an impressive 8.1%*. However, the country is facing serious losses of natural assets such as land, water, and biodiversity
- In the direction of conserving biodiversity and environment, Union Budget 2023 mentioned "Green Growth" as one of the seven priorities or Saptarishis.

❖ Measures taken by India for Biodiversity Conservation

1. **PM PRANAM**
   o PM Promotion of Alternate Nutrients for Agriculture Management Yojana
   o Will incentivise states to reduce the use of chemical fertilisers in agriculture
2. **MISHTI** scheme
   o Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI)
   o mangrove plantation along the coastline and on salt pan lands, wherever feasible, through convergence between MGNREGS, CAMPA Fund and other sources
3. **AMRIT DHAROHAR**
   o Protecting vital wetlands which sustain aquatic biodiversity.
   o The scheme aims to achieve sustainable ecosystem development with the help of local communities.
   o will enhance bio-diversity, carbon stock, eco-tourism opportunities and income generation for local communities
4. **Green Credit programme**
   o Under the Environment Protection Act, 1986.
   o Will incentivise environmentally sustainable and responsive actions by companies, individuals, and local bodies and help mobilise additional resources for such activities.
5. **National Mission for a Green India / Green India Mission**

o aims to increase forest cover on degraded lands and protect existing forested lands.
6. **Legal provisions**
   o WPA 1972 - protected areas like NPs, WLS; project tiger etc
   o EPA 1986 - rules for environmental protection
   o Eco-Sensitive Zones: areas notified around Protected Areas to regulate and manage developmental activities, reduce human-wildlife conflict, and conserve biodiversity.
   o Biological Diversity Act, 2002, provides for the conservation of biological diversity, sustainable use of its components, and fair and equitable sharing of benefits arising out of the use of biological resources.
7. **Other provisions**
   o National River Conservation Plan: conserve and restore the country's major rivers and their ecosystems.
   o National Mission on Himalayan Studies
   o National Mission for Clean Ganga
   o National Wildlife Action Plan

❖ Importance of Biodiversity

1. **Ecosystem services**: Biodiversity provides ecosystem services such as clean air and water, soil fertility, and pest control.
   o For example, forests play a crucial role in regulating the climate by sequestering carbon dioxide, while wetlands help to filter and purify water.
2. **Food security**: Biodiversity is the foundation of our food systems, with different crop varieties and livestock breeds providing resilience to climate change and food security.
   o For example, traditional rice varieties like Samba Masuri and Navara are better adapted to local environmental conditions and have higher nutritional value compared to modern varieties.
3. **Medicine**: Biodiversity is a source of traditional and modern medicines, with many plant species used for medicinal purposes.
   o For example, neem, a tree species native to India, has been used for centuries to treat various ailments such as skin diseases, diabetes, and fever.
4. **Ecotourism**: Biodiversity attracts millions of tourists each year, contributing to the economy.
   o For example, the Kaziranga National Park in Assam is home to the one-horned rhinoceros, a flagship species that attracts thousands of tourists every year.
5. **Cultural value**: Biodiversity has cultural value and is often deeply intertwined with local traditions and knowledge systems.
   o For example, the sacred groves in Kerala and other parts of India are protected areas that are revered by local communities and contain a rich diversity of plant and animal species. These groves are an example of how traditional knowledge and conservation practices can coexist with modern development.
6. **Pollination**: Biodiversity plays a crucial role in pollination, which is essential for agriculture and food security.
   o For example, the Nilgiri Biosphere Reserve in southern India is home to a diverse range of pollinators, including honeybees, bumblebees, and butterflies, which are essential for the pollination of crops like coffee, cardamom, and pepper.
7. **Forests and livelihoods**: Forests are an important source of livelihoods for millions of people in India, providing fuelwood, fodder, and non-timber forest products.
   o For example, the Bishnois, a community in Rajasthan, have been practicing traditional conservation of the khejri tree for over 500 years, which has helped to protect the tree from deforestation and provided a sustainable source of livelihoods.

❖ Threats faced by biodiversity

- **Habitat destruction**: due to human activities like deforestation, mining, and urbanization.

- o For instance, the Western Ghats, a biodiversity hotspot in India, is threatened by deforestation and habitat fragmentation.
- **Climate change**: altering the timing of seasonal events, changing precipitation patterns, and causing shifts in the distribution of plant and animal species.
  - o For example, the endangered snow leopard, which is found in the Himalayan region, is at risk due to the loss of its habitat as a result of climate change.
- **Pollution**: Pollution from industries, vehicles, and agriculture is another major threat to biodiversity in India.
  - o For example, the Ganges River, which is a vital source of water for many Indian cities, is heavily polluted, posing a threat to the biodiversity of the river and its surrounding ecosystems.
- **Overexploitation**: overgrazing, hunting, overfishing
  - o For example, poaching of tigers, elephants, and rhinoceroses is a major problem in India, with demand for their body parts in international markets.
- **Invasive species**: Invasive species are non-native species that are introduced into an ecosystem and cause harm to the native species.
  - o In India, invasive species like the water hyacinth and the African catfish are causing harm to native species and their habitats.
- **Lack of Awareness**: Many people are not aware of the importance of biodiversity and the role it plays in supporting human well-being, leading to insufficient public support and funding for conservation efforts.
- **Poverty and Inequality**: Poverty can drive people to rely on natural resources for their livelihoods, leading to overexploitation and habitat destruction. Lack of access to education and economic opportunities can also contribute to biodiversity loss.

❖ Way Forward

- Encouraging shift to less water intensive crops such as millets
- Investments in water recycling in urban areas using a combination of grey and blue-green infrastructure.
- Agroforestry, social forestry, Joint Forest Management
- science-based and inclusive monitoring programmes for biodiversity
- Ecological restoration & bio economy
- Traditional knowledge and practices of local communities should be integrated in conservation efforts
- Launch the National Mission on Biodiversity and Human Well-being on an immediate basis

Basic terms/related concepts and facts:

What is biodiversity?
- Biodiversity refers to the variety of living organisms in a particular ecosystem
- It includes the different types of plants, animals, and microorganisms that exist and how they interact with each other and their environment.
- It includes genetic diversity, species diversity, and ecosystem diversity.
  Status of Indian Biodiversity
  - ➢ India is one of the 17 megadiverse countries in the world, with a rich variety of ecosystems, habitats, and species.
  - ➢ India's biodiversity includes about 8% of the world's recorded species, including over 45,000 plant species, 91,000 animal species, and more than 7,500 species of fungi.

Biodiversity Hotspot: Biodiversity hotspots are areas of the world that are recognized as having exceptionally high levels of biodiversity, meaning they have a wide variety of species and ecosystems that are both irreplaceable and endangered. These hotspots are typically concentrated in regions with tropical climates, such as rainforests and coral reefs, and are identified based on two main criteria:
1. Species richness: The area must have at least 1,500 endemic plant species, which are species that are found nowhere else in the world.
2. Threatened: The area must have lost at least 70% of its original habitat.

Practice Questions

Prelims:

Q. Consider the following statements:

1. India is member of 30X30 pledge
2. Amrit Dharohar scheme promotes Alternate Nutrients for Agriculture Management
3. India has three biodiversity hotspots
4. Increasing veganism worldwide protects biodiversity

Which of the statements given above is/are correct?

a) 1, 4
b) 2, 3, 4
c) 2, 3
d) 1, 2, 4

Ans: (a)

Mains: (Level-Moderate)

Q. "Indian biodiversity is facing existential crisis despite having innumerable benefits". In the light of this statement, discuss the steps taken by India to conserve biodiversity.

[15 marks, 250 words]

TOPIC: E-waste (Management) Rules, 2022

Issue in brief – An analysis on E-waste (management) Rules 2022, which will come into force from the 1st day of April, 2023.
https://epaper.thehindu.com/ccidist-ws/th/th_delhi/issues/26795/OPS/G31AU9B43.1+G5JAU9LBJ.1.html

Where in Syllabus:
GS 3: Environmental Pollution and Degradation

❖ Why in news?

• The burgeoning problem of managing e-waste is a cross cutting and persisting challenge in an era of rapid urbanisation, digitalisation and population growth.

• *The Ministry of Environment and Forests notified a new set of e-waste rules, which will come into force from April 1, 2023.* These rules address some of the critical issues but are silent on others.

❖ What is e-waste and status of e-waste in India?

