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This Document was prepared under the supervision of Mr. Pramod Singh, Director, Edge IAS.

Current Affairs, September 2023

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1. Polity and Governance

1.1 Educational Schemes for religious minorities

There is a shift in Central govt's policy towards minority education in the past few years.

About Religious minorities in India:

- India is home to over 30 crore (20%) people from religious minority communities.
- These include six religions notified under Section 2(c) of the National Commission for Minorities Act, 1992.
- As per the Census 2011, the percentage of minorities in the country is about 3% of the total population of the country.
- The population of Muslims is 14.2%; Christians 2.3%; Sikhs 1.7%, Buddhists 0.7%, Jain 0.4% and Parsis 0.006%.
- The Constitution of India does not define the term minority.
- Article 29(1) of the Indian Constitution calls for the Protection of interests of minorities.
- Any section of the citizens residing in the territory of India or any part thereof having a distinct language, script or culture of its own shall have the right to conserve the same.
- Article 30(1) grants Right of minorities to establish and administer educational institutions.
- All minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice.
- Article 350-B: Originally, the Constitution of India did not make any provision with respect to the Special Officer for Linguistic Minorities.
- But, the Seventh Constitutional Amendment Act of 1956 inserted Article 350-B in the Constitution.
- Parliamentary Provisions: National Commission for Minorities Act, 1992 defines a minority as “a community notified as such by the Central government.”

Budgetary allocation for minorities:

- The Central govt slashed the budgetary allocation for the Ministry of Minority Affairs by 38.3%, a drop from Rs 5,020.5 crore in 2022-23 to Rs 3,097 crore in 2023-24.
- Notably, the 2022-23 estimates were revised to Rs 2,612.66 crore, indicating an under-utilisation of nearly 48% of funds.
- The shift in policy came despite a significant drop in beneficiaries (7%) between 2019 and 2022, even as funds remained underutilised.
- During the period, the government spending on six educational schemes for religious minorities dropped by around 12.5%.
- For instance, the pre-matric scholarship, which has benefitted the maximum number of minority students, the ministry spent Rs 43.95 crore out of the revised estimate of Rs 556 crore.
- Similarly, Rs 29 crore was the actual expenditure on post-matric scholarship when the budget estimate was Rs 515 crore.
- A 2022 report by the Centre for Budget and Governance Accountability (CBGA) highlighted a “declining trend” in the share of the overall budget expenditure towards minorities.
- Even the allocation of funds for the year 2022-23 was not in line with proportional representation of minorities.

Impacts of the policy:

- The restructuring of programmes, under-utilisation of funds, and reduced budgetary allocations have impacted the implementation and goals of educational schemes for minorities.
- As a result of all these factors, gaps in education and economic parameters are expected to widen.
- There are other challenges in implementation as well, including poor coverage of beneficiaries and low unit costs.

- According to the experts, eliminating scholarships and limiting the scope of scholarships will negatively affect the community and affect their enrollment rates, which are already alarming.

Welfare schemes for the educational empowerment of minorities:

- Pre-Matric Scholarship Scheme: to minority students from class 1 to 10 and ranged between Rs 1,000 and Rs 10,700 for each selected candidate. 30% of the scholarships were earmarked for girls.
- Post-Matric Scholarship Scheme: for students of class 11 and above (till Ph.D.), with a scholarship ranging between Rs 2,300 and Rs 15,000. Like the pre-matric, 30% of the post-matric scheme was also earmarked for girls.
- Merit-cum-Means based Scholarship Scheme: Launched in 2008, this scheme targeted professional and technical courses at undergraduate and postgraduate levels, with 30% earmarked for girl students. Eligible candidates are reimbursed full course fees,

Maulana Azad National Fellowship

- Padho Pardesh: The scheme was launched to provide better opportunities for higher education abroad, providing an interest subsidy on education loans for overseas studies to students belonging to economically weaker sections of minority communities.
- Naya Savera: To provide free coaching to minority students of classes 11-12 with science subjects for entrance to technical and professional courses and competitive examinations.
- Scheme for Providing Education to Madrasas and Minorities (SPEMM): Under it recognised madrasas receive financial assistance to introduce 'modern' subjects such as science, mathematics, social studies, Hindi and English in their curriculum.

Way Forward:

- A recent yearbook by the Institute of Objective Students on the status of Muslim school dropouts estimated that dropout rates stand at 23.1% as compared to the national average rate of 18.96%. Therefore an affirmative action is the need of the hour to improve the socio-economic status of religious minorities, particularly Muslims, who continue to lag behind the rest of the population in several areas.

1.2 Sixth census on minor irrigation

The Jal Shakti Ministry has released the sixth census on minor irrigation schemes report.

Key Highlights of the report:-

- As per the report, 14 million minor irrigation (MI) schemes have been reported in the country.
- The report also revealed that there has been an increase of about 1.42 million in MI schemes as compared to the previous census.
- Minor Irrigation Schemes(MI): those structures either in groundwater or in the surface water category having culturable command areas up to 2,000 hectares.
- Out of these 93 million are Ground Water (GW) and 1.21 million are Surface Water (SW) schemes.
- Ground Water (GW) schemes: provide irrigation throughout the year.
- Surface Water (SW) scheme: comprises surface flow schemes and surface lift irrigation schemes.
- For the first time, the information about the gender of the owner of the MI scheme was also collected in the case of individual ownership.
- Out of all the individually owned schemes, 1 percent are owned by women.
- Minor irrigation (MI) schemes: Uttar Pradesh possesses the largest number of MI schemes in the country.
- It was followed by Maharashtra, Madhya Pradesh, and Tamil Nadu.
- Ground Water (GW) ranking: The same ranking of states as MI follows for the Ground Water (GW)
- Surface Water (SW) ranking: Maharashtra leads in SW schemes followed by Karnataka, Telangana, Odisha, and Jharkhand.

About the 6th census on minor irrigation:-



- Published in 2023.
- Published by: Department of Water Resources, River Development and Ganga Rejuvenation.
- Ministry: Ministry of Jal Shakti.
- Past censuses: 1986-87, 1993-94, 2000-01, 2006-07 and 2013-14.
- Objective: to gather a sound and reliable database for minor irrigation schemes for effective planning and policy making in this sector.
- The census was conducted under the centrally sponsored scheme “Irrigation Census”.
- The 6th MI census work was delayed due to the Covid-19 pandemic.
- It was executed in 32 States/ UTs across the country.
- Detailed information on various parameters of Irrigation sources, irrigation potential created (IPC), potential utilized, ownership, holding size of land by owner, windmills, etc. were collected.
- Irrigation sources: dug well, shallow tube well, medium tube well, deep tube well, surface flow, and surface lift schemes. (‘Per Drop More Crop’)

Significance of report:-

- This report will be useful for planners, policy makers, researcher scholars, agricultural and groundwater scientists, and administrators & all concerned with the development of irrigation and the agricultural economy of the country. (Pradhan Mantri Krishi Sinchayee Yojana (PMKSY))

1.3 Central Consumer Protection Authority (CCPA)

The Central Consumer Protection Authority (CCPA) issued an order against M/s IQRA IAS Institute, to discontinue the false testimonials and misleading claims from their website with immediate effect recently.

Background:-

- The issue came to the notice of CCPA through the website of IQRA IAS Institute established in 2018 deliberately and falsely claimed through the testimonials of top-rank holders of UPSC CSE in 2015 & 2017 as their students which is factually deceiving.
- Therefore, CCPA took Suo-moto cognizance and found that along with the aforesaid false claim the institute claimed itself as the only coaching academy to have the best faculty from all around India for providing the best UPSC online prelims test series 2020, thus making it the top UPSC coaching within a year in Pune.
- Accordingly, the notice was issued to IQRA IAS Institute in view of the violation of the Consumer Protection Act, 2019.

Consumer Protection Act, 2019:-

- Definition of consumer: The act defines a consumer as a person who buys any good or avails a service for consideration.
- Exclusion: It does not include a person who obtains a good for resale or a good or service for commercial purposes.
- It covers transactions through all modes including offline, and online through electronic means, teleshopping, multi-level marketing, or direct selling.
- Definition of misleading advertisement: The Act defines “misleading advertisement” in relation to any product or service as “an advertisement, which:-
- Falsely describes such product or service.
- Gives, a false guarantee to, or is likely to mislead the consumers as to the nature, substance, quantity, or quality of such product or service.
- Conveys an express or implied representation which, if made by the manufacturer or seller or service provider thereof, would constitute an unfair trade practice.
- Deliberately conceals important information.

Rights of consumers:-

- Six consumer rights have been defined in the Act, including:-
- Right to safety, right to be informed, right to choose, right to be heard, right to seek redressal, and right to consumer education.

About Central Consumer Protection Authority (CCPA):-

- Establishment: 2020.
- Ministry: Ministry of Consumer Affairs.
- HQ: Delhi.
- Objective: To protect the rights of the consumer by cracking down on unfair trade practices, and false and misleading advertisements that are detrimental to the interests of the public and consumers.
- The Central Consumer Protection Authority (CCPA) is an authority constituted under Section 10(1) of The Consumer Protection Act, 2019.

Composition:-

- Head: Chief Commissioner
- Members: two other commissioners as members.
- One of these will deal with matters relating to goods while the other will look into cases relating to services.
- Investigation Wing: The CCPA will have an Investigation Wing, headed by a Director General.
- District Collectors: They too, will have the power to investigate complaints of violations of consumer rights, unfair trade practices, and false or misleading advertisements.

Powers and Functions of CCPA:-

- Inquire or investigate matters relating to violations of consumer rights or unfair trade practices Suo moto, or on a complaint received, or on a direction from the central government.
- Recall goods or withdrawal of services that are “dangerous, hazardous, or unsafe.
- Pass an order for a refund of the prices of goods or services so recalled to purchasers of such goods or services.
- Impose a penalty of up to Rs 10 lakh, with imprisonment of up to two years, on the manufacturer or endorser of false and misleading advertisements.
- The penalty may go up to Rs 50 lakh, with imprisonment up to five years, for every subsequent offense committed by the same manufacturer or endorser.
- Ban the endorser of a false or misleading advertisement from making an endorsement of any products or services in the future.
- File complaints of violation of consumer rights or unfair trade practices before the District Consumer

Disputes Redressal Commission, State Consumer Disputes Redressal Commission, and the National Consumer Disputes Redressal Commission.

1.4 National Commission for Schedule Tribes (NCST)

Kalahandi Gram Sabhas wrote to the National Commission for Schedule Tribes (NCST), invoking an atrocities act against the Jharkhand Divisional Forest Officer (DFO), recently.

Background of the issue:-

- DFO illegally seized a consignment of kendu leaves being transported from Odisha to West Bengal, a federation of Gram Sabhas alleges.
- The Kasturapadar and Khasiguda Gram Sabhas of the federation had issued transit permits to a company, Green India, for carrying kendu leaves (also known as tendu), which are used to roll beedi, from Kalahandi to Dhulian in West Bengal in May this year.
- On May 31, the company's truck, along with 400 sacks of kendu, was seized during transit by the DFO of Simdega forest division in Jharkhand.
- The Mahasangh has alleged that the seizure is in violation of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA) and the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989.
- Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989: It is an Act to prevent the commission of offenses of atrocities against the members of the Scheduled Castes and the Scheduled Tribes.
- It provides for Special Courts for the trial of such offenses for the relief and rehabilitation of the victims of such offenses and for matters connected therewith or incidental thereto.
- The letter dated June 19, 2023, appealed NSCT to take legal action against the Simdega DFO for "illegal interference with the enjoyment of forest rights of Schedule Tribes and Other Traditional Forest Dwellers".

About the National Commission for Schedule Tribes (NCST):-

- Establishment:
- Ministry: Ministry of Tribal Affairs.
- HQ: New Delhi.
- It was established by amending Article 338 and inserting a new Article 338A.
- It was done through the Constitution through the Constitution (89th Amendment) Act, 2003.
- By this amendment, the erstwhile National Commission for Scheduled Castes and Scheduled Tribes was replaced by two separate Commissions namely:-
- National Commission for Scheduled Castes (NCSC), and
- National Commission for Scheduled Tribes (NCST)
- The commission submits its report to the President annually.
- It gives data on the working of safeguards and measures required for the effective implementation of Programmers/ Schemes relating to the welfare and socio-economic development of STs.

Structure:-

- Term of office of Chairperson, Vice-Chairperson, and each member: three years from the date of assumption of charge.
- Chairperson has been given the rank of Union Cabinet Minister.
- Vice-Chairperson that of a Minister of State
- Other Members have the ranks of a Secretary to the Government of India.

Powers:-

- NCST is empowered to investigate and monitor matters relating to safeguards provided for STs under the Constitution under other laws or under Govt. order.
- It is also authorized to inquire into specific complaints relating to the rights and safeguards of STs and to

participate.

- It can advise in the Planning Process relating to the socio-economic development of STs and evaluate the progress of their development under the Union and States.

1.5 Article 371 D

The students of Andhra Pradesh stare at the prospect of losing 'local quota' in educational institutions as Article 371 D may not come to their rescue when the validity of the A.P. Reorganisation Act ceases after the 10-year period in May 2024.

Background:-

- The teaching fraternity and the student community fear the prospect of losing the 'local quota' in educational institutions in the near future.
- Their fear stems from the fact that the Andhra Pradesh Reorganization Act, which came into force in May 2014, is valid only for 10 years.
- This means that the rules and regulations formulated prior to the bifurcation of Andhra Pradesh will not hold good after May 2024.

About Article 371 D:-

- Article 371 of the Indian Constitution deals with special provisions for eleven states of the Indian Union.
- It is a part of XXI of the Constitution of India, Article 371.