• *Electronic waste (e-waste), is a generic term* used to describe all types of old, end-of-life or discarded electrical and electronic equipment, such as household appliances; office information and communications equipment etc.
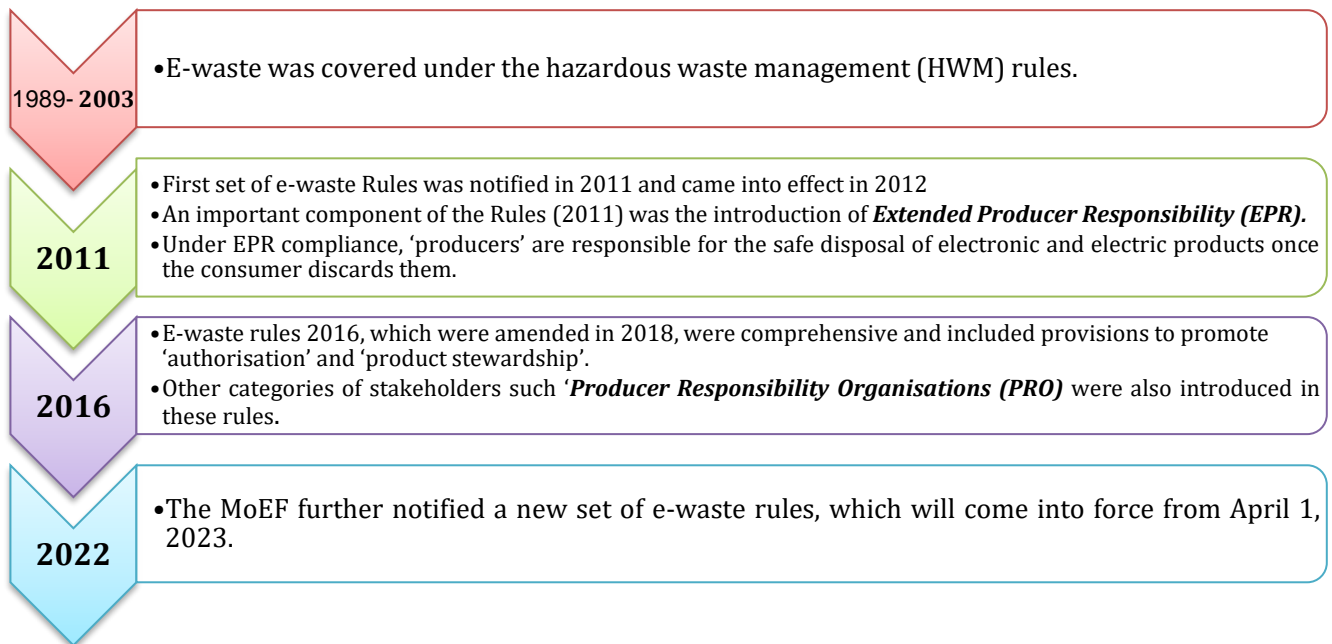
Status of e- waste in India
• India is the **third largest electronic waste generator** in the in the world after China and the USA.
• India collected just 10 per cent of the electronic waste (e-waste) estimated to have been generated in the country 2018-19 and 3.5 per cent of that in the generated in 2017-18, said a recent report by the Central Pollution Control Board.
• Computer devices accounts for nearly 70% of annual e-waste production, followed by telecom sector, medical equipment and electric equipment.
• **Uttar Pradesh, Uttarakhand, Tamil Nadu, and Haryana** are among the States that have a bigger capacity to dismantle and recycle e-waste.
• Maharashtra has the highest number (116) of authorised dismantlers and recyclers.

❖ Why e-waste is an issue?

• *Environmental Impact*: Electronic waste contains hazardous materials such as lead, mercury, cadmium, and other toxic substances that can leach into the soil and water, polluting the environment and harming wildlife.

• *Health Risks*: Exposure to the toxic substances in e-waste can lead to health problems such as respiratory issues, damage to the nervous system, and even cancer.

• *Resource Depletion*: Many electronic devices contain valuable materials like gold, copper, and rare earth metals, which can be reused and recycled. When e-waste is not properly managed, these resources are lost and have to be mined again, leading to further resource depletion.

• *Landfill Overcrowding*: E-waste can take up valuable space in landfills, which are rapidly running out of space in many parts of the world. This can lead to further environmental and health problems.

❖ **How is the regulation of e-waste management done in India?**

1989- 2003
• E-waste was covered under the hazardous waste management (HWM) rules.

2011
• First set of e-waste Rules was notified in 2011 and came into effect in 2012
• An important component of the Rules (2011) was the introduction of *Extended Producer Responsibility (EPR).*
• Under EPR compliance, 'producers' are responsible for the safe disposal of electronic and electric products once the consumer discards them.

2016
• E-waste rules 2016, which were amended in 2018, were comprehensive and included provisions to promote 'authorisation' and 'product stewardship'.
• Other categories of stakeholders such '*Producer Responsibility Organisations (PRO)* were also introduced in these rules.

2022
• The MoEF further notified a new set of e-waste rules, which will come into force from April 1, 2023.

❖ **What are the highlights of E-waste (Management) Rules, 2022?**

• **Scope and definitions**: Scope of applicability of 2022 Rules has been *restricted to manufacturer, producer, refurbishers, dismantlers and recycler of e-waste ('MPRDR')*, unlike 2016 Rules wherein dealer, consumer, bulk consumer and collection centres were also covered.

  ➢ The *definition of term 'e-waste' has been widened to include solar photo-voltaic modules or panels or cells*,

  ➢ The *term 'bulk consumer' has been widened and simplified*. Now, any entity which has used at least one thousand units of electrical and electronic equipment listed in Schedule I of 2022 Rule, at any point of time in the particular financial year including the e-retailer, will be considered as bulk consumers of e-waste.

  ➢ The term *EPR has been redefined to mean responsibility of any producer of electrical or electronic equipment as given in Schedule-I for meeting recycling targets* as per Schedule-III and Schedule-IV, only through registered recyclers of e-waste to ensure environmentally sound management of such waste.

  ➢ *The definition of term 'producer' has also been widened.*

• **Registration requirement:** Unlike 2016 Rules which mandates manufacturer, producer, refurbishers and recycler of e-waste ('MPRR') to obtain authorization from concerned State Pollution Control Board, 2022 Rules mandates MPRR of e-waste to obtain registration on the portal **('Portal')** to be developed by CPCB. Further, 2022 Rules bars MPRR to operate its business without obtaining aforesaid registration and/or to deal with any unregistered MPRR.

  ➢ *Most of the 'refurbishers' or the 'repair shops' operating in Delhi are not authorised under the Central Pollution Control Board of India.*

• **Reducing compliances on 'bulk consumers':** In general parlance, private and public companies and multi-national organizations are considered as 'bulk consumers' for the purpose of 2016 Rules. *The requirement of (i) filing annual return and (ii) maintaining record of e-waste generated, by the bulk consumer under 2016 Rules has been done away with under Rule 2022.*

- **Introduction of recycling certificate**: The *concept of obtaining EPR recycling certificate has been introduced by 2022 Rules for facilitating the fulfilment of EPR targets.*
  - ➤ Producers can purchase online EPR recycling certificate from registered recyclers for fulfilling its recycling target under 2022 Rules. However, such recycling certificate issued by CPCB will be valid for two years from the end of the financial year in which the same was generated.
- **Introduction of refurbishing certificate and deferred liability:** The concept of deferred liability has also been incorporated in 2022 Rules.
  - ➤ Now, refurbisher will be issued a refurbishing certificate for a particular quantity of refurbished product whereby the life of such product has been extended.
  - ➤ Producers can purchase refurbishing certificate from refurbishers to defer their EPR vis-à-vis corresponding quantity of e-waste in a particular year and same shall be added to the EPR target of the year in which the extended life of the refurbished product is expired.
- **The CPCB shall conduct random sampling of electrical and electronic equipment** placed on the market to monitor and verify the compliance of reduction of hazardous substances provisions.
- **Imports or placement in the market for new electrical and electronic equipment** shall be permitted only for those which are compliant with provisions laid down by the government.
- **Incorporation of penal provisions and widened scope**: Unlike 2016 Rules, 2022 Rules expressly introduced provisions related to environment compensation and prosecution under Environment (Protection) Act, 1986 ('EPA'). Further, the environment compensation can also be imposed on an entity which aids or abets the violation of 2022 Rules. This widens the scope of imposing environment compensation.
- **A 'digitalized systems approach', introduced in the new rules (*2022*):** Standardising the e-waste value chain through a common digital 'portal' may ensure transparency and is crucial to reduce the frequency of 'paper trading' or 'false trail', i.e., a practice of falsely revealing 100% collection on paper while collecting and/or weighing 'scrap' to meet targets.

❖ What are the challenges in the implementation of rules 2022?

- **_Two important stages of 'efficient' e-waste recycling are 'component recovery'_** (adequate and efficient recoveries of rare earth metals in order to reduce dependence on virgin resources) and 'residual disposal' (safe disposal of the leftover 'residual' during e-waste recycling). The rules briefly touch upon the two aspects, but do not clearly state the requirement for ensuring the 'recovery tangent'.
- **_The new notification does away with PRO_** and dismantlers and vests all the responsibility of recycling with authorised recyclers; they will have to collect a quantity of waste, recycle them and generate digital certificates through the portal. This move seems to be a bit myopic and can cause initial turbulence, where the informal channels may try and seek benefits from.
  - ➤ PROs acted as an intermediary between producers and formal recyclers by bidding for contracts from producers and arranging for 'certified and authorised' recycling. Fresh challenges might emerge as companies are no longer required to engage with PROs and dismantlers, who partially ensured 'double verification' in terms of quantity and quality of recycling.
- **_The informal sector, which plays a crucial role in e-waste handling, draws no recognition_** in the new rules which could be on account of its 'illegality'.
- **_Non- compliance of rules:_** Many producers have still not set up collection centres and some brands have labelled their head office as the 'only' collection point. Similarly, formal companies, low in number and clustered in the metropolises, also fail to provide doorstep collection to consumers when the quantum of e-waste is not enough to meet their overhead expenses or transport.
- **_Consumers lack awareness_** and information about the existence of any such services.