Beneficiary states:-

- This Article ranges from Article 371-A to Article 371-J.
- It gives special provisions for the states of Maharashtra, Gujarat, Nagaland, Assam, Manipur, Andhra Pradesh, Sikkim, Mizoram, Arunachal Pradesh, Goa and Karnataka.
- The main objectives behind Article 371 granting special provisions to some states are:-
- To meet the unique needs of the backward regions of these states.
- Protect the economic and cultural interests of these regions.
- Combat the local challenges and protect the customary laws in these regions.
- Article 371D, gives special provisions for the state of Andhra Pradesh.
- It was added to the Constitution in 1974 by the 32nd Amendment Act, 1973.
- It states that: the president must ensure "equitable opportunities and facilities" in "public employment and education to people from different parts of the state". He may require the state government to organize "any class or classes of posts in the civil service of, or any class or classes of civil posts under, the State into different local cadres for different parts of the State". He has similar powers vis-à-vis admissions in educational institutions.

Benefits:-

- It provides equitable opportunities and facilities for the people of the state.
- It safeguards their rights in matters of employment and education. (Domicile-based job quota)
- The state government may organize civil posts or direct recruitment to posts in the local cadre as required.

1.6 One Nation One Election' system (ONOE)

The 'one nation one election' proposal was mooted yet again by the government.

About 'One Nation One Election' system:

- Current system: The country holds separate polls for the Lok Sabha and state Assemblies in a gap of five years, i.e.
- When the tenure of the Lower House or the state government concludes, or either of them is dissolved prematurely.

- The term of state assemblies may not necessarily be in sync with one another or that of the Lok Sabha.
- As a result, the mammoth task of conducting elections goes all round the year.
- One Nation One Election proposes that simultaneous elections be held in all states and the Lok Sabha in a gap of five years.
- This would mean that the voters will cast their vote for electing members of the LS and the state assemblies on a single day, at the same time (or in a phased manner as the case may be).

Background of ONOE:

- Simultaneous elections have previously been conducted in India in 1952, 1957, 1962 and 1967.
- Soon after, this norm was discontinued following the dissolution of some Legislative Assemblies between 1968 -69.
- Since then, the Indian Electoral system holds polls to Centre and states separately.

Important articles to be amended to conduct ONOE:

- Article 172 and Article 83 deal with the duration of the Houses of Parliament, and guarantee a five-year term to both the elected Lok Sabha and state assemblies, unless they are dissolved sooner.
- Article 85 of the Indian Constitution deals with the powers of the President to summon Parliamentary sessions, not exceeding a gap of more than six months.
- The President also carries the power to adjourn either House of the Parliament and the dissolution of the Lok Sabha.
- Article 356 of the Indian Constitution, comes into action in case of governance and constitutional failure in a state and deals with the President' Rule.
- Amendments in the People's Representation Act, 1951(RPA Act 1951) and the Anti Defection Law must be made for organised conduct and stability in both Lok Sabha and state assemblies.

Arguments in favour of ONOE:

- Reduction of Financial burden on state exchequer: Continuous election cycles are a financial burden on the state exchequer.
- ONOE will reduce the overall expenditure on political process by ECI.
- Focus on governance instead of being in 'election mode': One nation one election" will ensure continuity of policies and programmes of the central and state governments.
- It will reduce disruption of normal public life as political rallies will be kept to a minimum.
- It will improve the delivery of essential services to public.
- Better utilisation of financial resources by political parties: Simultaneous elections will reduce the campaign expenditure of political parties and the candidates.
- This will help smaller regional parties in better management of financial resources.
- Reduced duration of 'model code of conduct: Frequent imposition of the Model Code of Conduct (MCC) during polls stalls all development work for months at a time.
- It will reduce 'policy paralysis' that results from the imposition of the Model Code of Conduct during election time.
- Increase of administrative efficiency: During elections the entire state machinery focuses on conducting a free and fair electoral process which impacts the everyday administration because officials are engaged in polling duties.
- ONOE will increase efficiency of administrative system.
- Increase of voter turnout:- According to the Law Commission, ONOE will increase voter turnout because it will be easier for people to cast many votes all at once.
- Reduced use of black money: Elections involve considerable expenditure by prospective candidates most of which is black money.
- ONOE will reduce the circulation of black money in economy.
- Improvement in social harmony: Frequent elections perpetuate caste, religion, and communal issues across the country as elections are polarising events that have accentuated casteism, communalism, and corruption.

- ONOE would reduce the fault lines between communities created due to multiple elections.

Arguments against ONOE:

- Only states are contesting: 'India' does not have an election every year, one of India's States does.
- So, when there are elections in a few States, 'India' is not in an election mode; some of India's States are.
- All of India's major political parties are not in an election mode, only some are.
- Against India's federalism: Each of India's States has different political cultures and parties.
- An elected Chief Minister of a State has the powers to recommend dissolution of their State legislatures and call for early elections.
- Under a 'one election' framework, state parties will not have the right to do this.
- These powers will be taken away from the States and only the Union government will have the powers to dictate the election schedule for every State.
- Increase in cost: In the short term, simultaneous elections will increase the costs for deploying far larger numbers of electronic voting machines and control units.
- Political parties and candidates may spend a lot more money on elections than the government but that is not the tax-payers' money.
- On the contrary, there is economic research to suggest that such election spending by parties and candidates actually benefits the economy and the government's tax revenues by boosting private consumption and serving as a stimulus.
- Works for presidential system: A single election calendar may work in a presidential system where the survival of the executive is not dependent upon a legislative majority.
- Unworkable and unfeasible: 'One nation one election' is a politically unfeasible, administratively unworkable and constitutionally unviable proposition.

Way Forward:

- The concept of 'One India One Election' holds promise as a positive change, provided it is executed with meticulous attention to policies and regulations. Addressing the growing demand for skilled administrative staff and heightened security is crucial. Forming a dedicated group consisting of constitutional experts, think tanks, government officials, and political party representatives is essential to working out the intricate details of implementation.

1.7 Amitava Roy Committee report

Recently, the Supreme Court sought the views of the Centre and the states on the Justice Amitava Roy Committee report.

Background:-

- On August 29, the Supreme Court sought the views of the Centre and the states on the Justice Amitava Roy Committee report submitted on December 27, 2022, underlining that the correctional justice system is "evidently gender exclusionary".

About Amitava Roy Committee report:-

SOME RECOMMENDATIONS BY PANEL

- Telemedicine and virtual consultation to address unavailability of women staff or medical wards.
- Vocational training in collaboration with NGOs.
- Community service for those accused of petty offences

- Allowing inmates to file complaints, sensitisation training of prison staff
- Women prisoners with psychological or psychosomatic disorders, or victims of sexual abuse, should get proper counselling

- Formation: 2018.
- Formed by: Supreme Court of India.
- In September 2018, the Supreme Court formed a Committee on Prison Reforms chaired by former judge, Justice Amitava Roy.
- Objective: To examine the various problems plaguing prisons in the country, from overcrowding to lack of legal advice to convicts to issues of remission and parole.

Historical Background:-

- The decision was taken based on a letter from former Chief Justice of India R.C. Lahoti highlighting the overcrowding in prisons, unnatural deaths of prisoners, gross inadequacy of staff, and the lack of trained staff.
- The court asked the committee to complete the collection of data and information and submit the report in a year.
- The committee submitted the final report in December 2022.

Functions of the committee:-

- Examine the extent of overcrowding in prisons and correctional homes & and recommend remedial measures.
- Grant of remission, parole, and furlough.
- Reasons for violence in prisons and correctional homes.
- Recommend measures to prevent unnatural deaths.
- Assess the availability of medical facilities in prisons and correctional homes.

Key Findings of the Committee:-

- Globally, one in three prisoners are undertrials.
- In India, three out of four, or about 77% of the total prison population in 2021, were undertrials.
- Undertrials: people waiting for the completion of a trial or investigation.
- Women prisoners face far worse conditions than men in terms of access to basic facilities.
- Prisons only in Goa, Delhi, and Puducherry allow female inmates to meet their children without any bars or glass separation. (National Commission for Women)
- Less than 40% of prisons provide sanitary napkins to female inmates.
- Only 18% of female prisoners get exclusive women's prison facilities.
- Prison authorities of only 13 states and two Union Territories have designated a 'complaint officer' to deal with complaints of violation of rights of transgender inmates in prisons.
- Majority of the states and Union Territories have not formulated welfare schemes for transgender prisoners.
- Suicide is a major cause of the 817 unnatural deaths reported in jails across the country between 2017 and 2021.
- Uttar Pradesh recorded the highest number of suicides at 101 during this period.

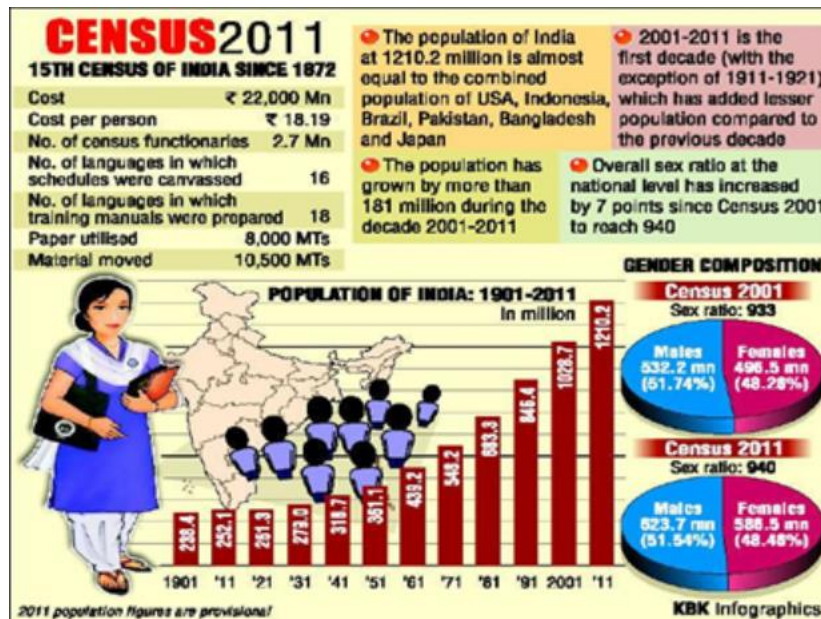
Key Recommendations of the Committee:-

- Speedy trials.
- Lawyer to prisoner ratio: There should be at least one lawyer for every 30 prisoners.
- Special courts should be set up to deal exclusively with petty offenses.
- Accommodative Transition: Every new prisoner should be allowed a free phone call a day to his family members to see him through his first week in jail. (Police & Prison Reform)
- Legal aid must be provided.
- Use of video-conferencing for trial.
- Modern cooking facilities and canteens to buy essential items.
- The Supreme Court should pass directions asking authorities to start the recruitment process against permanent vacancies within three months and the process should be completed in a year.

1.8 Bihar government's caste-based survey

Recently in its reply to the Supreme Court on the Bihar government's caste-based survey, the Union government recently said only the Centre is entitled to conduct a census.

About Caste Census:



- The Socio-Economic and Caste Census 2011 (SECC) was conducted for the 2011 Census of India.
- The SECC 2011 was conducted in all states and union territories of India.
- SECC 2011 was the first paperless census in India conducted on hand-held electronic devices by the government in 640 districts.
- SECC 2011 was the first caste-based census since the 1931 Census of India.
- SECC 2011 was not conducted under the 1948 Census of India Act, which made information disclosure voluntary for citizens, and not a mandatory disclosure.
- Caste Census is under the administrative control of the Ministry of Home Affairs: Registrar General and Census Commissioner of India.

About Census in India:

- Census in India was started in 1872 under British Viceroy Lord Mayo,
- However, the first complete census was taken in 1881 under Lord Ripon.
- Since 1881, the Census has been undertaken every 10 years.
- It is conducted by the Registrar General and Census Commissioner of India under the Ministry of Home Affairs.
- All the censuses since 1951 were conducted under the 1948 Census of India Act.

Significance of Caste Census:

- Steps towards equality: It would help to point out those castes that are not represented in the institutions of this country so that steps towards equality can be established.
- It would justify the extension of reservations to various communities.
- Usage of last census data: last caste census was in 1931 and the government still uses this as a basis to estimate demography and different caste groups.
- There have been significant changes in the demography of this country.
- Data unavailability: The Rohini Commission too, faced difficulties due to the unavailability of data on various communities classified under OBCs.
- The Commission was set up to examine the issue of sub-categorisation of OBCs.
- Effective service delivery: A fresh estimate of the population is necessary to ensure more effective delivery

of targeted welfare.

- State actions on caste data collection: Karnataka, Odisha and Telangana had carried out similar counts in the name of “socio-economic surveys”.
- Popular demand: Along with Bihar, other states like Jharkhand and Odisha are also reiterating their support for the caste census.

Criticisms associated with it:

- Way for caste divisions: The 21st century India should be discussing ‘let’s do away with caste’ rather than further divide India on those lines.
- It may “rekindle divisive feelings among people.
- A colonial practice: Every Census until 1931 had data on caste. So it was a colonial practice of divide and rule which drove them toward collecting such data.
- Every Census in independent India from 1951 to 2011 has published data on Scheduled Castes and Scheduled Tribes, but not on other castes.
- Demand for reservations: Reservations that were implemented for 10 years have continued for 75 years and a caste-based census may lead to a demand for more.
- Constitutional Mandate: Unlike in the case of the SCs and the STs, there is no constitutional mandate for the Registrar-General and Census Commissioner of India, to provide the census figures of the OBCs and the BCCs.
- Feasibility of the count: Union government contended that such an exercise was not feasible given that there are too many castes and sub-castes in each state and Union territory making it difficult to classify them.
- People use their clan/gotra, sub-caste and caste names interchangeably.
- The government has cited numerous administrative, operational and logistical reasons.
- Census data enumerators are part-timers with 6-7 days of training and are “not an investigator or verifier”
- There is a fear that such counting could endanger the census exercise itself.
- Political agenda: At a deeper level there are politics involved in the matter.
- Bihar’s politics has been dominated by the Other Backward Castes (OBCs), the numerically powerful social group.