❖ **Way forward**

- ***Consumer awareness***: In order to ensure the efficient implementation of the law, stakeholders must have the right information and intent to safely dispose of e-waste.
- ***There is a need for simultaneous and consistent efforts towards*** increasing consumer awareness, strengthening reverse logistics, building capacity of stakeholders, improving existing infrastructure, enhancing product designing, rationalising input control (by defining 'rare earth elements' as 'critical raw materials'), and adopting green procurement practices.
- ***A robust collection and recycling system*** on the ground, making it responsive to meet legislative requirements.
- ***Stringent monitoring and enforcement of the provisions of the E-Waste (Management) Rule 2022*** so that EPR targets are met and there is independent information on where this collected waste is 'recycled'.

Basic terms/related concepts and facts:

These rules shall not apply to:

➤ Waste batteries as covered under the Battery Waste Management Rules, 2022;
➤ Packaging plastics as covered under the Plastic Waste Management Rules, 2016;
➤ Micro enterprise as defined in the Micro, Small and Medium Enterprises Development Act, 2006 (27 of 2006);
➤ Radio-active wastes as covered under the provisions of the Atomic Energy Act, 1962 (33 of 1962) and rules made there under.

Practice Questions

Prelims:

Q. With respect to E-waste Management Rules 2022, **c**onsider the following statements:

1. These rules shall apply to every manufacturer, producer refurbisher, dismantler and recycler only.
2. Producer Responsibility Organisations (PRO) are introduced for the first time.
3. Solar photo-voltaic modules are included under e-waste.

Which of the statements given above is/are *incorrect*:

a) 1 and 3 only
b) 3 only
c) 2 and 3 only
d) 2only

Answer: d)

Mains: (Level-Basic)

Q. Discuss the salient features of the E-Waste Management Rules 2022 and evaluate their potential for the effective management of electronic waste in India. **[15marks, 250 words]**

TOPIC: Integrated Urban Water Management System (IUWM)

Issue in brief – A holistic water management system in urban areas for a sustainable future is the need of the hour.
https://www.thehindubusinessline.com/opinion/working-towards-a-holistic-water-plan/article66658104.ece

Where in Syllabus:
GS 3: Conservation, environmental pollution and degradation.

❖ Why in news?

• India is endowed with bountiful rain (India's average rainfall is 1170 mm against the world average of 1000 mm) and many perennial rivers that criss-cross the country, yet, sadly because of nature-abusive practices we find ourself in a calamitous predicament, _wherein 256 out of 700 districts are 'over-exploited' and 21 major cities including Delhi, Chennai would run out of groundwater by 2030._

• It is essential that integrated, holistic and systemic solutions are implemented to solve water issues.

❖ What is Integrated urban water management system (IUWM)?

• **Integrated urban water management system (IUWM)** is a process, which ensures water supply, used water management, sanitation and stormwater management can be planned in line with economic development and land use.

• It focuses on achieving sustainable water management by considering the following key principles:

➢ **Collaborative action** is one of the leading principles of IUWM. It focuses on a collaborative approach involving all stakeholders. While effective legislation will help guide local authorities, engaging local communities will lead to faster solutions in water management.

➢ **Interdependence of water with other sectors**: Water is inseparable in its connection to economic development, city infrastructure and land use. Earlier, many solutions focused solely on seeing water as an independent sector, but now the perception has shifted and it is necessary to view the interdependence with other sectors.

➢ **Water as a resource for various end goals:** To understand water as a resource, we need to realise water is used for different purposes like domestic use, industrial use, freshwater, agricultural use and wastewater. This means it cannot be just seen as an end product for consumers but rather as a resource for various end goals. Once all sources are clearly defined, it will be easier to treat different kinds of water based on agricultural, industrial and environmental purposes.

➢ **Customised solutions:** Different cities also need customised solutions. Since IUWM focuses on specific contexts and local requirements, it prioritises a rights-based solution approach over one-size-fits-all approach.

❖ **Why there is a need for holistic water resource management?**

• **Around 35 per cent of India's population lived in urban areas as of 2020.** Water demand is going to increase even more, with India's population in urban areas expected to double by 2050.

• **Climate change, pollution and contamination** have also added to the burden on water resources. More intense, extreme, and variable rainfall, combined with the lack of proper drainage will lead to flooding on the roads in urban areas adding to filth and disease.

• **Conflicts across competing uses and users of water,** agriculture and industry, town and country will continue to grow over the years.

• **Growing competition over finite water resources, compounded by climate change**, will have serious implications for India's food security, as well as for the livelihoods of its farmers and for the country's economic development.

• **India does not so much face a water crisis as a water management crisis,** calling for a fundamental reassessment of the way the country manages water.

• **In India, there are different water management systems** based on utilities like sanitation, urban water, stormwater and wastewater that deal with water-related issues in different localities. Since areas and localities define distribution and water allocation, it is often a challenge to find a unified solution.

❖ **What are challenges regarding urban water management in India?**

• **Growing Urban Population**: Rapid urbanization and population growth place immense pressure on water resources in cities. The UN- Habitat World Cities Report 2022 highlight that urban population in India is estimated to reach 675 million in 2035.

• **Lack of effective rainwater harvesting** and other methods to augment water supply.

• **Only reactive solutions and do not address the root causes** in a holistic manner integrating soil, water, air and vegetation.

> **The interdependency**
> Water, soil, and plants have a critical inter-dependency. Soil acts as a vast reservoir of fresh water and produces 95% of our food. It contains microorganisms that decompose organic matter and provide nutrients to plants. Soil water is essential for nutrient assimilation. Maintaining healthy soil is vital for greenhouse gas absorption and climate regulation. Degraded soil limits vegetation potential, leading to air pollution. Soil should ideally have 2.5-3.0% organic matter for health. Sustainable land management practices are necessary for soil preservation and water absorption.

• **Inadequate Infrastructure**: Many cities in India have outdated or insufficient water supply and distribution infrastructure. Aging pipelines, leakages, and inadequate storage facilities contribute to water loss and inefficient water management.

• **inefficient use of wastewater:** According to a recent report published by the Central Pollution Control Board (March 2021), India's current water treatment capacity is 27.3% and the sewage treatment capacity is 18.6% (with another 5.2% capacity being added).

• **Inequitable Access**: There is often a disparity in access to water services within urban areas. Marginalized communities, slums, and informal settlements often lack access to clean and reliable water supply and sanitation facilities.

• **Water Contamination and Pollution**: Urban areas face challenges of water contamination due to industrial discharge, improper disposal of waste, and inadequate wastewater treatment. This poses health risks and affects the quality of water sources. Groundwater getting contaminated with fluoride, arsenic, mercury and even uranium in some areas.

- **Non-Revenue Water**: Non-revenue water refers to <u>water loss through leakage, theft, or unbilled consumption.</u> Many urban areas in India experience high levels of non-revenue water, leading to financial losses and further strain on water resources.
- **Governance and Institutional Challenges**: Institutional fragmentation, lack of clear responsibilities, and inadequate financial resources pose hurdles to efficient and sustainable water management.

❖ Way forward

- **Customised Terrain Friendly Rainwater harvesting (RWH**): It involves (i) terrain-friendly groundwater recharge measures, — use of graded gravel pits, wells, recharge wells, ponds, water bodies, lakes and conservation of wetlands and (ii) collection of roof-water into storage tanks for direct use.
- **Improve Infrastructure**: Invest in upgrading and expanding water supply and distribution infrastructure, including pipelines, storage facilities, and treatment plants. E.g<u>.: Jal Jeevan Mission</u>
- **Holistic urban wastewater management** requires data from all key stakeholders and environmental conditions. Monitoring data is one such key data, which is the need of the hour in order to utilise the wastewater as a resource – e.g. for using wastewater before or after treatment.
- **Sustainable Urban Planning**: Integrate water management considerations into urban planning processes. Ensure that water-sensitive urban design principles are followed, incorporating green spaces, permeable surfaces, and sustainable drainage systems to manage stormwater effectively. <u>E.g.: AMRUT Scheme.</u>
- **Afforestatio**n: Floodplains and forest aquifers can provide natural mineral water and unpolluted bulk water for our cities.
- **Mapping groundwater and monitoring water quality.** <u>Hydrology project</u> with the support of World Bank
- **Water data can also be a critical input in making development decisions**. In Pune, for example, a planned tunnel between two reservoirs to improve the city's water supply was abandoned for a simpler, better and cheaper solution.
- **Research and Innovation**: Encourage research and innovation in water management technologies, practices, and policies.