Way Forward:

- The need for a caste census can be seen in the vast income disparity in the country. For instance the 2020 Oxfam report states that the top 10% of India’s population owns 74.3 % of the total wealth; the middle 40% owns 22.9%; and the bottom 50% owns a shocking 2.8 %. This indicates unequal distribution of wealth demands a greater understanding of Indian society.
- The SECC will help to move to the principle of ‘program-specific indicators for program-specific entitlements’. Recognizing many dimensions of poverty and tackling them with different programs, in multiple fields like health, education, sanitation, and mid-day meal can be universal; others like affordable housing and disability can be targeted.

1.9 e-Courts Mission Mode Project

The Government has recently, approved the e-Courts Mission Mode Project Phase -3 as part of the National e-Governance Plan.

Background:-

- It is a part of the National e-Governance Plan.
- It will span for four years with a financial outlay of seven thousand 210 crore rupees.

About e-Courts Mission Mode Project:-

- Launched: 2007.
- Ministry: Ministry of Law & Justice.

- E-Courts Project is a mission-mode project undertaken by the Department of Justice, Government of India.
- Objective: to provide designated services to litigants, lawyers, and the judiciary by universal computerization of district and subordinate courts in the country and enhancement of ICT enablement of the justice system.
- Implementation: The e-Courts project is being implemented in association with the e-Committee Supreme Court of India and the Department of Justice.
- The project is aimed at providing the necessary hardware and software application to enable courts to deliver e-services, and the judiciary to be able to monitor and manage the functioning of courts.
- It is a Central Sector Scheme.
- The e Committee of the Supreme Court has been overseeing the implementation of the e Courts Project, conceptualized under the “National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary-2005”.
- The Chairperson of the e Committee is Dr Justice Dhananjaya Y Chandrachud, Judge, Supreme Court of India.

Phases:-

- Phase I: It was implemented during 2011-2015.
- Phase II: It was started in 2015 under which various District and subordinate courts have been computerized.
- Draft vision document for Phase III aims for: (Phase III of the eCourts Project)
- Digitization of court processes.
- Upgrade the electronic infrastructure of the judiciary.
- Enable access to lawyers and litigants.
- Seamless exchange of information between various branches of the State through the Interoperable Criminal Justice System (ICJS).
- These branches include the judiciary, the police, and the prison systems.

Advantages:-

- Faster justice (Digitization of Court Records)
- Clearing pendency which is around 3.27 crore cases before Indian courts.
- Reduce long delays and difficulties for ordinary litigants.
- Building people’s trust in the judiciary.

Challenges:-

- Technical Challenges: Complex process that involves upgrading existing technology and infrastructure.
- Cybersecurity Risks.
- Equity Concerns: The digitization of courts can exacerbate existing disparities in access to justice for marginalized communities, particularly those without access to technology.
- Preservation of Records: Digitizing records poses challenges for preserving historical records

1.10 India Ageing Report 2023

India Ageing Report 2023 was released recently.

About India Ageing Report 2023:-

- Released on: 27 September 2023.
- Released by: International Institute for Population Sciences and the United Nations Population Fund.

Key highlights of the report:-

- The percentage of the elderly in India has been increasing rapidly in recent years and this trend is likely to continue in the coming decades as well,
- By 2050, the share of the elderly in India’s total population can reach more than 20 percent.

- The number of elderly will also be higher in proportion to the number of children aged 0-14 years.
- The number of working-age people in the age group of 15-59 years will decrease.
- Also, women will live longer than men, due to which the number of older women will be more than older men.
- A large number of them will be rural women.
- It noted that the decadal increase in India's elderly population since 1961 was medium to high.
- This pace was slow until 2001 but is expected to spike in the coming decades.
- The report said the global population has been increasing even as people are living longer. (World Population Prospects)
- According to the report, in India, a man aged 60 years can live another 18.3 years, while women can live 19 years.
- In Kerala and Himachal Pradesh, women can be up to 4 years more than men.
- The report has expressed concern that since the life expectancy of women in India will be longer than that of men, the number of widowed women will be considerable.

Edge IAS

2. International Relations

2.1 20th ASEAN-India Summit

Prime Minister Narendra Modi will be on a two-day visit to Indonesia to attend the ASEAN-India Summit and East Asia Summit.

About 20th ASEAN-India Summit:-

- Host: Indonesia.
- Venue: Jakarta, Indonesia
- Significance: It will be the first Summit since the elevation of India-ASEAN relations to a Comprehensive Strategic Partnership last year. (India-ASEAN relations)
- It will review the progress of India-ASEAN relations and chart the future direction of cooperation.

About East Asia Summit:-

- Established :2005.(East Asia Summit)
- First summit: Kuala Lumpur, Malaysia.
- Date: 14 December 2005.
- 18th summit: Jakarta, Indonesia.
- It is a forum of 18 regional leaders for strategic dialogue and cooperation on the key political, security, and economic challenges facing the Indo-Pacific region.
- This forum has an important role to play in advancing closer regional cooperation.
- The 18th East Asia Summit will provide an opportunity for leaders of ASEAN countries and its eight dialogue partners, including India, to exchange views on issues of regional and global significance.

2.2 Africa Climate Summit 2023

The Africa Climate Summit 2023 ended recently.

Background:-

- The inaugural Africa Climate Summit (ACS23) in Nairobi culminated in the 'Nairobi Declaration', giving the continent a common voice ahead of upcoming key global engagements.
- The declaration has a raft of recommendations, pledges, and demands believed to have boosted Africa's bargaining power on international platforms.
- The Nairobi summit largely focused on calls to unlock investment in clean energy.

About Africa Climate Summit 2023:-

- Date: 4th to 6th September 2023.
- Venue: Nairobi, Kenya (Africa)
- Objective: to address the increasing exposure to climate change and its associated costs, both globally and particularly in Africa. (African Union)
- At the Africa Climate Summit, leaders made ambitious pledges and commitments.
- A comprehensive "Pledging and Commitment Framework" was developed to guide these actions.

Significance of Africa Climate Summit 2023:-

- Despite having a small carbon footprint, Africa disproportionately bears the human toll of climate change
- The Summit will highlight the urgent need for regional and global action.
- The outcomes of the summit are critical for the African continent to arrive at a consensus and mobilize action in the upcoming 28th Conference of Parties (COP28).
- COP28 of the United Nations Framework Convention on Climate Change: is to be hosted in Dubai, United

Arab Emirates.

Theme and Focus Areas of Africa Climate Summit 2023:-

- Climate Action Financing.
- Green Growth Agenda for Africa. (Horn of Africa)
- Climate Action and Economic Development.
- Global Capital optimization.

2.3 Organisation for Economic Co-operation and Development (OECD)

Secretary General of the Organisation for Economic Co-operation and Development (OECD) Mathias Cormann arrived in New Delhi to attend the G20 Summit recently.

Background:-

European Council President Charles Michel also arrived to attend the G20 Summit.

About the Organisation for Economic Co-operation and Development (OECD):-

- Establishment: 1960.
- HQ: Paris, France.
- Objective: to shape policies that foster prosperity, equality, opportunity and well-being for all.

Historical Background:-

- The forerunner of the OECD was the Organization for European Economic Co-operation (OEEC).
- OEEC was formed to administer American and Canadian aid under the Marshall Plan for the reconstruction of Europe after World War II.
- The Convention transforming the OEEC into the OECD was signed in Paris in 1960 and entered into force

Members of OECD:-

- OECD currently has 38 member nations and the Member Countries are each represented by a delegation led by their ambassadors.
- The 38 Member Countries consist of: Australia, Austria, Belgium, Canada, Chile, Colombia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, South Korea, Latvia, Lithuania, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.
- India is a non-member economy with working relationships with the OECD.

Functions of OECD:-

- It is responsible for publishing economic reports, statistical databases, analyses, and forecasts on the outlook for economic growth worldwide. (OECD/G20 Inclusive Framework tax deal)
- The group analyzes the impact of social issues on economic growth and makes recommendations.
- It endeavours to eliminate bribery and other forms of financial crimes worldwide.
- It seeks to eliminate bribery and other financial crimes
- It also maintains a “blacklist” of nations that are considered uncooperative tax havens.

Reports:-

- OECD Economic Outlook
- OECD Communication Outlook
- OECD Internet Economy Outlook

2.4 End of Old Multilateralism – and the Beginning of a New Order

- Post-Cold War, the multilateralism is past its peak — at both the global and regional levels.
- Recent East Asia Summit in Jakarta and the G20 summit in Delhi highlight the deep and arguably irreversible crises in the old multilateral order.

About Multilateralism:

- The relationship between three or more groups of states is known as multilateralism.
- It consists of some qualitative principles that construct the character of an institution or arrangement.
- The principles are a commitment to the diffusion of reciprocity, indivisibility among participants on interest, and a system to settle disputes.
- The new multilateral world order is a term that refers to the emergence of new forms of cooperation and dialogue among different countries and regions in the 21st century.
- It is a response to the challenges and opportunities posed by globalization, climate change, pandemics, terrorism, and other issues that require collective action and shared solutions.

Post-Cold War Multilateralism:

- The end of the Cold War at the turn of the 1990s created favourable conditions for an intensive phase of multilateralism.
- Europe moved towards rapid regional economic integration and expansion under the banner of the European Union.
- In Asia, the Association of Southeast Asian Nations (ASEAN) provided the framework for intensifying regional economic and political cooperation.
- Regionalism in Europe and Asia was facilitated by the end of the great power rivalry in both continents.
- Russia was drawn into the Group of Seven (G7) led by Western countries, making it the G8.
- Moscow was also engaged in consultations with the NATO.
- In Asia, China became a close partner for the US on economic and political fronts.
- This, in turn, translated into new possibilities for cooperation among major powers on global issues — such as the proliferation of weapons of mass destruction, climate change, and pandemics.

Reasons behind Decline of Existing Multilateralism:

- Contradictions within the multilateral system: The multilateral system itself has faced internal contradictions and challenges.
- These internal disagreements and conflicting interests among member states have weakened the effectiveness of multilateral organizations and impeded consensus-building.
- Rise of alternative security forums: In response to China's expansionism, alternative security forums like the Quad, AUKUS, and trilateral compacts have emerged.
- These forums reflect a shift away from traditional multilateral institutions, raising questions about the continuing relevance and centrality of existing regional organizations like ASEAN.
- Changing perspectives of key players: The changing perspectives of key players, such as India, have also contributed to the decline of existing multilateralism.
- India's evolving view of the international order, shifting from concerns about a "unipolar Asia" dominated by China to a more proactive engagement with the United States and its allies, has altered the dynamics of multilateralism in the Indo-Pacific region.
- Rise of China and its expansionism: One of the primary reasons behind the decline of existing multilateralism is the rise of China as a global economic and military power.
- China's expansionist policies, both in Asia and globally, challenge the existing multilateral order.
- Its unilateral efforts to alter borders with neighbours and its assertive territorial expansionism have created tensions and destabilized regional and global institutions.
- Impacts of Russian actions: The Russian occupation and annexation of Ukraine's Crimea in 2014 (and ongoing war) marked a significant challenge to the post-Cold War security order, particularly in Europe.
- This event disrupted multilateralism by causing rifts and conflicts in the international community.

Salient features of India's new multilateral approach:

- Quad collaboration: At the Jakarta summit, Indian's PM emphasizes that the Quad complements ASEAN's efforts and promotes regional stability.
- The expansion and diversification of the existing multilateral institutions, such as the UN, the IMF, and the World Bank, to include more voices and perspectives from the developing world and the Global South.
- Focus on Re-globalisation: External Affairs Minister S Jaishankar advocates for a diversified, democratic globalisation, moving away from a China-centric production model.
- Collective responsibility: Despite challenges in multilateralism, India continues to seek collective solutions, focusing on diverse issues like modernising the global tax regime.
- Concerns of Global South: India prioritizes the concerns of the Global South in the G-20 agenda, aiming to enhance cooperation between developed and developing nations, rather than reviving old confrontational politics.

Role of India:

- Acting as central player: India is emerging as a pivotal figure in shaping both regional and global dynamics, highlighted by its active participation in forums like the Indo-Pacific Quadrilateral Forum.
- Evolution of G20 grouping: India is pushing for the G20 to address the concerns of the Global South, signalling its desire to play a more substantial role in global economic discussions.
- Shifting alliances: Historically aligned with Moscow and Beijing for a multipolar world, India's focus has shifted due to China's increasing assertiveness, leading it closer to nations like Australia, Japan, and the US.
- Embracing the Indo-Pacific: India has adopted the Indo-Pacific concept and rejuvenated the Quad alliance to counterbalance China's influence in the region.

Way Forward:

- As a hosting country for G20 presidency, India can use G20 summit as an opportunity to showcase its vision and achievements as a global leader, as well as to forge consensus on important issues such as climate change, sustainable development, health security, and digital transformation. It offers the perfect platform for India to infuse partner nations with foundational ideas and pave the way for the beginning of a new world order.

2.5 G20 Tourism and SDG Dashboard

The Ministry of Tourism in collaboration with the United Nations World Tourism Organization (UNWTO), unveiled the G20 Tourism and SDG Dashboard recently.

Background:-

- Union Tourism Minister G Kishan Reddy launched the dashboard in a virtual ceremony.
- The virtual launch witnessed participation from G20 member countries, invited countries, international organizations, various states and Union Territories, and industry stakeholders.