Basic terms/related concepts and facts:
- **Jal Jeevan Mission**, is envisioned to provide safe and adequate drinking water through individual household tap connections by 2024 to all households in rural India. The programme will also implement source sustainability measures as mandatory elements, such as recharge and reuse through grey water management, water conservation, rain water harvesting.
- **Atal Mission for Rejuvenation and Urban Transformation (AMRUT)Mission** focuses on development of basic infrastructure, in the selected cities and towns, in the sectors of water supply; sewerage and septage management; storm water drainage; green spaces and parks; and non-motorized urban transport. A set of Urban Reforms and Capacity Building have been included in the Mission.
- **Other Government initiatives related to water management:**
  ➢ National Water Policy, 2012
  ➢ Amrit Sarovar Mission
  ➢ Jal Shakti Abhiyan- Catch the Rain Campaign
  ➢ Atal Bhujal Yojana
  ➢ Sujalam 2.0

Practice Questions

Prelims:

Q. Consider the following statements w.r.t. components of Jal Jeevan Mission:
1. Tap water connection to every household in the country.
2. Technological interventions for removal of contaminants where water quality is an issue.
3. Retrofitting of completed and ongoing schemes to provide Functional Household Tap Connection.
4. Greywater management

How many of the statements given above are correct?

a) Only one
b) Only two
c) Only three
d) All four

Answer: c)

Mains: (Level-Moderate)

Q. Assess the key challenges faced in the management of urban water resources in India. Discuss the implications of these challenges on sustainable urban development and suggest measures to address them. **[15 marks, 250 words]**

TOPIC: Waste-To-Energy Plants

Issue in brief – Waste-to-energy technology offers a dual benefit of decentralized energy generation and waste reduction, addressing environmental challenges posed by increasing industrialization and urbanization.
https://epaper.thehindu.com/ccidist-ws/th/th_delhi/issues/29552/OPS/GIOB13H05.1.png?cropFromPage=true

Where in Syllabus:
GS 3: Environmental Pollution and Degradation

❖ **Why in news?**

• The Kerala government recently announced the State's first waste-to-energy project in Kozhikode.
• Waste-processing infrastructure is a <u>good way to deal with the mountains of waste that Indian cities produce</u> – but to succeed, such projects need the unwavering support of the municipality, its residents, and the State.
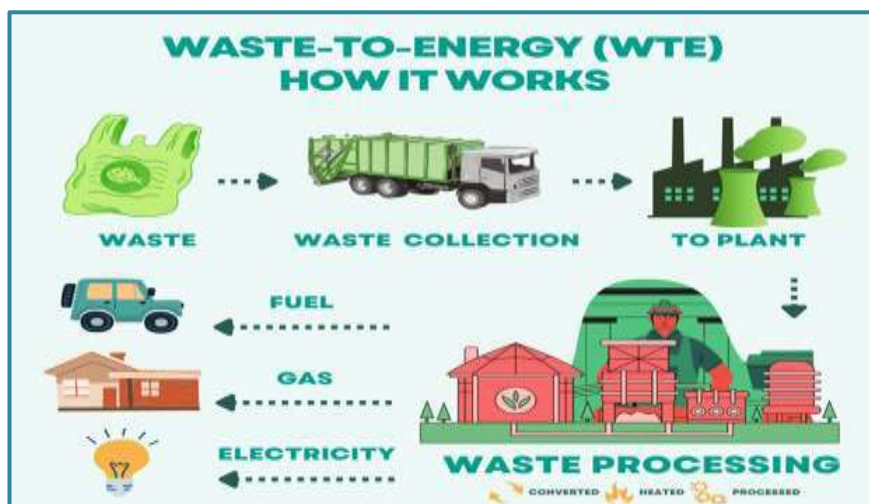

Waste to Energy Plant

❖ **What are waste to energy plants?**

• **Waste-to-energy plants** use non-recyclable dry waste to generate electricity.
• **Working of waste to energy plant**
  ➢ Generally, *solid waste in India is 55-60% biodegradable organic waste*, which can be converted into organic compost or biogas.
  ➢ Of the non-biodegradable dry waste, only 2-3% – including hard plastics, metals, and e-waste – is recyclable. The *remainder consists of low-grade plastic, rags, and cloth that can't be recycled.*

  ➢ *Waste-to-energy plants use this portion to generate power*. The waste is combusted to generate heat, which is converted into electricity.

❖ **What are the advantages of waste to energy plants?**

• **Waste Reduction:** These plants help reduce the volume of waste going to landfills. By processing and incinerating waste, they significantly decrease the amount of solid waste that would otherwise occupy landfill space.

- **It provides a chance for energy recovery**: Waste-to-energy is employed for a cause, and when compared to conventional waste management techniques, it unquestionably offers certain advantages, such as the chance for resource recovery and the use of an otherwise wasted resource.
- **Renewable Energy Source**: Waste-to-energy plants contribute to the production of renewable energy. By harnessing the energy potential of waste, they provide an alternative to fossil fuels, reducing reliance on non-renewable resources and lowering greenhouse gas emissions.
- **Reduction of Greenhouse Gas Emissions:** Waste-to-energy plants can help *mitigate climate change by reducing methane emissions*. Methane, a potent greenhouse gas, is produced when organic waste decomposes in landfills. By diverting this waste to energy plants, the release of methane is minimized, as the organic matter is incinerated or converted into other useful forms of energy.
- **Environmental Benefits**: Waste-to-energy plants employ advanced technologies and pollution control systems to minimize environmental impact. The combustion process is regulated and monitored to ensure the proper handling of waste and emissions. Modern plants are equipped with sophisticated air pollution control systems that remove harmful pollutants before they are released into the atmosphere.
- **Resource Recovery:** Metals and other recyclable materials can be extracted from the waste before or after the combustion process. This promotes resource conservation and reduces the need for raw material extraction.
- **Job Creation**: Building and operating waste-to-energy plants create employment opportunities. These facilities require skilled labour for plant operations, maintenance, waste management, and other related tasks. The establishment of such plants can stimulate local economies and contribute to job growth.
- **Land Use Optimization:** By reducing the amount of waste sent to landfills, waste-to-energy plants help optimize land use. Landfills require significant space and can have adverse effects on surrounding ecosystems. Waste-to-energy facilities help minimize the need for additional landfill sites, thereby preserving valuable land for other purposes.

❖ **Why do waste-to-energy plants often fail?**

- **The low calorific value of solid waste** in India due to improper segregation. The calorific value of mixed Indian waste is about 1,500 kcal/kg, which is not suitable for power generation. (Coal's calorific value is around 8,000 kcal/kg.) Biodegradable waste has high moisture content and can't be used for power generation; it should be composted instead.
- **It results in the elevated CO_2 emissions**: One of the most prominent greenhouse gases, carbon dioxide is released when waste is burned for WTE, making up nearly all of the carbon content in the waste.
- **The high costs of energy production**: The cost of generating power from waste is around Rs 7-8/unit, while the cost at which the states' electricity boards buy power from coal, hydroelectric, and solar power plants is around Rs. 3-4/unit.
- **Many waste-to-energy projects have failed** because of improper assessments, high expectations, improper characterisation studies, and other on-ground conditions.
- **The quantity of waste generated by cities varies** due to multiple factors, including season, rainfall, and the floating population. Importantly, waste-to-energy projects can consume only non-recyclable dry waste, which is about 25% of the waste; they are expected to only use segregated non-recyclable dry waste as well. But in reality, these projects are often expected to manage all types of waste generated in the city, which is only bad for the projects.
- **Technological Complexity:** Waste-to-energy plants involve complex technologies for waste processing and energy generation. Implementing and maintaining these technologies require specialized expertise and skilled personnel. The lack of technical know-how and experienced operators can lead to operational inefficiencies and increased maintenance costs.

❖ Way forward

- **Comprehensive Waste Management Approach:** Implementing a comprehensive waste management approach is crucial. Emphasize waste reduction, waste segregation, recycling, and composting to minimize the amount of waste sent to waste-to-energy plants. Promote awareness and education programs to encourage individuals and businesses to adopt sustainable waste management practices.

- **Community Engagement and Communication**: Setting up waste-to-energy projects is complex and needs the full support of the municipality, the State and the people. To overcome its various challenges, the municipality must ensure that only non-biodegradable dry waste is sent to the plant and separately manage the other kinds of waste.

- **Collaboration and partnerships**: The municipality or the department responsible for SWM should be practical about the high cost of power generation, and include the State electricity department, perhaps as a tripartite agreement between the municipality, the plant operator, and the power distribution agency. It is also crucial to conduct field studies and learn from the experience of other projects.

- **Foster international collaboration and knowledge sharing** among countries and organizations involved in waste-to-energy initiatives. Share experiences, lessons learned, and best practices to accelerate technological advancements and overcome common challenges.

Status of for waste to energy in India:
- **The first WTE plant** was set up in Timarpur in Delhi in 1987.
- A **total of 14 WTE plants** have been installed in India, out of which seven plants were closed
- The **total estimated energy generation potential** from urban and industrial organic waste in India is approximately 5690 MW.
- The **steps taken by Government to promote installation of Waste to Energy plants** for generation of energy from municipal solid waste include the following:
  - Ministry of New and Renewable Energy has been implementing a **Programme on Energy from Urban, Industrial, Agricultural Wastes/ Residues and Municipal Solid Waste.**
  - **Certificates for availing concession on custom duty** are being issued by the Ministry of New and Renewable Energy for import of machinery and components required for initial setting up of projects for generation of Power and Bio-CNG from nonconventional materials including municipal waste.
  - **National Policy on Biofuels-2018** promotes the production of Bio-CNG and other biofuels.
  - Government announced **Sustainable Alternative Towards Affordable Transportation (SATAT)** Initiative, under which Oil Marketing Companies (OMCs) purchase Bio-CNG produced by waste including municipal solid waste.