About G20 Tourism and SDG Dashboard:-



- Launched: 2023.
- Developed by: the Ministry of Tourism in collaboration with the United Nations World Tourism Organization (UNWTO).
- The G20 Tourism and SDG Dashboard showcases the best practices, case studies, and insights from G20 countries.
- These all are modeled for achieving the Sustainable Development Goals (SDGs). (Sustainable Development Goals (SDG) India Index)
- It serves as a comprehensive online public platform, amalgamating the collective knowledge of the G20 Tourism Working Group.
- It consolidates the GOA Roadmap, survey results, case studies, and best practices from G20 countries.
- It offers insights into sustainable tourism practices.
- It also provides a platform for knowledge exchange, collaboration, and growth.
- It offers a wealth of knowledge and showcases best practices, aimed at steering the tourism industry towards greater sustainability, resilience, and inclusivity.

Significance:-

- This dashboard is a lasting legacy of India's G20 Presidency.
- It reflects its dedication to global collaboration and sustainable growth in the global tourism industry.

2.6 India- USA Relations

Recently the US President arrived in New Delhi to attend the G-20 Summit and met Prime Minister Narendra Modi for a bilateral meeting.

Highlights of the bilateral meeting:

- **INDUS -X:** The leaders commended the India-U.S. Defence Acceleration Ecosystem (INDUS-X) team for establishing a robust collaboration agenda to harness the innovative work of the U.S. and Indian defence sectors to address shared security challenges.
- **UN Security Council seat:** US reaffirmed support for a reformed UN Security Council with India as a permanent member.
- **Initiative on Critical and Emerging Technology (iCET):** Both the countries intend to undertake a midterm review of iCET in September 2023 to continue to drive momentum toward the next annual iCET review, co-led by the National Security Advisors of both countries, in early 2024.
- **India-U.S. Global Challenges Institute:** The leaders welcomed the signing of an MoU between Indian universities, represented by the Council of Indian Institutes of Technology (IIT Council), and the Association of American Universities (AAU) to establish the India-U.S. Global Challenges Institute.
- **Technology Transfer:** The leaders commenced negotiations for a commercial agreement between GE Aerospace and Hindustan Aeronautical Limited (HAL) to manufacture GE F-414 jet engines in India.

About India- USA Relations:

Historical:

- During the Cold War, India pursued a non-aligned foreign policy and maintained a distance from both the US and the Soviet Union.
- In the early 1990s, India began to open up its markets to foreign investment, including from the US, and undertook significant economic reforms.
- This led to a gradual improvement in relations between the two countries.
- The two countries have also increased their defence ties, with the US becoming India's second-largest arms supplier after Russia.
- In recent decades, India's growing strategic importance as a counterweight to China has led to closer ties with the US, particularly in the security and defence domains.

Political:

- India has joined the US-led Indo-Pacific Economic Framework for Prosperity (IPEF).
- India-U.S. 2+2 Ministerial Dialogue: It is led by the heads of foreign and defence ministries of India and the U.S.
- Two successful rounds of this Dialogue have been held so far.
- India-U.S. Commercial Dialogue: The India-U.S. Commercial Dialogue is led by the Minister of Commerce and Industry (CIM) and the U.S. Secretary of Commerce.
- India – U.S. Economic and Financial Partnership: The India – U.S. Economic and Financial Partnership is led by the Finance Minister (FM) and the U.S. Secretary of the Treasury.

Trade and commerce:

- The U.S. has emerged as India's biggest trading partner in 2022-23 on account of increasing economic ties between the two countries.
- The bilateral trade has increased by 7.65% to USD 128.55 billion in 2022-23 as against USD 119.5 billion in 2021-22.
- Exports to the U.S. rose by 2.81% to USD 78.31 billion in 2022-23 as against USD 76.18 billion in 2021-22, while imports grew by about 16% to USD 50.24 billion.
- In 2021-22, India had a trade surplus of USD 32.8 billion with the US.
- The U.S. is the largest destination for India's merchandise exports, while it ranks as India's third-largest merchandise import supplier, after China and the European Union.

Defence Cooperation:

- Both have strong defence cooperation, which is based on the "New Framework for India US Defence Cooperation" that was renewed in 2015 for a period of ten years.
- Several defence agreements have been signed, such as the Logistics Exchange Memorandum of Association in 2016, the Communications Compatibility and Security Agreement in 2018, the Industrial Security Agreement in 2019, and the Basic Exchange and Cooperation Agreement in 2020.
- The two countries conduct a number of bilateral military exercises such as Yudh Abhyaas and Vajra Prahari, and also participate in defence exchanges to deepen their military-to-military cooperation.
- In 2019, the two countries conducted a tri-services exercise called Tiger Triumph.
- Another grouping in the Middle East – I2U2 involving India, Israel, UAE and the US is being termed as the new Quad along with the existing QUAD

Education partnership:

- It is an important pillar of India-US ties and both the countries share strong linkages and history of higher education collaborations.
- The United States Educational Foundation in India (USEFI) was set up after a bilateral agreement on education exchange was signed between India and the US on February 2, 1950

Increased diaspora:

- The number of Indians and Indian Americans in the U.S. is estimated at around 4 million, which accounts for almost 1% of the total U.S. population.
- Indian diaspora in America over the years have increased. It has contributed to income creation in the USA through knowledge-based employment and also to Indian economic growth through remittance.
- Growing financial and political clout of the affluent Asian Indian diaspora is noteworthy.

Challenges associated with the relations:

- Trade: Recently India and US confronted each other regarding tariffs and protectionist policies.
- US has continuously accused India of high tariffs and India have accused USA of restriction to US markets and high tariffs on Indian products.
- Intellectual Property Rights: US has continuously criticised India for its IPR policies. It has accused India of acting against Intellectual properties of major companies especially pharmaceutical over generic drugs.

- Continuous support to Pakistan: Although US has reduced support to Pakistan, it has still provided monetary support to Pakistan.
- In February 2016, USA intended to provide Pakistan eight nuclear-capable F-16 fighters and assorted military goods.
- Relations with Russia: India is all time friend of Russia while USA is its all-time rivalry.
- In 2018, India inked the historic agreement worth with Russia to procure four S-400 surface-to-air missile defence system ignoring America's CAATSA
- With she U.S. threatened India with sanctions over India's decision.
- Relations with Iran: India has continuously bought oil from Iran despite of US sanctions on Iran.
- The United States threatened India with sanctions over India's decision to buy oil from Iran.
- But recently it exempted India from sanctions that allowed India to buy oil from Iran.

Way Forward:

- Therefore, it is in the mutual interest for both India and USA to rise above differences and ensure continuous cooperation to establish a peaceful, progressive and multilateral world. The partnership between India and US is simply one of the most consequential in the world.

2.7 World Trade Organisation (WTO)

Recently, the World Trade Organisation (WTO) disputes between the US and India were resolved through Mutually Agreed Solutions.

Background:-

- With the decision to resolve six outstanding World Trade Organisation (WTO) disputes between the US and India through Mutually Agreed Solutions in June 2023, India has withdrawn additional duties on eight US-origin products, including apples, walnuts and almonds vide notification number 53/2023 (Custom).
- Additional duties of 20% each on apples and walnuts and Rs 20 per kg on Almonds were imposed on the US's products in 2019 over and above the Most Favoured Nation (MFN) duty as a retaliation to the US's state protectionist measure of increasing tariffs on certain steel and Aluminium products.
- These additional duties imposed by India on US-origin products have been withdrawn as the US agreed to provide market access to Steel and Aluminium products under the exclusion process.
- There is no reduction on the Most Favoured Nation (MFN) duty on apples, walnuts, and almonds, which still applies to all imported products, including US-origin products, at 50%, 100%, and Rs 100 per kg, respectively.
- Further, DGFT, vide its notification number 05/ 2023 dated 8 May 2023, made an amendment in import policy for Apples under ITC (HS) 08081000 by applying MIP (Minimum Import Price) of Rs 50 per Kg for imports from all countries except Bhutan.
- Therefore, this MIP will also apply to apples from the US and other countries (excluding Bhutan).
- This measure would protect against the dumping of low-quality apples and from any predatory pricing in the Indian market.

About WTO:-

- Established: 1995.
- HQ: Geneva, Switzerland.
- Members: 164 members.
- India is a member of WTO. (China's Developing Status at WTO)
- The WTO operates the global system of trade rules.
- It helps developing countries build their trade capacity.
- It also provides a forum for its members to negotiate trade agreements and resolve the trade problems they face with each other.

Historical Background:-

- It was established following the Marrakesh Agreement which was ratified on April 15, 1994.
- The General Agreement on Tariff and Trade was substituted by the Marrakesh Agreement.
- The GATT was only a set of rules and multilateral agreements and lacked institutional structure.
- The GATT 1947 was terminated and WTO preserved its provisions in the form of GATT 1994 and continues to govern trade in goods.
- It is the only global international organization dealing with the rules of trade between nations.

Functions of WTO:-

- Establishing and Enforcing Rules for International Trade
- Negotiating trade rules
- Overseeing WTO agreements
- Maintaining open trade
- Settling disputes
- Collaboration Between International Economic Institutions
- Safeguarding The Trading Interest of Developing Countries

2.8 Northern Sea Route

India and Russia have been exploring the use of the Northern Sea Route, and Eastern Maritime Corridor in recent times.

Background:-

- India and Russia discussed the possibility of exploring new transport corridors like the Northern Sea Route (NSR).
- Both sides also agreed that Indian seafarers will be trained on Polar and Arctic waters at the Russian Maritime Training Institute in Vladivostok, which is equipped with simulators.
- India is keen to collaborate on a partnership regarding the development of the NSR recognizing the potential it holds for enhanced connectivity and trade.

About Northern Sea Route:-



- Eastern and western regions of the Arctic Ocean are connected via the Northern Sea Route (NSR), sometimes known as the Northeast Passage (NEP).
- It is the shortest shipping route connecting Europe and the Asia-Pacific region.
- The route between Europe and Asia is just 13,000 km long, compared to the 21,000 km covered by the Suez Canal route, which reduces the travel duration from one month to less than two weeks.

- It passes through four seas of the Arctic Ocean.
- The route starts at the boundary between the Barents and Kara seas (Kara Strait) and concludes at the Bering Strait (Provideniya Bay).

Advantages:-

- The NSR offers potential distance savings of up to 50% compared to existing shipping lanes via Suez or Panama.
- The region may hold over 40 percent of the current global reserves of oil and gas.
- There may also be significant reserves of coal, zinc, and silver.

India's gains in NSR development:-

- Growing Cargo Traffic: NSR cargo traffic increased by about 73% during 2018-2022.
- Strategic Transit Route: India's geographical location and reliance on sea transportation make the NSR a crucial transit route. India – Russia Relations
- Geopolitics: India would like to complement China and Russia's potential collective influence over NSR.

2.9 India – Saudi Arabia Relations

Recently, India and Saudi Arabia have cooperated in various sectors such as energy, trade, and culture.

About India – Saudi Arabia Relations:

Political relations:

- The establishment of diplomatic relations in 1947 was followed by high-level visits from both sides.
- The historic visit of King Abdullah to India in 2006 was a watershed moment that resulted in the signing of the 'Delhi Declaration', imparting a fresh momentum to the bilateral relationship.
- Saudi Arabia and India signed the Riyadh Declaration to enhance the strategic partnership covering security, economic, defense, technology and political areas and joint combat of terrorism.

Economic Cooperation, Trade and Investment:

- India is the second largest trade partner of Saudi Arabia, while Saudi Arabia is the fourth largest trade partner of India.
- Saudi Arabia is currently India's second-largest supplier of crude oil (Iraq has been India's top supplier).
- India imports around 18% of its crude oil requirement and around 22% of its Liquefied Petroleum Gas (LPG) requirement from Saudi Arabia.
- India's imports from Saudi Arabia reached USD 34.01 billion and exports to Saudi Arabia were worth USD 8.76 billion.

Defense and security cooperation:

- AL – Mohed AL – Hindi is the maiden bilateral naval exercise between India and Saudi Arabia.
- Riyadh has largely shown an understanding of India's terrorism-related concerns, and has agreed to work with India in countering the global menace.

Cultural Relations

- India successfully participated as 'Guest of Honour' in the 32nd edition of the prestigious Saudi National Festival of Heritage and Culture in 2018.
- Yoga was announced as a 'sports activity' in Saudi Arabia.
- Haj pilgrimage is another important component of bilateral relations.

Indian Diaspora:

- The approximately 7 million strong Indian community is the largest expatriate community in the Kingdom.
- They send remittances of over US \$11 billion annually to India.

Challenges:

- The politics of the Middle East is complex and multidimensional so requires a collective and united effort.
- The Saudi Arabia-Turkey rivalry could create problems for India.
- Saudi Arabia-Iran Rivalry: India has close relations with both Saudi Arabia and Iran.
- However, India is yet to work out a way to balance its ties with Iran on the one hand and Saudi Arabia and the United States on the other.
- Hike in taxes: An astronomical hike in the 'expatriate dependent fee' or family tax, in Saudi Arabia is forcing thousands of Indians working in the kingdom to send their families back home.
- The Kafala system: The Kafala system requires all migrant workers to have a sponsor in the country where he or she is to work in order that a valid visa and residence permit may be issued.
- This practically places the migrant worker at the mercy of his or her employer, leading to his/her exploitation.

Way Forward:

- Economic Reform: Economic reform programs (Vision 2030) are underway in Saudi Arabia, for which it needs India's economic as well as technological assistance.
- Saudi Arabia plays an important role in India's energy security while India is a vital partner in Saudi Arabia's food security.
- Investments: Saudi investment of around \$100 billion is in the pipeline in areas ranging from energy, refining, petrochemicals and infrastructure to agriculture, minerals and mining.
- It is one of the largest consumers of hydrocarbons in the world and this makes India an attractive investment destination for the world.
- Countering Militias: Saudi Arabia appears to have limited experience in countering threats from groups like Houthi militias.
- This is an area where India's expertise in fighting such threats could be imparted to the Saudi side, by enhancing joint military training programs.

2.10 East Asia Summit (EAS) and its significance

Recently the Prime Minister attended the 18th East Asia Summit (EAS) was held in Jakarta.

Key highlights of the 18th East Asia Summit (EAS):

- Leaders' Declaration on ASEAN: At the 18th EAS, the Leaders' Declaration on ASEAN as an Epicentrum of Growth was adopted.
- It was discussed on building resilience against emerging challenges and future shocks through cooperation on enhancing energy security and food security, maintaining financial stability, and strengthening regional health architecture.
- Plan of Action (POA): The Plan of Action (POA) for the next five years outlines the priorities that include efforts on the mainstreaming and implementation of the ASEAN Outlook on the Indo-Pacific (AOIP).
- It lays emphasis on strengthening partnerships, through cross-sectoral collaborations that includes efforts in furthering the implementation of the 2030 Agenda for Sustainable Development.
- Meet of ASEAN and non-ASEAN states: The meet provided an opportunity for ASEAN member states and the eight non-ASEAN countries to exchange views on issues concerning the region and the world at large.

Significance of East Asia:

- Regional Security: Considering tension on the Korean Peninsula, South China and in the Taiwan Strait, among others, it is vital for Japan, China and South Korea to maintain a common stance and to share a common concern for security in the East Asian region.
- Economic benefit: It represents nearly 50 per cent of the world's population with 20 percent of global trade, and comprising 16 nations that are on a dynamic path of economic development.
- Global Implications: An East Asia community would play a big role in instilling a sense of responsibility in Asian countries and in leading them jointly in contributing to the resolution of global issues.

Challenges in the region:

- Regional challenges: While the EAS participating countries share a common perspective aimed at achieving peace and security in the Indo-Pacific, ongoing contestations like China with other countries issue limits cooperative and collaborative framework as envisaged originally.
- Complex geopolitical issues: Strengthening the EAS as a forum for dialogue and cooperation on a wide spectrum of strategic, political, and economic matters of common interest and concern, remains complex.
- This stems from the existing and ever-evolving multi-faceted threats and challenges which get compounded through the intense geo-political and geo-economic discourse being witnessed in the region.
- Concerns over the relevance: The deepening geo-political divide being witnessed today raises concern on the relevance of the EAS in addressing issues of human security challenges as a consequent of the socio-economic fallout from the COVID-19 and the ongoing Ukraine-Russia war.
- Hampering efficacy and effectiveness: The nature of the relations amongst the EAS participating countries, marked by confrontation and contestations, has had its impact on its efficacy and effectiveness.

Way Forward:

- It was an attempt at the 18th EAS to strengthen the efficacy and effectiveness of the institution by emphasising on an international community, built on cooperation without division and confrontation. The EAS promotes adherence to international law and a rules-based order in the region which includes respecting maritime rights and territorial integrity and working towards peaceful conflict resolution.

2.11 India-Canada Relations

The recent killing of pro-Khalistan leader and a Canadian citizen, Hardeep Singh Nijjar has caused diplomatic challenges in India-Canada Relations.

Background of the Issue:-

- Khalistan Tiger Force chief Hardeep Singh Nijjar, one of the most wanted terrorists in India, was shot dead by two unidentified men within the premises of a gurdwara in Canada Sunday night.
- Canadian Prime Minister Justin Trudeau recently made explosive allegations of a “potential link” between agents of the Government of India and the killing of a pro-Khalistan leader and Canadian citizen, Hardeep Singh Nijjar.
- Hardeep Singh Nijjar’s name had been included in the wanted list handed over by the then-Punjab CM Captain Amarinder Singh, to Canadian Prime Minister Justin Trudeau during the latter’s visit to India in 2018.
- The Khalistan issue has always plagued bilateral ties, from the 1980s to the last eight years of Trudeau’s term.
- But this time, Ottawa has ratcheted up the ante and New Delhi is watching the situation keeping in mind the complexity of the bilateral ties and the reputational cost on the global stage.

About India-Canada Relations:-

- India and Canada have a longstanding bilateral relationship based on shared democratic values, the multi-cultural, multi-ethnic, and multi-religious nature.
- 1947: India established diplomatic relations with Canada in 1947.
- 1951: Canada’s aid program to India began in 1951 and grew substantially under the Colombo Plan.
- Canada provided food aid, project financing, and technical assistance to India.
- 1974: deterioration of India-Canada relations due to India’s Smiling Buddha nuclear test.
- 1976: The Canadian government severed bilateral nuclear cooperation with both India and Pakistan in 1976 after claims that the fissionable material used to construct India’s first nuclear device had been obtained from the Canadian-supplied CIRUS nuclear research reactor.
- 1985: The bombing by Sikh separatists of Air India Flight 182 resulted in Canada and India maintaining a bilateral dialogue on anti-terrorism.
- 2015: The Prime Minister of India’s visit to Canada in April 2015 elevated the bilateral relationship to a

strategic partnership.

- In recent years, both countries have been working to enhance bilateral cooperation in several areas of mutual importance.

Significance:-

- Canada hosts one of the largest Indian diasporas in the world, numbering 16 lakh people of Indian origin.
- It accounts for more than 3 percent of the total Canadian population and 700,000 NRIs.
- At the Ministerial level, Canada and India enjoy a strategic partnership underpinned by Ministerial Dialogues on foreign policy, trade and investment, finance, and energy.
- At the official level, there are regular working groups that focus on counter-terrorism, security, agriculture, education, science, technology, etc.

Trade relations

- In 2021, India was Canada's 14th largest export market and 13th largest trading partner overall.
- India became the top source of foreign students studying in Canada — 2.3 lakh, according to 2022 data.
- India is a key partner as Canada strengthens its economic links to the Indo-Pacific under a new, comprehensive strategy for the region.

Challenges in India-Canada Relations:-

- Sikh extremism and the Presence of Sikh separatist groups in Canada.
- Concerns about the revival of the Khalistan movement.
- Sikh Diaspora's Influence on Canadian Politics
- Impediments for Trade: India's Complex labour laws; Market protectionism; Bureaucratic regulations.

Areas of Cooperation:-

- Politically, India and Canada share commonalities in Parliamentary structure and procedures.
- Commercial: Bilateral trade between India and Canada stands at over USD 6.4 billion in 2020. Negotiations for a Comprehensive Economic Partnership Agreement (CEPA).
- Nuclear Cooperation: Nuclear Cooperation Agreement (NCA) signed in 2010 by, the Joint Committee on Civil Nuclear Cooperation, restoration of nuclear cooperation.
- Security and Defense Collaboration: in international fora, mutual ship visits, Framework for Cooperation between India and Canada on Countering Terrorism in 2018
- People-to-People Ties
- Cultural Exchanges
- Cooperation during COVID-19 Pandemic.

3. Economy

3.1 Mera Bill Mera Adhikaar scheme

The invoice incentive scheme – Mera Bill Mera Adhikaar scheme began recently.

About Mera Bill Mera Adhikaar:-



- Launched: 1st September, 2023.
- Ministry: Ministry of Finance.
- Objective: to bring a cultural and behavioural change in the general public to 'Ask for a Bill' as their right and entitlement.
- Duration: This Pilot Scheme will run for a period of 12 months.

Salient Features of Mera Bill Mera Adhikaar:-

- This scheme is a Goods and Services Tax (GST) invoice incentive programme that offers cash incentives for uploading invoices.
- Invoice: a commercial document that itemizes and records a transaction between a seller and a buyer.
- It will initially be launched as a pilot in the States of Assam, Gujarat & Haryana, and UTs of Puducherry, Dadra Nagar Haveli and Daman and Diu.
- A monthly and quarterly draw of lots will be made, and winners will be eligible for cash reward prizes beginning from Rs 10,000 to up to Rs 1 crore.

Eligibility: –

- All residents of India will be eligible to participate in this Scheme irrespective of their State/UT.
- The invoice uploaded on the app should have the GSTIN of the seller, invoice number, amount paid, and tax amount. (GST Council)
- Minimum value of invoices: to be considered for a lucky draw is 200.
- Maximum value for invoices: A maximum of 25 invoices can be uploaded by an individual on the App/web portal in a month to be considered for the lucky draw.
- Mobile Application: Invoices can be uploaded on the Mobile Application 'Mera Bill Mera Adhikaar'.
- It is available on IOS and Android as well as on the web portal 'web.merabill.gst.gov.in'.

- Acknowledgement Reference Number (ARN): will be generated for each uploaded invoice, which will be used for the draw of prizes.

Prizes:-

- In this scheme, the government will select 800 people every month, who will get a reward of ten thousand rupees.
- In Bumper Draw, which will held quarterly, two people will get a reward of one crore rupees.
- Selection of Winner: Winning invoices will be picked by a method of random draw at regular intervals (monthly/quarterly).

Benefits of Mera Bill Mera Adhikaar:-

- It will help simplify the tax system of the country and end Inspector Raj.
- It will reduce the tax burden on the citizens.

3.2 United Nations Children’s Fund (UNICEF)

According to recent reports, released by the United Nations Children’s Fund (UNICEF), children in 48 African countries are at high risk of climate change impacts.

Background:-

- The report of the United Nations Children’s Fund (UNICEF) was released on September 1, 2023.
- Children in 48 out of 49 African countries assessed were categorized as at ‘high’ or ‘extremely high’ risk of climate change, the report said. (Horn of Africa)

About United Nations Children’s Fund (UNICEF):-

- Establishment: 1946.
- HQ: New York, USA.
- Historical Background: It was created in 1946 as the International Children’s Emergency Fund (ICEF) by the UN Relief Rehabilitation Administration to help children affected by World War II.
- Objective: to save children’s lives, defend their rights, and help them fulfill their potential, from early childhood through adolescence.
- It works to reach the most disadvantaged children and adolescents and to protect the rights of every child, everywhere.
- Its Executive Board is the governing body of UNICEF.
- It works in over 190 countries and territories with 7 regional offices
- It became a permanent part of the United Nations in 1953.
- It is mandated by the United Nations General Assembly.
- It is guided by the Convention on the Rights of the Child, 1989.
- 1965: It was awarded the Nobel Prize for Peace for the “promotion of brotherhood among the nations”.

3.3 Build Operate Transfer (BOT) model

Minister of Road Transport and Highways Nitin Gadkari recently suggested the revival of the Build Operate Transfer (BOT) model via smaller highway projects.

Background:-

- Minister of Road Transport and Highways said that the National Highways Authority of India (NHAI) and other road-building agencies should look at reviving the Build Operate Transfer (BOT) model by putting up projects costing less than Rs 1,000 crore for award through this route.
- The minister’s comments came amid a prolonged dearth of private investments in the sector caused much strain on the exchequer.

About Build Operate Transfer (BOT) model:-



- A build-operate-transfer (BOT) contract is a model used to finance large projects, typically infrastructure projects developed through public-private partnerships.
- They are normally large-scale, greenfield infrastructure projects that would otherwise be financed, built, and operated solely by the government.
- Under a build-operate-transfer (BOT) contract, an entity—usually a government—grants a concession to a private company to finance, build, and operate a project for a period of 20 to 30 years, hoping to earn a profit.
- After that period, the project is returned to the public entity that originally granted the concession.

Other commonly used PPP investment models in India:-

Build, Operate ,Least ,Transfer (BOLT):-

- In this approach, the government gives a concession to a private entity to build a facility (and possibly design it as well), own the facility, and lease the facility to the public sector.
- At the end of the lease period transfer the ownership of the facility to the government.

Hybrid Annuity Model (HAM):-

- The central government bears 40% of the project cost.
- The remaining amount is arranged by the developer.
- Engineering, Procurement and Construction Model (EPC)
- The EPC Model partnership requires the government to undertake the total funding of the project.
- The Private sector partner provides the engineering and construction requirements.

About the National Highways Authority of India (NHAI):-

- Establishment:
- Ministry: Ministry of Road Transport and Highways.
- NHAI is an autonomous agency of the Union Government, responsible for the management of a network of over 70,000 km of national highways in India.
- It is a statutory body.
- It was established through the National Highways Authority of India Act, 1988.
- 1995: It was formally made an autonomous body.
- It is responsible for the development, management, operation, and maintenance of National Highways.

3.4 National Payments Corporation of India (NPCI)

Recently, the National Payments Corporation of India (NPCI) launched a slew of new payment options on payment platforms UPI.

Background:-

- Reserve Bank of India (RBI) Governor Shaktikanta Das announced the launch of the products by the National Payments Corporation of India (NPCI) at the ongoing Global Fintech Festival in Mumbai.
- The latest offerings are aimed at creating an inclusive, resilient, and sustainable digital payments ecosystem and will help UPI achieve the target of 100 billion transactions per month.

About National Payments Corporation of India (NPCI):-

- Establishment:2008.
- HQ:
- It was established under the provisions of the Payment and Settlement Systems Act, 2007.
- Objective: to create a robust Payment and settlement Infrastructure in India.
- It is an umbrella organization for operating retail payments and settlement systems in India.
- It is an initiative of the Reserve Bank of India (RBI) and the Indian Banks' Association (IBA).
- It has been incorporated as a "Not for Profit" Company under the provisions of Section 25 of the Companies Act 1956 (now Section 8 of the Companies Act 2013), with an intention to provide infrastructure to the entire Banking system in India for physical as well as electronic payment and settlement systems.