Basic terms/related concepts and facts:

• **Waste-to-Energy (WTE) technologies** to recover the energy from the waste in the form of Electricity and Biogas/Syngas are given as below:

➢ **BIOMETHANATION** is anaerobic digestion of organic materials which is converted into biogas. Anaerobic digestion (AD) is a bacterial fermentation process that operates without free oxygen and results in a biogas containing mostly methane (~60%), carbon dioxide (~40%) and other gases. Biomethanation has dual benefits. It gives biogas as well as manure as end product.

➢ **INCINERATION** technology is complete combustion of waste (Municipal Solid Waste or Refuse derived fuel) with the recovery of heat to produce steam that in turn produces power through steam turbines.

➢ **GASIFICATION** is a process that uses high temperatures (500-1800° C) in the presence of limited amounts of oxygen to decompose materials to produce synthetic gas (a mixture of carbon monoxide (CO) and hydrogen (H2)). Biomass, agro-residues, Segregated MSW and RDF pellets are used in the gasifier to produce Syngas. This gas further can be used for thermal or power generation purposes

➢ **PYROLYSIS** uses heat to break down combustible materials in the absence of oxygen, producing a mixture of combustible gases (primarily methane, complex hydrocarbons, hydrogen, and carbon monoxide), liquids and solid residues. The gas generated by either of these processes can be used in boilers to provide heat, or it can be cleaned up and used in combustion turbine generators. The purpose of pyrolysis of waste is to minimize emissions and to maximize the gain.

Practice Questions

Prelims:

Q. Consider the following statements:
1. Waste to energy plants use both recyclable and non-recyclable waste.
2. Waste to energy results in the elevated CO_2 emissions.

Which of the above given statements are correct?
a) 1 only
b) 2 only
c) Both 1 and 2
d) None of the above

Answer:b)

Mains: (Level-Moderate)

Q. Discuss the potential of waste-to-energy plants as a sustainable solution for waste management in the context of increasing urbanization and industrialization in India.

[10 marks, 150 words]

TOPIC: Heat Waves

Issue in brief – Recent warning of Indian Meteorological Department(IMD) invites our attention on heat waves and India's strategy to mitigate its impact.

https://epaper.thehindu.com/ccidist-ws/th/th_delhi/issues/26630/OPS/GN2AU58E6.1+GOFAU5KV8.1.html#:~:text=Heat%20waves%20are%20formed%20for,hot%20air%20near%20the%20surface

Where in Syllabus:

GS 3: Disaster Management

❖ Why in news?

- *Recently*, the India Meteorological Department (IMD) warned that the maximum temperatures over northwest, west, and central India would be 3-5℃ higher than the long-term average.
- On February 21, the national capital recorded its third hottest February day (33.6° C) in more than five decades.

❖ What is heat wave?

- Heat wave is a condition of air temperature which becomes fatal to human body when exposed.
- ***Criteria**: According to the IMD*, a region has a heat wave if its ambient <u>temperature deviates by at least 4.5-6.4℃ from the long-term average</u>. There is also a heat wave if the <u>maximum temperature crosses 45℃ (or 37℃ at a hill-station)</u>.
- Heat waves are *expected to become longer and more intense* and frequent over the Indian subcontinent. In 2022 itself, the heat waves started early and were more numerous. They also *extended further south into peninsular India* due to a north-south pressure pattern set up by the La Niña, a world-affecting weather phenomenon in which a band of cool water spreads east-west across the equatorial Pacific Ocean.
- The last three years have been La Niña years, which has served as a precursor to 2023 likely being an El Niño year. As we eagerly await the likely birth of an El Niño this year, we have already had a heat wave occur over northwest India. Heat waves tend to be confined to north and northwest India in El Niño years.

❖ How do heat waves occur?

- **Heat waves are formed for one of two reasons:**
- ✓ Warmer air is flowing in from elsewhere and the air sinking down from above is compressed along the way, producing hot air near the surface.
- ✓ It is a local phenomenon when the air is warmed by higher land surface temperature.

Different processes contribute to the formation of a heat wave:

1. ***In spring, India typically has air flowing in from the west-northwest.***
- ✓ This direction of air-flow is bad news for India for several reasons. In the context of climate change, West Asia is warming faster than other regions in latitudes similarly close to the equator, and serves as a source of the warm air that blows into India.

✓ Likewise, air flowing in from the northwest rolls in over the mountains of Afghanistan and Pakistan, so some of the compression also happens on the leeward side of these mountains, entering India with a bristling warmth.

✓ While air flowing in over the oceans is expected to bring cooler air, *the Arabian Sea is unfortunately warming faster than most other ocean regions.*

2. The strong upper atmospheric westerly winds, that come in from the Atlantic Ocean over to India during spring, control the near-surface winds.

✓ Any time winds flow from the west to the east, we need to remember that the winds are blowing faster than the planet itself, which is also rotating from west to east.

✓ The energy to run past the earth near the surface, against surface friction, can only come from above. This descending air compresses and warms up to generate some heat waves.

3. The lapse rate — the rate at which temperatures cool from the surface to the upper atmosphere:

✓ It is declining under global warming. In other words, global warming tends to warm the upper atmosphere faster than the air near the surface.

✓ This in turn means that the sinking air is warmer due to global warming, and thus produces heat waves as it sinks and compresses.

4. Air mass: The other factors that affect the formation of heat waves are the age of the air mass and how far it has travelled. *The north-northwestern heatwaves* **are typically formed with air masses that come from 800-1,600 km away and are around two days old**. *Heat waves over peninsular India* **on the other hand arrive from the oceans, which are closer (around 200-400 km) and are barely a day old. As a result, they are on average less intense.**

• Given that these are the processes that contribute to the formation of a heat wave, and the ways in which global warming affects them, it is clear why once-a-decade heat wave events have started to occur once every few years, and are also more intense.

❖ Impacts of heat wave in India:

• *Human Mortality*: Heatwaves have posed severe challenges to human health and have created public health emergencies. Prolonged heat exposure causes heat strokes and heat exhaustion and causes various respiratory and cardiovascular diseases. *According to the report of the Tata Centre for Development, the University of Chicago (2019),* annually, more than 1.5 million people are likely to die due to extreme heat caused by climate change by 2100. *IMD Pune atlas shows that 15% of the population in 13% of the districts is vulnerable to heatwaves.*

• *Economy*: Heatwaves also adversely affects different sectors of the economy.

✓ The livelihood of poor and marginal farmers is negatively impacted due to the loss of working days.

✓ Heatwaves disproportionately impact the lives of daily wage laborers, small street vendors, brickmaking workers, construction workers, and rickshaw pullers.

✓ Heatwaves have an adverse impact on these workers' productivity and thereby affect the overall economy of India.

✓ Prolonged heatwaves adversely impact agricultural productivity and affect the livestock sector as animals are more vulnerable to heatwaves.

✓ Moreover, heatwaves increase the risk of forest fires, causing a sudden rise in demand for electricity and irrigated water.

• *Crop Damage and Food Insecurity*: The concurrence of heat and drought events are causing crop production losses and tree mortality. This will increase food prices, reduce household incomes, and lead to malnutrition and climate-related deaths.

• *Job loss: According to the International Labour Organization (2019) report*, India lost around 4.3% of working hours due to heat stress in 1995 and is expected to lose 5.8% of working hours in 2030.

✓ 9.04% of working hours are expected to be lost in each agriculture and construction sectors, respectively, due to heat stress in 2030. *In absolute terms, India has lost around 34 million full-time jobs in 2030 due to heat stress.*

❖ India's strategy to mitigate the impacts of heat waves

• ***Before 2015, no national-level heatwave action plan*** was available to fight against such calamities. At the regional- level, Ahmedabad Municipal Corporation (AMC) prepared the first Heat Action Plan in 2013, followed by the devastating heatwave-related deaths in 2010.

• In 2016, NDMA issued comprehensive guidelines titled '***Guidelines for Preparation of Action Plan-Prevention and Management of Heatwave'*** to prepare state and national level key strategies for mitigating the impact of heatwaves across Indian states.

  ✓ The National Guidelines on Heat Wave clearly *mentions the roles and responsibilities* of the central and state government agencies, district administrations, local self-governments, NGOs, civil society organisations and other stakeholders in a matrix format.

  ✓ The *ward level Heat Action Plans* have improved the capacities of cities and states in managing heat stress and meeting heat wave related emergencies.

  ✓ The revisions in 2019 included a new section*, 'Built Environment'*; the revisions focused on short-term, medium-term and long-term measures for heat wave risk reduction.

❖ Way forward

• ***Effective implementation of the Sendai Framework for Disaster Risk Reduction 2015-30***, which emphasizes disaster risk reduction with the state playing a leading role and sharing responsibility with other stakeholders such as local governments and the NGO sector, is now the need of the hour.

• ***Declare it as natural disaster***: Heatwave is India's second most lethal disaster after the flood; the government should declare it a natural disaster to prevent further losses. It helps the State and District administration prepare a heatwave action plan at the regional level.

• ***Increase green cover***: Planting more trees and increasing green cover in urban areas can reduce the heat island effect and help regulate the temperature.

• ***Database creation***: In order to undertake necessary mitigation and prevention measures, it is crucial to prepare a database at the district level involving the age, gender, and occupation of people who have died due to heatwaves.

• ***Implement heat warning systems:*** Heat warning systems can alert people to upcoming heat waves and provide guidance on how to stay safe during extreme heat.

• ***Improve building design***: Improving building design to minimize heat absorption and increase ventilation can help keep indoor temperatures cooler during heat waves.

• ***Reduce greenhouse gas emissions:*** Reduced emissions of heat-trapping gases such as carbon dioxide, which make the heatwaves more intense, can help protect human health and properties by reducing the effects of global warming.

• ***Improve public education:*** Educating the public about the dangers of heat waves and how to protect themselves can help reduce the number of heat-related illnesses and deaths.

Basic terms/related concepts and facts:
- *El Niño*
  - ✓ El Niño means Little Boy in Spanish.
  - ✓ El Niño is a weather pattern that occurs in the Pacific Ocean. During this time, unusual winds cause warm surface water from the equator to move east, toward Central and South America.
- **La Nino**
  - ✓ La Niña means Little Girl in Spanish.
  - ✓ During a La Niña period, the sea surface temperature across the eastern equatorial part of the central Pacific Ocean will be lower than normal.

Practice Questions

Prelims:

Q. With respect to ElNino,**c**onsider the following statements:
1. An El Niño condition occurs when surface water in the Eastern Pacific becomes warmer than average and east winds blow stronger than normal.
2. The El Nino may result in a weakening of the Indian monsoon, leading to drier conditions and reduced rainfall.

 Which of the statements given above is/are correct:
a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Answer: b)

Mains: (Level-Basic)

Q. What are heat waves? Describe various processes that contribute to the formation of heat waves. **[10 marks, 150 words]**

TOPIC: Prevention of Money-laundering (Maintenance of Records) Amendment Rules, 2023

Issue in brief – The Ministry of Finance, Department of Revenue, GoI introduced the Prevention of Money Laundering (Maintenance of Records) Amendment Rules, 2023, to enhance the existing rules and regulations on client due diligence and record keeping.
https://indianexpress.com/article/explained/explained-economics/disclosures-ngos-pmla-rules-new-8488484/

Where in Syllabus:
GS 3: Money-Laundering & its Prevention

❖ Why in news?

• *Recently*, The Finance Ministry has amended money laundering rules to incorporate more disclosures for non-governmental organisations by reporting entities like financial institutions, banking companies or intermediaries.

• In addition, it has defined *"politically exposed persons" (PEPs)* under the Prevention of Money Laundering Act (PMLA) in line with the recommendations of the Financial Action Task Force (FATF).

PREVENTION OF MONEY LAUNDERING ACT

❖ What is Prevention of Money Laundering Act?

• The ***Prevention of Money Laundering Act (PMLA), 2002*** and its accompanying rules (PML Rules) serve as the primary legal framework for the prosecution of money laundering in India.

• *Anti-money laundering (AML) provisions in India are imposed on* companies, banks, crypto exchanges, foreign portfolio investors, trusts, and NGOs, among others*.*

• It is noteworthy that the *PMLA was sanctioned as a response to India's global commitment* (Vienna Convention) to combat the issue of economic crimes like money laundering. The other conventions include:

➢ United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988;

➢ Basle Statement of Principles, 1989;

➢ Forty Recommendations of the Financial Action Task Force on Money Laundering, 1990;

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

• **Authorities investigate and prosecute anti-money laundering offences in India**

➢ At the federal level, ***the Directorate of Enforcement (ED)*** is the principal legal entity in charge of looking into and prosecuting money laundering offences under the PMLA. The ED comes under the Department of Revenue within the Ministry of Finance. It has the authority to initiate proceedings for the seizure of property as well as proceedings in the designated Special Court for money laundering crimes.

➢ ***The Financial Intelligence Unit – India (FIU-IND)***, which is a part of the Department of Revenue and Ministry of Finance, is the primary national body in charge of collecting, processing, assessing, and disseminating data about suspicious financial transactions to law enforcement authorities and foreign FIUs.

➢ Apart from the ED and FIU, regulators like the ***Reserve Bank of India (RBI), Securities & Exchange Board of India (SEBI), and Insurance Regulatory & Development Authority of India (IRDAI***) are empowered to handle matters relating to money laundering activities and establish AML standards.

❖ **What are the recent amendments to PMLA, 2002?**

Politically exposed person

- The amendment rules have introduced a new clause, **which defines "Politically Exposed Persons" (PEPs)** as individuals who have been "entrusted with prominent public functions by a foreign country, including the heads of States or Governments, senior politicians, senior government or judicial or military officers, senior executives of state-owned corporations and important political party officials".
- The move to define politically exposed persons under PMLA is to bring uniformity with a 2008 circular of the Reserve Bank of India (RBI) for KYC norms/anti-money laundering standards for banks and financial institutions, which had defined PEPs in line with FATF norms.

Beneficial ownership

- In line with existing provisions of The Income-Tax Act, 1961 and The Companies Act, the amended rules have **now lowered the threshold for identifying beneficial owners by reporting entities**, where the client is acting on behalf of its beneficial owner.
- Earlier, definition of "beneficial owner" included, among other things, the ownership of or right to more than 25 percent of the company's shares, capital, or profits. This threshold of 25 percent has been lowered to 10 percent, bringing more indirect players into the reporting net.
- The amendments require "reporting entities"- banks, other financial institutions, and businesses operating in the real estate and jewelry industries – to gather data on each person or organization that has a 10 percent ownership in their clients.

Non-profit organization

- The **definition of "non-profit organization" has been expanded**, which will now include any entity or organization constituted for religious or charitable purposes referred to in Section 2(15) of the Income-tax Act, 1961; or registered as a trust or a society under the Societies Registration Act, 1860 or any similar state legislation; or a company registered under Section 8 of the Companies Act, 2013.
- If the client is a non-profit organization, reporting entities must also register the client's information on **the NITI Aayog's DARPAN portal.**
- **Maintain such registration records for a period of five years** after the business relationship between a client and a reporting entity has ended or the account has been closed, whichever is later.

Due diligence and documentation

- The due diligence documentation requirements, which were until now limited to obtaining the basic KYCs of clients such as registration certificates, PAN copies and documents of officers holding an attorney to transact on behalf of the client, have now been extended.
- Depending on the legal structure of the firm, it now also involves the submission of information, such as the names of those in top management positions, partners, beneficiaries, trustees, settlors, and writers. Moreover, clients must now provide information about their registered office and primary place of business to financial institutions, banks, or intermediaries.

Cryptocurrency and virtual digital assets (VDAs)

- The new rules have brought **crypto currency and VDAs** under the ambit of anti-money laundering law (AML) where crypto exchanges and intermediaries dealing with virtual digital assets will now be required to perform KYC of their clients and users of the platform.
- As per new rules, **an entity dealing in VDAs will now be considered a 'reporting entity' under the PMLA.**

❖ What is the significance of the recent changes?

• *The amendments assume significance ahead of India's proposed FATF assessment*, which is expected to be undertaken later this year. The broader objective is to bring in legal uniformity and remove ambiguities before the FATF assessment.

• *Amendments are in line with other acts* like Income Tax Act (1961), Companies Act, 2013.

• *Strengthen the law and making it more effective* in dealing with the problem of money laundering and terrorist financing.

• *By requiring more detailed information from clients during the due diligence process*, financial institutions can better identify high-risk clients involved in money laundering.

• *The implementation of the DARPAN portal is a significant step* towards the modernization of the KYC process and the efficient exchange of data between reporting entities and the Department of Posts. It will not only reduce the burden of paperwork but also help prevent financial crimes by enabling reporting entities to make informed risk assessments and take appropriate measures.

• *The measure is expected to aid investigative agencies* in carrying out action against crypto firms.

• *Bringing more indirect participants* within the reporting net.

❖ Conclusion

• The Prevention of Money Laundering Act (PMLA) have played a crucial role in enhancing its effectiveness in preventing money laundering and related offenses. Financial institutions as well as the governments of such nations have been persistently searching for new approaches to dealing with money launderers. Amendments have been carried out from time to time to avoid the misuse of the loopholes in the law. *PMLA can be referred to as a dynamic Act that will keep evolving over time considering the changes in society and a rise in awareness of the citizens.*

Basic terms/related concepts and facts:

FATF: Financial Action Task Force

• It is an intergovernmental organisation founded in 1989 on the initiative of the G7 to develop policies to combat to money laundering.

• The FATF, which is the global money laundering and terrorist financing watchdog, has *40 recommendations*. In its recommendations, the FATF states that financial institutions should be required to have appropriate risk-management systems to determine whether a customer or beneficial owner is a domestic PEP or a person who is or has been entrusted with a prominent function by an international organization.

• The *40 recommendations cover seven areas and provide a framework of measures.*

• The *seven areas are* anti-money laundering/counter-terrorist financing; policies and coordination; money laundering and confiscation; terrorist financing and financing of proliferation; preventive measures; transparency and beneficial ownership of legal persons and arrangements; powers and responsibilities of competent authorities and other institutional measures; and international cooperation.

Practice Questions

Prelims:

Q. With respect to Financial Action Task Force (FATF),**c**onsider the following statements:
1. It is an initiative of G20 countries.
2. It is mandatory for the member countries to implement FATF recommendations.