Important Services Offered by NPCI:-

- Bharat Bill Payment Interface (BBPI): It was developed by the NPCI to help the retail payments sector.
- National Automated Clearing House (NACH): an offline web-based system for bulk push and pull transactions which provides an electronic mandate platform to register mandates facilitating paperless collection processes for corporates and banks.
- Immediate Payment Service (IMPS): It gives the option to transfer funds immediately and is available at any given time.
- Aadhaar-enabled Payment System (AePS): It has been introduced to access funds at the doorstep & and drive financial inclusion in India.
- RuPay: It is an affordable card and can be issued as credit cards, debit cards, and prepaid cards. (RuPay Debit Cards and BHIM UPI)
- USSD Services: It was introduced by the NPCI to allow individuals to make banking solutions without the need for the internet or smartphones.
- BHIM: It uses UPI to complete payment transfers. No smartphone is required to transfer funds via BHIM.
- United Payments Interface (UPI): It allows you to transfer funds from your smartphone. Money is transferred directly from one bank to another. (India's UPI Push)

3.5 Indian Green Building Council (IGBC)

Vijayawada Railway Station was certified with a Platinum rating by the Indian Green Building Council (IGBC) recently.

Background:-

- In the recertification process this year, Vijayawada railway station outperformed and immensely improvised its amenities in almost all aspects compared to the 2019 Gold Standard Rating and clinched the Platinum standard IGBC Rating.

About Indian Green Building Council (IGBC):-

- Establishment:2001.
- HQ:
- The Indian Green Building Council (IGBC) is a part of the Confederation of Indian Industry (CII).
- Vision: To enable a sustainable built environment for all and facilitate India to be one of the global leaders in the sustainable built environment by 2025.
- IGBC is India's Premier certification body.

- It is also among the 5 countries that are on the board of the World Green Building Council, discussing global issues at COP and similar global platforms. (Green Buildings Need & Benefits)
- Green building movement: It is a Pan India movement with over 10,930 projects with a green footprint of over 10.26 billion sq. ft.
- IGBC is working closely with the Government of India on green building projects for more than 1000 projects across the country.
- Today, more than 90% of green buildings in the country are being facilitated by IGBC and more than 3,480 projects are certified & and fully operational.
- IGBC-rated green projects are encouraged by Central and State government incentives in 12 Indian states.
- IGBC is National by Choice and Global in Performance.
- All the stakeholders of the construction industry comprising architects, developers, product manufacturers, corporate, Government, academia and nodal agencies participate in the council activities.
- The council also closely works with several State Governments, the Central Government, the World Green Building Council, and bilateral multi-lateral agencies in promoting green building concepts in the country.

Services offered:-

- Developing new green building rating programmes
- Certification services and green building training programmes.
- Organizing Green Building Congress which is an annual flagship event on green buildings.

3.6 Measuring unemployment in India

According to the Periodic Labour Force Survey (PLFS), India's unemployment rate was 6.1% in 2017 (the highest ever recorded) and the PLFS of 2021-22 showed unemployment reducing to 4.1%.

About Unemployment:

- According to the International Labour Organisation (ILO), an unemployed person is a person aged 15 or over who simultaneously meets three conditions
- Unemployment is being out of a job.
- Being available to take a job.
- Actively engaged in searching for a job.

Trends in unemployment rates in India:

Table 1: The unemployment rates as per the Periodic Labour Force Survey

	UPSS			CWS		
	Rural	Urban	Aggregate	Rural	Urban	Aggregate
2017-18	5.3%	7.8%	6.1%	8.5%	9.6%	8.9%
2018-19	5%	7.7%	5.8%	8.4%	9.5%	8.8%
2019-20	4%	7%	4.8%	7.9%	11%	8.8%
2020-21	3.3%	6.7%	4.2%	6.5%	10%	7.5%
2021-22	3.3%	6.3%	4.1%	6%	8.3%	6.6%

Measuring unemployment in India:

- Usual Principal and Subsidiary Status (UPSS): This method focuses on an individual's primary economic activity over the course of a year.
- It considers an individual employed if they spent a relatively long time in economic activity during the previous year, even if they were unemployed for a significant portion of the year.
- This approach may lead to lower unemployment rates because it considers longer-term work patterns.
- Current Weekly Status (CWS): CWS, on the other hand, adopts a shorter reference period of one week.
- An individual is considered employed if they worked for at least one hour on at least one day during the

seven days preceding the survey.

- This method is more sensitive to short-term employment fluctuations and may result in higher unemployment rates.
- Informal Economy: The definitions used in India are often tailored to capture the informal economy, where employment is characterized by irregular and casual work.
- This informal sector is a significant part of the Indian labour market, and traditional unemployment measures used in developed economies may not accurately reflect the employment dynamics in this context.

Reasons for unemployment in India:

- Large population: The number of job seekers often exceeds the available job opportunities.
- Inadequate economic growth: Slow economic growth relative to the population growth rate means that the economy cannot create enough jobs to absorb the increasing workforce.
- Lack of vocational skills and education: Many job seekers in India lack the necessary vocational skills or have low educational qualifications, making them less competitive in the job market.
- Nearly 93% of the population in India did not receive any vocational or technical training, according to Periodic Labour Force Survey (PLFS) 2017-18.
- Lack of employability: According to India Skills Report (ISR), less than half of the Indian graduates are employable.
- In 2021, as many as 45.9 per cent of graduates are employable, a decline from 46.21 per cent in 2020 and 47.38 per cent in 2010.
- Inadequate attention to small and medium enterprises (SMEs): SMEs are more labor intensive than that of large firms.
- However, big companies remain the main beneficiaries of the fiscal policy of the government.
- Agriculture as a seasonal occupation: Agriculture, which still employs a significant portion of the workforce, provides seasonal employment.
- Farmers and agricultural laborers often face unemployment during non-harvest seasons.
- Ineffective economic planning: A lack of comprehensive economic planning and policy measures to address the gap between labor supply and demand can result in unemployment.

Impacts of unemployment in India:

- Poverty: Unemployment can indeed push individuals and families into poverty.
- This not only affects their living standards but can also have intergenerational consequences as children growing up in impoverished households may face limited opportunities.
- Social unrest: High levels of unemployment can lead to social unrest and protests.
- When a large segment of the population is without jobs and opportunities, frustration and discontent can build up, potentially resulting in civil unrest and protests. This can disrupt the social fabric and stability of a nation.
- Mental health issues: Prolonged unemployment can take a toll on individuals' mental health.
- The stress and anxiety of not being able to find work, coupled with the social stigma often associated with unemployment, can lead to mental health problems such as depression, anxiety, and a loss of self-esteem.
- Economic loss: Unemployment results in an economic loss for a country.
- When people are not employed, they are not contributing to the country's production and GDP.
- This can lead to lower economic growth and reduced overall prosperity.
- Reduced consumer spending: Unemployed individuals have less disposable income, which in turn leads to reduced consumer spending.
- This decrease in consumer demand can negatively affect businesses, leading to lower sales, layoffs, and potentially a vicious cycle of economic downturn.

Steps taken to address unemployment by the government:

- Atma Nirbhar Bharat Package: The government announced the Aatmanirbhar Bharat package to stimulate business and mitigate the impact of COVID-19.

- It includes various long-term schemes and policies for self-reliance and employment opportunities.
- Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS): Statutory guaranteed 100 days employment for an unskilled worker in rural areas.
- Startup India: The Startup India initiative is designed to encourage entrepreneurship and support the growth of startups.
- By fostering innovation and providing financial incentives, regulatory support, and mentorship, this program aims to create jobs and stimulate economic growth through the startup ecosystem.
- Make in India: The Make in India campaign promotes manufacturing and aims to transform India into a global manufacturing hub. By attracting both domestic and foreign investments in manufacturing, it seeks to create job opportunities in the industrial sector and boost economic growth.
- National Skill Development Mission: It was set up in November 2014 to drive the 'Skill India' agenda in a 'Mission Mode' in order to converge the existing skill training initiatives and combine scale and quality of skilling efforts, with speed.

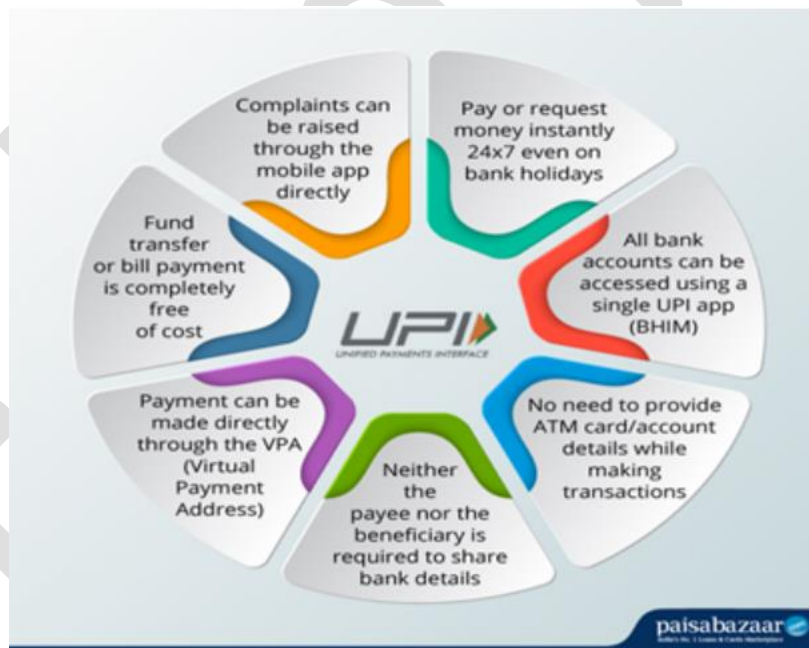
3.7 UPI-ATM

Recently, India's first UPI-ATM was unveiled.

Background:-

- India's first UPI-ATM was launched recently as a White Label ATM (WLA) by Hitachi Payment Services in collaboration with the National Payments Corporation of India (NPCI) in order to enable "seamless cash withdrawals".
- It offers an experience that allows customers of certain banks to enjoy "QR-based cashless withdrawals".

About UPI-ATM:-



- The UPI-ATM service is also known as Interoperable Cardless Cash Withdrawal (ICCW).
- It offers a convenient way for customers of participating banks who are using UPI to withdraw cash from any ATM that supports UPI-ATM functionality, without the need for a physical card.
- India's first UPI-ATM was launched recently as a White Label ATM (WLA) by Hitachi Payment Services in collaboration with the National Payments Corporation of India (NPCI). (UPI and NPCI Regulation)

Working Mechanism:-

- When a customer selects the 'UPI cash withdrawal' option at the ATM, they will be prompted to enter the desired withdrawal amount.

- Once the amount is entered, a unique and secure dynamic QR code will appear on the ATM screen.
- To complete the transaction and obtain cash from the ATM, the customer simply needs to scan this QR code using any UPI app and authorize the transaction with their UPI PIN on their mobile device.

Features of UPI-ATM

- Compatible with various systems.
- Transactions without the need for a physical card.
- Transaction limit of up to ₹10,000 per transaction, aligned with existing UPI daily limits and issuer bank's UPI-ATM transaction limits.
- Allows cash withdrawals from multiple accounts via the UPI app.

Benefits:-

- It will eliminate the need to carry physical ATM cards.
- It allows users to obtain cash from multiple accounts using the UPI app.
- It will prevent issues such as card skimming.
- Card skimming: a type of financial fraud where devices are installed at ATMs or point-of-sales terminals to gather card information such as PIN and card number to siphon off cash.

3.8 G20 New Delhi Declaration

The Group of Twenty (G20) recently adopted the G20 New Delhi Leader's Declaration.

Background:-

- The New Delhi Leader's Declaration was adopted on September 9, 2023.
- The Countries committed to, accelerating their actions to address environmental crises and challenges, including climate change.

About G20 New Delhi Leader's Declaration:-

- The New Delhi Leader's Declaration was adopted with consensus on a number of issues.
- These include sustainable development goals (SDG), climate finance, energy transitions, using and restoring natural ecosystems, harnessing and preserving ocean-based economy, plastic pollution, reducing disaster risk, and building resilient infrastructure. (SDG India)
- In the declaration under the Green Development Pact for a Sustainable Future, the countries have committed to "urgently accelerate actions to address environmental crises and challenges, including climate change".
- Paris Agreement: One of the aims of the declaration is "to tackle climate change by strengthening the full and effective implementation of the Paris Agreement and its temperature goal.
- This reflects equity and the principle of common but differentiated responsibilities and respective capabilities (CBDR).
- The inclusion of the principles of CBDR is interesting as some developed G20 countries such as the United States have been averse to the usage.
- The G20 members also cited the findings of the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Synthesis Report.
- It stated that Global greenhouse gas (GHG) emissions are projected to peak between 2020 and at the latest before 2025 in global modeled pathways that limit warming to 1.5°C with no or limited overshoot and in those that limit warming to 2°C and assume immediate action. (Mitigating Climate Change)
- The G20 members also highlighted the macroeconomic risks stemming from climate change and transition pathways.
- The G20 countries also noted the institutionalization of the Disaster Risk Reduction Working Group under the presidency of India, which catalyzed efforts toward disaster risk reduction.
- The document also talks about accelerating progress on early warning and early action through strengthening national and local capacities, innovative financing tools, private sector investments, and

knowledge sharing.

- The members supported the United Nations initiatives such as the Global Platform for DRR and the Coalition for Disaster Resilient Infrastructure in “furtherance of such collaboration and sharing”.

Need for Fintech Self-Regulatory Organizations (SROs)

- The Reserve Bank of India (RBI) Governor recently urged fintech entities to establish Self-Regulatory Organizations (SROs) in the rapidly evolving fintech sector,

About Fintech Self-Regulatory Organizations (SROs):

- Financial technology or Fintech refers to innovative technologies designed to enhance and automate the delivery of financial services.
- Fintech encompasses technological advancements across various financial sectors, including retail banking, investments, and decentralized cryptocurrencies like DeFi, with a focus on improving financial literacy and education.
- An SRO is a non-governmental entity responsible for creating and enforcing industry-specific rules and standards.
- SROs prioritize safeguarding consumer interests, promoting ethical conduct, ensuring equality, and nurturing professionalism.
- They collaborate with industry stakeholders to formulate and administer regulations.

Functions of a Self-Regulatory Organization (SRO):

- Acts as communication channel: SROs serve as a bridge between their member organizations and regulatory authorities such as the RBI.
- They facilitate communication, cooperation, and collaboration between industry participants and regulators.
- Establishing standards: One of the primary functions of an SRO is to set and enforce industry standards and minimum benchmarks.
- Standardization ensures consistency and fairness within the industry.
- Training and awareness: SROs are often responsible for providing training and awareness programs to their member organizations.
- This helps enhance the knowledge and skills of employees and industry professionals, ensuring that they stay up-to-date with industry best practices and regulatory requirements.
- Grievance redressal: When disputes or non-compliance issues arise among member organizations, these mechanisms help address and resolve such conflicts in a fair and efficient manner.
- This contributes to the smooth functioning of the industry and helps maintain trust among stakeholders.

Significance of SROs:

- Evolution of industry best practices: Fintech companies operate in a rapidly evolving landscape, and the industry needs to adapt and evolve its practices.
- The RBI recognizes the need for fintech’s to establish and follow industry best practices that align with the legal and regulatory framework of the country.
- This includes adhering to standards that ensure the responsible and ethical conduct of business.
- Preventing unethical selling: Mis-selling refers to the unethical or deceptive practices of selling financial products or services to customers.
- The RBI wants fintech’s to set standards that prevent mis-selling and ensure that products and services are marketed and sold transparently, without misleading or harming customers.
- Privacy protection norms: FinTech’s handle sensitive customer data, and data privacy and protection have become paramount concerns globally.
- RBI expects fintech companies to establish robust privacy and data protection norms that safeguard customer information and comply with the relevant data protection laws.
- Transparency of Pricing: Transparency in pricing is essential for consumers to make informed decisions.
- Fintech companies are expected to be transparent in their pricing structures, ensuring that customers

have clear information about the costs and charges associated with the products or services they offer.

Concerns related to regulation of FinTech's in India:

- Regulation: It is a major problem in the emerging world of FinTech, especially
- Due to the diversity of offerings in FinTech, it is difficult to formulate a single and comprehensive approach to these problems.
- In most countries, they are unregulated and have become fertile ground for scams and frauds.
- Uncertainty in the business: uncertainty in the FinTech sector is making things complicated for both FinTech service providers and consumers.
- The absence of an overarching regulatory framework for FinTech's have created multiple points of ambiguity in the system for companies, investors and consumers.
- Unethical practices: Being away from the radar of the regulator, a number of unethical practices in lending have also been reported.
- Brutal collection methods, opaque lending practices, mis-selling of products, customer harassment, etc. are some of the instances.

Way Forward:

- With the rising fintech sector in India, SROs emerge as indispensable entities, shaping industry behavior, promoting ethical conduct, and safeguarding consumer interests. Their role as industry experts and watchdogs helps create a more transparent, trustworthy, and well-regulated environment for all stakeholders.

3.9 Bureau of Indian Standards (BIS)

The Bureau of Indian Standards (BIS) recently, reached 2.4 lakh Gram Panchayats to create awareness and promote compliance with Indian standards.

Background:-

- The initiative aims to enhance the overall quality and safety of government programs and schemes implemented at the village level.

About the Bureau of Indian Standards (BIS):-

- Establishment: 1986.
- Ministry: Ministry of Consumer Affairs, Food & Public Distribution.
- HQ: New Delhi.
- The Bureau of Indian Standards (BIS) was established under the BIS Act, 1986 for the harmonious development of the activities of standardization, marking, and quality certification of goods and for matters connected therewith or incidental thereto.
- Objectives: harmonious development of the activities of standardization, marking, and quality certification of goods and for matters connected therewith or incidental thereto.
- BIS is the National Standard Body of India.

Historical Background:-

- It was formerly the Indian Standards Institution (ISI), set up under the Resolution of the Department of Industries and Supplies in 1946.
- The ISI was registered under the Societies Registration Act, of 1860.
- A new Bureau of Indian Standards Act, 2016 which was notified on 22nd March 2016, has been brought into force with effect from 12 October 2017.
- It reinforces the activities of BIS with respect to standardization and certification of goods, articles, processes, systems, and services.

Composition:-

- President, Ex-officio: Hon'ble Minister for Consumer Affairs, Food and Public Distribution, Government of India.
- Vice President, Ex-officio: Hon'ble Minister of State for Consumer Affairs, Food and Public Distribution, Government of India.

Functions:-**BIS is involved in various activities as given below:-**

- Standards Formulation
- Product Certification Scheme
- Compulsory Registration Scheme
- Foreign Manufacturers Certification Scheme
- Hall Marking Scheme
- Laboratory Services
- Laboratory Recognition Scheme
- Sale of Indian Standards
- Consumer Affairs Activities
- Promotional Activities
- Training Services, National and international level
- Information Services

3.10 Kisan Credit Card (KCC)

The Union Minister of Fisheries, Animal Husbandry and Dairying, chaired a National KCC Conference recently, to boost Kisan Credit Card (KCC) saturation among animal husbandry and dairy farmers.

Background:-

- The government in 2018-19 extended the Kisan Credit Card (KCC) facility to fisheries and animal husbandry farmers to help them meet their working capital requirements.
- The Ministry of Fisheries, Animal Husbandry and Dairying in association with the Department of Financial Services, has been organizing various campaigns since June 2020 to provide Kisan Credit Card facilities to all eligible Animal Husbandry and Fishery farmers.
- More than 50,000 animal husbandry farmers virtually attended through 1,000 common service centers across the country.

About Kisan Credit Card (KCC):-

- Ministry: Ministry of Fisheries, Animal Husbandry and Dairying.

Historical Background:-

- The scheme was introduced in 1998 for providing adequate and timely credit support from the banking system, under a single window and simplified procedure to the farmers.
- The scheme was further extended for the investment credit requirement of farmers viz. allied and non-farm activities in the year 2004.
- In the Budget-2018-19, the government announced the extension of the facility of Kisan Credit Card (KCC) to fisheries and animal husbandry farmers to help them meet their working capital needs.

Objectives:-

- To meet the short-term credit requirement for cultivation.
- To manage post-harvest expenses.
- To meet the consumption requirement of the farmer's household.

Implementing Agencies:-

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

Salient Features of Kisan Credit Card:-

- The KCC offers a number of features, including an ATM-enabled RuPay Card, one-time documentation, built-in cost escalation in the limit, and any number of withdrawals within the limit.
- In 2004, the program's eligibility was expanded to include farmers' needs for investment credit for non-farm and related activities. (Procurement Reforms)
- KCC provides for post-harvest expenses, produce marketing loans, household consumption needs for farmers, etc.
- The repayment period is decided on the basis of the harvesting of the crop and its marketing period.
- The maximum limit for a short-term agriculture loan is up to 1 year and for a long-term loan is 5 years.
- Moreover, banks can extend the tenure/duration of the loan at their discretion.
- To ensure the availability of agricultural credit at a reasonable cost of 7% per annum to farmers.
- The government of India implements an interest subvention scheme of 2% for short-term crop loans up to Rs. 3 lakh.
- In addition, the GOI provides interest subvention of 2% and a prompt repayment incentive of 3% to the farmers.
- Farmers are charged a simple interest rate when they make prompt payments.
- Compound interest is charged when cardholders fail to make timely payments.

Benefits:-

- The Interest rate offered on the loan may go as low as 2.00%.
- Banks will not seek security on loans up to Rs. 1.60 lakh.
- Crop insurance coverage against a variety of calamities is given to the users.
- Farmer is provided insurance coverage against permanent disability, death, and other risks is also provided to the farmer.

3.11 India's of Food Security

Despite being the fastest growing large economy, India is facing the alarming issue of food-price inflation as it can be seen on the affordability of a healthy diet for a significant portion of the population.

Highlights of alarming findings:

- The 'State of Food Security and Nutrition in the World' of the Food and Agriculture Organization (FAO) estimates the proportion of the population across countries unable to afford a healthy diet.
- An estimated 74% of the population cannot afford a healthy diet.
- Implied Reduction in Purchasing Power: It would be reasonable to expect that food consumption has been impacted.
- Food prices in India have been steadily increasing since 2019, with annual inflation exceeding 11% in July 2023, the highest in a decade.
- Rise in the Prevalence of Anaemia: As per latest National Family Health Survey (undertaken over 2019-21), over 50% of adult women were estimated to be anaemic.
- Ineffective Macroeconomic policies: It is criticised that the effectiveness of macroeconomic policies, particularly the Reserve Bank of India's approach to controlling inflation through measures like inflation targeting are ineffective in addressing food inflation, which is largely driven by supply-side factors.

Significance of Food security:

- Promotes health and nutrition: Food security improves the health and well-being of individuals by

preventing malnutrition and its associated health problems, such as stunting, cognitive impairment, and disease susceptibility.

- Malnutrition is responsible for the death of 3.1 million children a year, which is nearly half of all deaths in children under the age of 5.
- Economic and social stability: Food security enhances the economic and social stability of individuals and nations by enabling them to be more productive, generate income, and participate in trade.
- A study by the World Bank estimated that the global cost of undernutrition in terms of lost productivity and human capital was USD 3.5 trillion per year.
- A report by the United Nations found that food insecurity was a key factor in 58% of the conflicts that occurred between 2017 and 2019.
- Reduced poverty and hunger: Food security contributes to poverty reduction by allowing people to afford and access nutritious food and invest in other essential needs, such as education and healthcare.
- These can help them escape the cycle of poverty.
- National Security: Food security strengthens national security by ensuring a reliable food supply that is not dependent on external factors, such as global food prices or supply chain disruptions.
- Food insecurity can make nations vulnerable to these factors and compromise their sovereignty.
- Towards sustainable development: Food security advances sustainable development by achieving one of its main goals (Goal 2: Zero Hunger) and supporting other related goals, such as poverty reduction, good health, gender equality, and environmental sustainability.

Learning from the green revolution:

- India has a rich history of the Green Revolution, which took place in the 1960s.
- The government launched a supply-side strategy by equipping farmers with high-yielding seeds, affordable credit, and guaranteed prices through procurement.
- This endeavour achieved remarkable success.
- Within a short span, India no longer relied on food imports.
- It facilitated India's aspiration for self-sufficiency.
- However, there were some mistakes at the level of strategy.
- There was excessive use of chemical fertilizers that led to soil degradation.
- There was also an overemphasis on procurement prices rather than boosting productivity to enhance farm incomes. It contributes to inflation.
- The policy predominantly concentrated on cereals rather than pulses, a primary source of protein for most Indians.

Causes of Food insecurity:

- Russia-Ukraine War: Russia-Ukraine war has disrupted the Global supply chain following trade-related policies imposed by countries have surged.
- The global food crisis has been partially made worse by the growing number of food trade restrictions put in place by countries with a goal of increasing domestic supply and reducing prices.
- Domestic Inflation: Domestic food Inflation in many countries have added fuel to the fire and further aggravated the problem of food insecurity in the world.
- For Example, India has imposed a ban on wheat and rice exports to support its domestic population.
- Climate Variability and Extremes: Climate change has affected the availability and quality of water, land, and biodiversity, which are essential for food production.
- It has also altered the patterns and intensity of pests, diseases, and natural disasters, which has reduced crop yields and livestock productivity.
- According to the Global Report on Food Crises, weather and climate extremes were the primary driver of acute food insecurity in 12 countries in 2021, affecting nearly 57 million people.
- Economic Slowdowns and Downturns: They have reduced the income and employment opportunities of poor and marginalized people, who have spent a large share of their income on food.
- Economic shocks have also affected the supply and demand of food, leading to higher food prices and lower food quality.

Way Forward: Suggestive measures

- Increased agriculture Expenditure: Review and optimize public spending on irrigation for efficiency.
- Research Institute Revival: India's network of public agricultural research institutes needs to be energized to resume the sterling role they had played in the 1960s.
- Revival of the role of the gram sevak in the village, playing a crucial role in the dissemination of best practices.
- Increase of protein based crop production: Various initiatives should be dovetailed into a programme for the manifold increase of protein production.
- Develop a spirit of cooperative federalism: States are asked to play their part to enhance agricultural productivity rather than relying on food allocations to their Public Distribution System from the central pool.
- Focus on permanent access: In order to ensure that all Indians have permanent access to a healthy diet, no approach consistent with ecological security must be off the table.
- Intervention on the supply side: It is necessary to intervene on the supply side to ensure that food is produced at a steady price by raising the yield on land.
- Lowering of food prices: Need to focus on the specific goal of lowering the cost of producing food.
- Multidimensional approach: Need to extend irrigation to 100% of the net sown area, an end to restrictions on leasing of land, a quickening of agricultural research and the re-institution of extension.

3.12 World Trade Report 2023

The onset of the Ukraine war has started fragmenting world trade as per the recent World Trade Report 2023.

About World Trade Report 2023:-

- Launched: 12 September 2023.
- Published by: WTO. (India Challenges WTO verdict on sugar)
- It emphasizes policy goals beyond trade efficiency, including peace, security, poverty reduction, and sustainability.
- It features findings on how re-globalization or increased international cooperation and broader integration can support security, inclusiveness, and environmental sustainability.