Which of the statements given above is/are correct:
a) 1 only
b) 2 only
c) Both 1 and 2
d) None

Answer: d)

Mains: (Level-Moderate)

Q. What are the recent changes made in the Prevention of Money Laundering (Maintenance of Records) Amendment Rules, 2023 and evaluate their impact on preventing financial crimes.   **[15 marks, 250 words]**

DIY: **https://www.dashovidya.in/syllabus_affairs_articles2?id=Njg=**

TOPIC: Digital Gender Gap

Issue in brief – Even as India finds itself in a digitally emergent phase, it has not moved ahead with the required pace on bridging the digital gap that exists among its young people, especially girls.
https://www.livemint.com/opinion/columns/india-needs-to-double-down-on-bridging-its-digital-gender-gap-11678040421197.html

Where in Syllabus:
GS 1: Social Empowerment

❖ Why in news?

- Prime Minister Narendra Modi emphasized the need for '*women-led development*' as India took over the G20 presidency.
- *Women20—the G20's official engagement platform to promote gender equity—identifies "bridging the gender digital divide" as one of its five priorities* that need to be mainstreamed as part of the G20 agenda this year.

THE DIGITAL GENDER DIVIDE

❖ What is digital gender gap?

- The digital gender gap refers to the disparity between men and women *in access to and use of digital technologies*, including the internet, mobile phones, and other digital devices.
- This gap encompasses various factors, such as differences in access to technology, digital literacy, an use of digital services and platforms.

- **UNICEF Report:**
  - ✓ 90% of the jobs in the world today have a digital component.
  - ✓ These jobs, however, are available only to the digitally able, and to more men than women. According to the report, in developing countries, only 41% of women have access to the internet compared with 53% of men.
  - ✓ Women are 20% less likely to own a smartphone and are more likely to borrow phones from a male family member.
  - ✓ The report also says that boys are 1.5 times more likely to own a mobile phone, and 1.8 times more likely to own a smartphone than girls.
- **OCED Report:**
  - ✓ The gender gap in internet use is widening.
  - ✓ Software development remains a male-dominated field, with women comprising only 15% of software designers.
- **ICUBE 2020**
  - ✓ Data on the use of the internet in India indicates that in comparison with 58% male internet users, female users are only 42%
  - ✓ Data for first-time users of the internet shows a starker contrast between men who have ever used the internet at 57.1% compared with women at 33.3%.
- **National Family Health Survey-5**
  - ✓ Over half of women (53.9%) in India own mobile phones but amongst these only 22.5% reported using them for financial transactions .

❖ **What are the barriers for women to access digital technology?**

• ***Affordability***: Digital devices and internet services can be expensive, making them unaffordable for many women, particularly those living in poverty or in rural areas.

• ***Lack of Infrastructure***: In some areas, there may be a lack of infrastructure such as broadband internet, mobile networks, and electricity, which makes it impossible for women to access digital technologies.

• ***Gender Stereotypes***: Women may face cultural and social barriers that prevent them from accessing digital technologies. For example, in some societies, women are expected to prioritize domestic duties and care-giving over education and training, which limits their ability to learn how to use digital technologies.

• ***Patriarchal social order***: Girls and women are denied access to digital technologies because they almost always come second in a patriarchal social order. The internet is seen as a 'risk to the traditional social order' and 'male gatekeepers' restrict or control girls' and women's access to the internet.

• ***Lack of Digital Skills***: Women may lack the digital skills and literacy needed to effectively use digital technologies. This may be due to a lack of access to education and training opportunities, which may be more readily available to men. Limitations in digital literacy are also related to a lack of digital products and services designed for women and girls.

• ***Online Harassment and Violence***: There are many risks associated with digital technology, including online harassment from strangers (such as unsolicited messages), cyber-bullying, cyberstalking etc, which can deter them from using digital technologies. In a study it has been found that 90% of child sexual abuse images are of girls.

• ***The COVID-19 lockdown*** in India has affected millions of girl students, destroying their dreams and chances of a formal education and better lives at one stroke.

The India's digital gender gap is the result primarily of three factors- rural-urban divide, income based divide and social norms.

❖ **Why bridging gender digital divide is important?**

• ***The Promoting Gender Equality***: Access to digital technologies is a basic human right that should be available to everyone regardless of gender. By bridging the gender digital divide, we can help promote gender equality by ensuring that women have equal access to opportunities in the digital economy and society.

• ***Economic Empowerment***: Digital technologies are critical for economic growth and job creation. By providing women with access to digital technologies, we can help unlock their potential as entrepreneurs, innovators, and job creators, which can contribute to economic empowerment and growth.

• ***Leveraging India's demographic dividend*** requires an equal emphasis on the country's gender dividend. Educated, economically productive, empowered and socially aware women and girls are highly valued in any society.

• ***India aims to have a $1 trillion digital economy by 2025***. Already, 40% of global digital transactions take place in India. As economies digitize further, there is every reason to believe that most jobs will require some knowledge of digital technology.

• ***Social and financial Inclusion***: In India, front-line workers are using tablets and smartphones, filling out online forms which feed directly into *management information systems (MIS) while public schemes such as the PM Janani Suraksha Yojana* require beneficiaries to provide their bank account details. Social and financial inclusion will necessitate digital inclusion.

• ***Multiplier effects***: Access to digital technology for a young woman can be a game changer with multiplier effects. Young women known as 'Digital Sakhis' from Madhya Pradesh are upturning discriminatory social norms through the use of smartphones. Their efforts give us hope that digitally empowered women will lead this transformation in India.

- ***Improving Health and Well-being***, particularly in remote or underserved areas. By bridging the gender digital divide, we can help improve the health and well-being of women and their families.
- ***Advancing Sustainable Development***: Bridging the gender digital divide is critical for achieving the Sustainable Development Goals (SDGs) adopted by the United Nations. Digital technologies can support the SDGs by providing access to education, promoting gender equality, and reducing poverty and inequality.

❖ What are the efforts done to bridge the gender digital gap?

Government	• ***Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA)'*** under Digital India programme. It aims to bridge the digital divide specially targeting rural population including the marginalised sections of society, women and girls by covering 6 crore rural households. • ***National Commission for Women (NCW) has launched an online resource center under the 'We Think Digital' programme.*** The programme is run collaboratively by the NCW, Facebook, and Cyber Peace Foundation. It aims to help women in distress on issues related to online • ***safety like cyberbullying, cyberstalking, financial fraud, etc*** • ***Beti Bachao, Beti Padhao*** • Ministry of Education is administering ***'National Mission on Education through Information and Communication Technology' (NMEICT) Scheme***, ***SWAYAM (Study Webs of Active Learning for Young Aspiring Minds), SWAYAM PRABHA***, ***National Digital Library (NDL), Virtual Lab, e-Yantra, NEAT (National Education Alliance for Technology)*** etc.
Civil Society	• ***Digital Sakhi Program*** - The Digital Sakhi Program is an initiative launched by the Tata Trusts and Google India to provide digital literacy training to women in rural areas. • ***Internet Saathi Program*** - The Internet Saathi Program is an initiative launched by Google India and Tata Trusts to provide digital literacy training to women in rural areas. • ***Breakthrough*** - Breakthrough is a human rights organization that works to promote gender equality and prevent violence against women and girls. The organization has launched several digital initiatives, including 'Bell Bajao' (Ring the Bell), which uses digital media to raise awareness about domestic violence and encourage bystanders to take action. • ***Digital Empowerment Foundation (DEF)*** - DEF has launched various initiatives to promote digital literacy and digital inclusion for women, including the 'Smartpur' initiative, which aims to create digitally empowered villages in India.

❖ Way forward

- ***Envisaging a gendered digital strategy:*** It is crucial to adopt a gendered digital strategy before formulating any policy or action plan for adolescent girls. Building the evidence base, by strengthening the collection and analysis of gender-disaggregated data on digital access, use, and impact, from rural and urban India.
- ***Gender-Sensitive Policies:*** A favourable policy environment to promote the digital empowerment of women is a step in the right direction. These policies should focus on increasing access to digital technologies, promoting digital literacy, and creating an enabling environment for women to participate in the digital economy.
- ***Infrastructure Development***: Governments and the private sector need to invest in the development of digital infrastructure, including high-speed internet connectivity and mobile networks, to ensure that women in both urban and rural areas have access to digital-technologies.
- ***Partnerships and Collaborations:*** Partnerships and collaborations between governments, civil society organizations, the private sector, and academia are essential in promoting digital inclusion for women.

- ***Strengthening e-learning for girls in public schools***: Making public schools digitally sound for girls with integrated digital and e-learning modules, courses and resources will enhance motivation, determination and aspiration to complete education and pursue goals for self and growth.
- ***Establishing regular short-term digital skill-building programs*** which enhance adolescent girls' ability to use technology within real-life situations.

Practice Questions

Prelims:

Q. With respect to "We Think Digital Programme", which of the following is correct?
a) Programme launched by Ministry of women and Child Development to promote digital literacy among women.
b) Programme launched by Ministry of Education to provide digital skills training to school children
c) Programme launched by National Commission for Women to ensure women safety in cyberspace
d) Programme launched by RBI for digital financial literacy.

Answer: C)

Mains: (Level-Moderate)

Q. In the era of the digital economy, access to digital technologies is becoming increasingly important for economic and social empowerment. However, women still face significant barriers to access and use these technologies. Discuss the implications of the digital gender divide for women's economic and social empowerment in India.   **[15 marks, 250 words]**

TOPIC: Clean-tech as the next big thing in rural India

Issue in brief – Decentralized renewable energy (DRE) technology offers an alternative to traditional energy sources, and has the potential to transform the lives of millions of people, particularly women in rural areas.

https://www.thehindu.com/opinion/op-ed/clean-tech-as-the-next-big-thing-in-rural-india/article66577539.ece

Where in Syllabus:
GS 1: Social empowerment

❖ Why in news?

- Recently, a study has shown that Clean energy solutions are transforming women's livelihoods at the grassroots.
- Distributed renewable energy (DRE) powered technologies provide an additional advantage to **women farmers and microentrepreneurs** by enhancing income opportunities through mechanisation. They also free women from several gender-assigned manual activities that are laborious.

Clean Tech in Rural India

❖ What does the study say?

- **_Council on Energy, Environment and Water (CEEW) study_** has shown that out of the 13,000 early adopters of clean tech livelihood appliances, more than 80% are women.
- By 2030, India is expected to see 30 million women-owned micro, small and medium enterprises (MSMEs) employing around 150 million people. DRE livelihood technologies — a $50 billion market opportunity in India alone — have the potential to transform rural livelihoods, with women at the core of this transition.

❖ What is Distributed renewable energy (DRE)?

- DRE is a system that uses renewable energy to generate, store and distribute power in a localised way.
- Unlike centralized energy systems, which rely on large-scale power plants and long-distance transmission lines, DRE systems are designed to provide power to small communities or individual households.
- _DRE systems are also known as off-grid or mini-grid systems_, and they can be standalone or connected to a larger power grid.
- _DRE livelihood applications_ can be defined as applications powered by renewable energy - solar, wind, micro-hydro, biomass & their combinations, which are used for earning livelihoods directly such as solar dryers, solar mills, solar or biomass powered cold storage/chiller, solar charkha and looms, small-scale biomass briquette/pellet-making machines, etc.
- **Advantages of DRE systems:**
  - ✓ Sustainable solution for areas that lack access to grid-connected electricity, such as rural or remote regions.

✓ Promote energy independence.

✓ Flexible, scalable, and reliable.

✓ Allow for easy expansion as demand grows.

✓ They can often be installed and maintained locally, creating local job opportunities and economic benefits.

❖ How DRE system is beneficial for women?

- *Improved health*: It can reduce the amount of time women spend collecting firewood, which can be physically taxing and can expose them to smoke and other health hazards. Access to clean cookstoves and solar lighting can also reduce indoor air pollution, which can improve respiratory health.

- *Increased economic opportunities*: It can provide women with access to energy for small businesses or productive uses, such as irrigation, which can increase income and economic opportunities.

- *Enhanced education*: Access to electricity through DRE systems can enable children to study at night, which can be particularly beneficial for girls, who may have additional household responsibilities during the day. This can improve educational outcomes and increase opportunities for women and girls.

- *Improved safety*: Women may be at risk of violence or harassment when collecting firewood or traveling long distances to charge phones or access electricity. DRE systems can provide safer and more reliable alternatives, reducing the need for women to travel long distances for energy access.

- **Increased empowerment**: It can provide women with greater control over their own energy supply, enabling them to make decisions about how to use energy and how to generate income from energy production. This can increase their overall sense of empowerment and agency.

- *Reduced workload*: It can reduce the amount of time and effort women spend on household tasks, such as cooking and cleaning, by providing access to energy-efficient appliances and tools.

- *Climate change mitigation*: It can help reduce greenhouse gas emissions and promote sustainable development, which can have long-term benefits for women and their communities, particularly in areas that are vulnerable to the impacts of climate change.

❖ What are the challenges faced by women in accessing and benefiting from DRE technology?

- *Relatively lower risk appetite* in women due to socio-economic reasons.

- *Limited access to information* about the benefits and potential of DRE systems, which can make it difficult for them to make informed decisions about energy use and investment.

- *Lack of access to finance* to purchase DRE systems or start their own energy businesses.

- *Less access to technical training and education*, which can limit their ability to participate in the design, installation, and maintenance of DRE systems or to start their own energy businesses.

- *Gender-based barriers*: Gender-based discrimination, cultural norms, and social expectations may prevent women from participating in energy decision-making processes or from engaging in income-generating activities related to DRE systems.

- *Limited mobility*: Women may have limited mobility due to social or cultural constraints, which can make it difficult for them to access energy services, participate in training or workshops, or travel to markets to sell energy products.

❖ How to scale up the impact of DRE technology?

- *Leverage the experience of early women adopters*. Because of their novelty and high starting price, DRE appliances are perceived as high-risk purchases, especially by women users with a relatively lower risk appetite due to socio-economic reasons. To overcome the challenge, technology providers must leverage

early users to share their experiences with potential customers, becoming demo champions/sales agents to market these products, based on their first-hand product experience and local credibility.

- ***Organise hyperlocal events and demos***. People want to touch and see a high-tech, high-ticket-size product before believing in its ability and promised benefits, especially when it comes to women who historically have limited access to new information. These events also create spaces for women to network, become aware of the product and connect with people who can help them procure, finance and use these machines. *At an event in Hamirpur, Uttar Pradesh, more than 200 women booked seven appliances on the spot, including solar sewing machines and multi-purpose food processors.*

- ***Enable easy finance to purchase products***. Limited avenues to avail financing for these clean technology products remain a bottleneck. Financiers supporting women farmers and microentrepreneurs should consider the technologies themselves as collaterals while easing the loan application process. *For example, Samunnati Finance, a financier in the agri-value chain, availed an 80% first-loan default guarantee to support six women-led FPOs in Andhra Pradesh that purchased 100-kg solar dryers.*

- ***Technology manufacturers and promoters should also ensure adequate after-sales services and buy-backs***. To build financiers' confidence, evidence on the economic viability of these technologies should be shared and promoters must offer partial default guarantees.

- ***Support backwards and forward market linkages***. Only technology provision is not enough in all cases. Many rural products have larger market potential. Thus, finding and connecting producers to consumption hubs in urban areas are equally important to generate higher incomes. *Reshamsutra, a manufacturer of solar silk-reeling machines, is partnering with local procurement organisations to establish silk cocoon banks and equipment training for women reelers in Chhattisgarh.*

- ***Enable policy convergence.*** No private sector entity has the kind of reach and scale government institutions have, so leveraging their reach is imperative to exponentially scale up. Multiple ministries are working towards promoting livelihoods for women — from state rural livelihood missions, horticulture and agriculture departments, ministry of micro, small and medium enterprises, to the ministry of textiles. They should embrace clean energy solutions to further their respective programmes and outcomes.

❖ Conclusion

- Scaling the impact of clean energy solutions on women's livelihoods needs a gamut of policymakers, investors, financiers, technology promoters and other ecosystem enablers. Only then can we truly unlock the potential of rural women and clean technologies simultaneously.

- The adoption of decentralized renewable energy technology among women in India can bring about transformative changes that address their energy needs and contribute to their economic and social empowerment. While challenges persist, the government's initiatives and efforts by various organizations provide hope for a sustainable and equitable energy future for women in the country.

Some initiatives aimed at increasing the penetration of decentralized renewable energy (DRE) technology among women:
- Solar Charkha Mission.
- Saubhagya Scheme.
- National Rural Livelihoods Mission.
- Hariyali Green Village Plans, developed by NRDC and partner, the Self-Employed Women's Association (SEWA).
- Powering Livelihoods initiative by Council on Energy, Environment and Water (CEEW).
- Women in renewable energy- call for action programme of Ministry of New & Renewable Energy.

Basic terms/related concepts and fact:

• **Hariyali Green Villages initiative**:

✓ The Natural Resources Defense Council (NRDC) and the Self-Employed Women's Association (SEWA) along with the Association of Renewable Energy Agencies of States under the Ministry of New and Renewable Energy (AREAS-MNRE) are implementing a unique and comprehensive initiative.

✓ Aims to enhance accessibility and affordability of clean energy technologies and improve livelihood opportunities at the household level in rural India.

✓ Each Green Village, or Hariyali Gram, includes a suite of clean energy and environment friendly technologies such as Light-emitting Diode (LED) bulbs and energy efficient fans for lighting and thermal comfort, biogas plants for clean cooking, solar-powered water pumps for irrigation, and cool roofs to reduce heat stress in the houses. With the objective of scaling up to 100 villages by 2025.

Practice Questions

Prelims:

Q. Hariyali Green Villages Initiative is related to which of the following?
   a) Women-led climate and clean energy solutions for prosperity in rural India.
   b) Tree Plantation drive with the aim of increasing green Cover planting.
   c) Encouragement of the use of electric vehicles in rural India.
   d) Promotion of organic farming in rural areas.

Answer: A)

Mains: (Level-Moderate)

Q. Access to decentralized renewable energy (DRE) technology has the potential to transform the lives of rural women in India. Discuss the challenges faced by women in accessing and benefiting from DRE systems, and suggest measures to overcome them.
[10 marks, 150 words]

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