Key Highlights:-

- The report addresses the shift in the narrative around globalization.
- It emphasizes policy goals beyond trade efficiency, including peace, security, poverty reduction, and sustainability.
- Re-globalization: The report advocates for "re-globalization," expanding trade integration to more economies, people, and issues.
- Reorientation of Trade
- It states reorientation of Trade Trade is gradually aligning along geopolitical lines.
- It states Trade flows within hypothetical geopolitical "blocs" are growing faster than those between them, indicating a shift towards friend-shoring.
- Geopolitical Shifts
- It states that Geopolitical tensions, the Ukraine conflict, and the rise of China have impacted global trade dynamics.
- It states COVID-19 pandemic highlighted the importance of resilient supply chains.
- It states that despite challenges, bilateral trade between China and the United States reached record highs. (China's Developing Status at WTO)
- Inclusiveness: It states inclusiveness Trade integration has lifted millions out of poverty.
- Sustainability: It states Sustainability Trade can contribute to sustainability by providing access to green technologies.

3.13 Business Responsibility and Sustainability Reporting (BRSR)

Indian Institute of Corporate Affairs (IICA) recently, organized a workshop on Business Responsibility and Sustainability Reporting (BRSR).

Background:-

- The Indian Institute of Corporate Affairs (IICA), organized a workshop on Business Responsibility and Sustainability Reporting (BRSR) in collaboration with UNICEF and the National Stock Exchange at the NSE premises in Mumbai on September 12, 2023.
- The workshop aimed to provide a comprehensive understanding of the BRSR framework, which is based on the nine principles of the National Guidelines for Responsible Business Conduct (NGRBC).

About Business Responsibility and Sustainability Reporting (BRSR):-

- The BRSR framework is a mandatory disclosure mechanism for the top 1000 listed companies or businesses to report their performance on environmental, social, and governance (ESG) aspects.
- It demonstrates their commitment to responsible business practices.
- It will be applicable to the top 1000 listed entities (by market capitalization), for reporting on a voluntary basis for FY 2021 – 22 and on a mandatory basis from FY 2022 – 23.
- It includes:-
- Sustainability Reporting: disclosure and communication of environmental, social, and governance (ESG) goals.
- It is intended to have quantitative and standardized disclosures on ESG parameters to enable comparability across companies, sectors, and time.
- Environmental criteria: consider how a company performs as a steward of nature.
- Social criteria: examine how it manages relationships with employees, suppliers, customers, and the communities where it operates.
- Governance: deals with a company's leadership, executive pay, audits, internal controls, and shareholder rights.
- The listed entities already preparing and disclosing sustainability reports based on internationally accepted frameworks (such as GRI, SASB, TCFD, or Integrated Reporting)

Significance:-

- Such disclosures will be helpful for investors to make better investment decisions.
- It shall also enable companies to engage more meaningfully with their stakeholders, by encouraging them to look beyond financials and social and environmental impacts.

3.14 Gender Responsive Budgeting

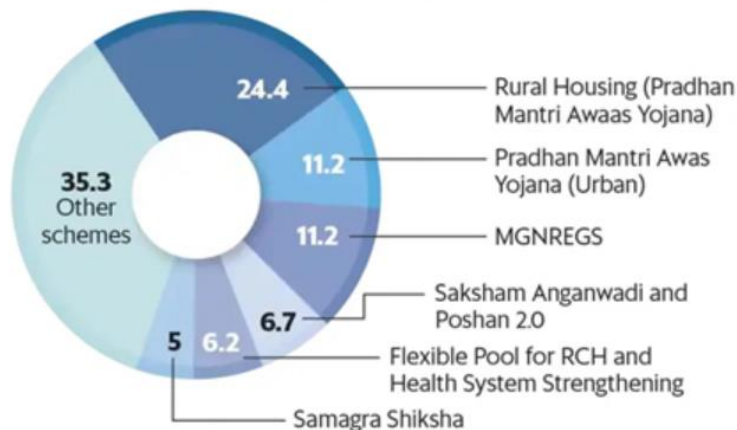
Recently UNICEF India representative Cynthia McCaffrey has said the country is being looked upon as a leader in child and gender-responsive budgeting, especially in South Asia.

About Gender Responsive Budgeting (GRB):

- Gender budgeting is a fiscal strategy to achieve equality between women and men by focusing on how public resources are collected and spent.
- Gender Responsive Budgeting initiatives can help to close the gender gaps, ensuring that public money is raised and spent more effectively.

India's Gender Responsive Budgeting:

Share (%) of top schemes in gender budget, 2023-24

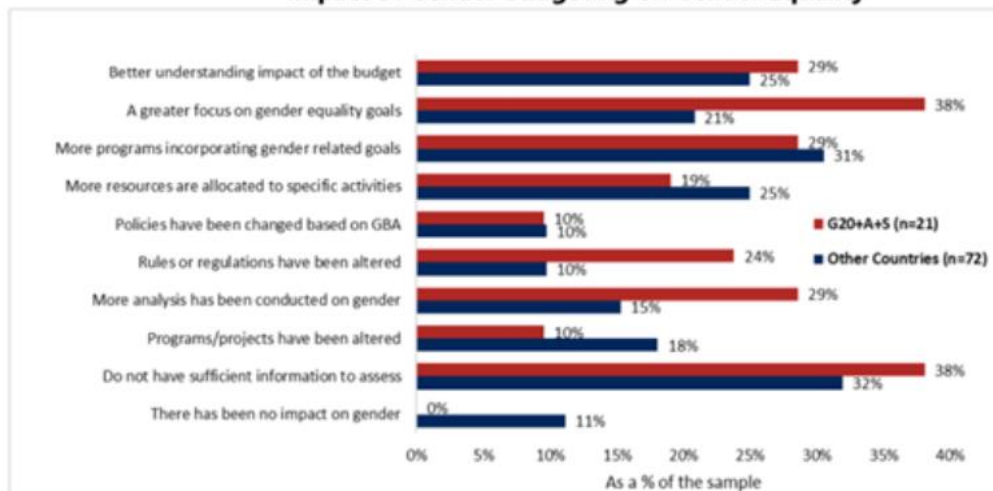


- GRB began in India in 2005-2006 as a fiscal innovation, every year since then the Ministry of Finance has been publishing “Gender Budget Statements” along with the Union Budget.
- In 2010, the Planning Commission clarified that in place of the Women Component Plan, the Ministry of Finance and MoWCD should adopt Gender Responsive Budgeting or Gender Budgeting only.
- The ‘Gender Budgeting Handbook, 2015’ released by the Ministry of Women and Child Development notes that Gender Budgeting is a tool for gender mainstreaming.
- In the 2023-24 Union budget, the Finance Minister emphasised ‘Nari-Shakti’ (woman power) and shifted the focus from women’s development to women-led development.

Significance of Gender Responsive Budgeting:

- Achievement gender equity and equality: The Constitution of India not only grants equality to women, but also empowers the State to adopt measures of positive discrimination in favour of women.
- Improving Literacy: The Government has been successfully running the Vidhya shakti program with focus on female literacy.

Impact of Gender Budgeting on Gender Equality



- Monitoring The Achievement Of Policy Goals: GRB is a tool to monitor the achievement of the goals of the National Policy for Empowerment of Women 2001 and other policy goals.
- Economic Growth: Ensures allocation of resources to address specific needs and challenges faced by women and girls.
- The Bharatiya Mahila Bank Ltd, first of its kind in the banking industry in India and the Pradhan Mantri Jan Dhan Yojana besides promoting financial inclusion are emerging as a catalyst for gender justice and equality.

Challenges need to be tackled:

- Political representation: Women comprise only 14.44 % of the 545 members of the 17th Lok Sabha.
- Education: According to the World Bank India report, while male literacy rate in the country is at 84.7 percent, for females, it is 77 percent.
- Economic Opportunities: According to the Periodic Labour Force Survey 2021-22, only 32.8 percent of women between 15-29 years were part of India's labour force in 2021-2022, while men were at 77.2 percent.
- Low budgetary allocation: Despite having been in operation for almost two decades, budgetary expenditure on it remains a mere 4-5 percent of the total allocation in Union Budget 2023-24.
- Skewed Implementation: NITI Aayog paper on Gender Mainstreaming (June 2022) has noted that only 62 out of 119 centrally-sponsored schemes are practising GB.
- The paper noted that the record of Ministers associated with Environment and Climate Change, Urban Transformation, Skill etc. have done poorly.
- Quality gender disaggregated data: The government agencies who do not capture gender-disaggregated information from their schemes and programmes may not be able to assess the targeted expenditure towards the empowerment of women and girls.

Government Initiatives toward Gender Responsive Budgeting:

- Safe City Project: To ensure the safety of women by strengthening public resources.
- Samarthya Scheme: Launched by clubbing existing women's empowerment programmes such as the Pradhan Mantri Vandana Yojana and Swadhar Greh etc.
- Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)
- Pradhan Mantri Awaas Yojana
- Saksham Anganwadi scheme and POSHAN 2.0
- Swachh Bharat Mission
- Beti Bachao, Beti Pado
- Pradhan Mantri Ujjwala Yojana (PMUY)

Way Forward:

- Gender Responsive Budgeting (GRB) in India has made strides in promoting gender equality through government initiatives and budget allocations. However, challenges like disparities in education, economic opportunities, and political representation needs to be addressed as a top priority. By doing so, India can achieve Beijing Declaration's principles and address deeper socio-economic issues beyond fiscal measures.

3.15 Serious Fraud Investigation Office (SFIO)

Serious Fraud Investigation Office (SFIO), arrested a Chartered Accountant in Hyderabad recently.

Background:-

- Shri Nalin Prabhat Panchal, a Chartered Accountant by profession was arrested for failure to honour the summons issued in connection with the prosecution of Nityank Infrapower & Multiventures Private Limited.

About Serious Fraud Investigation Office (SFIO):-

- Ministry: Ministry of Corporate Affairs.
- HQ: New Delhi.
- Establishment: As per the Companies Act, 2013, the Serious Fraud Investigation Office (SFIO) has been established through the Government of India Notification dated 07.2015.
- It is a multi-disciplinary organization, consisting of experts in the field of accountancy, forensic auditing, banking, law, information technology, investigation, company law, capital market and taxation, etc.
- Objective: It works for detecting and prosecuting or recommending for prosecution white-collar crimes/frauds. (Shell Companies)

- It has five Regional Offices in Mumbai, New Delhi, Chennai, Hyderabad & and Kolkata.

Composition:-

- Headed by: a Director as Head of Department in the rank of Joint Secretary to the Government of India.
- The Director is assisted by Additional Directors, Joint Directors, Deputy Directors, Senior Assistant Directors, Assistant Directors Prosecutors, and other secretarial staff.

Functions:-

- Take up for investigation cases characterized by
- complexity and having inter-departmental and multi-disciplinary ramifications.
- substantial involvement of public interest to be judged by size, either in terms of monetary.
- the possibility of investigation leading to or contributing towards a clear improvement in systems, laws, or procedures.
- Investigate serious cases of fraud received from the Department of Company Affairs.
- Investigate the affairs of a company on: –
- on receipt of a report of the Registrar or inspector under section 208 of the Companies Act, 2013.
- on intimation of a special resolution passed by a company that its affairs are required to be investigated.
- in the public interest.
- on request from any department of the Central Government or a State Government.

3.16 World Economic Forum's Chief Economists Outlook

Recently released World Economic Forum's Chief Economists Outlook report states that Global economic uncertainty is taking a toll on SDG progress.

About World Economic Forum's Chief Economists Outlook:-



- Published in September 2023
- Published by: World Economic Forum(WEF)
- The World Economic Forum's latest Chief Economists Outlook report, highlights the economic challenges that developing countries are facing.
- This report draws on the individual and collective perspectives of a group of leading chief economists through consultations with the World Economic Forum's Chief Economists Community and a regular Chief Economists Survey.
- It explores the key trends in the economic environment, including the prospects for growth, inflation, and

monetary policy.

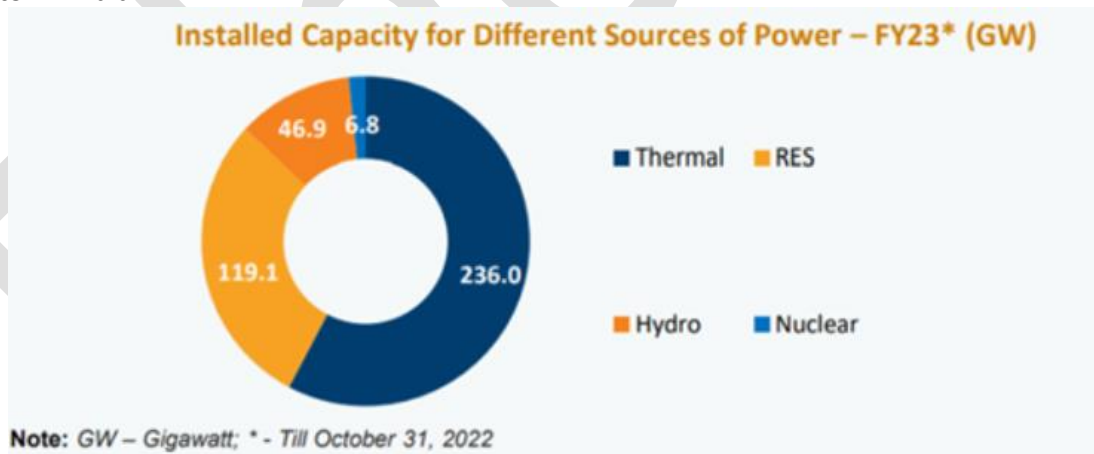
Key highlights:-

- The Chief Economist's Outlook is published amid slowing global momentum and continuing economic uncertainty.
- Recession concerns appear to have eased, but the outlook remains anaemic as the world grapples with political and financial headwinds.
- There are some signs of optimism about the easing of inflationary pressures following looser labour market conditions and fading supply-chain pressures.
- According to a significant majority of chief economists, the weak economic outlook and geopolitical tensions are likely to have a lasting impact on global development goals in the coming years.
- It says that over 60% of chief economists expect the global economy to weaken in the coming year amid uncertain domestic and international politics and unsettled financial markets.
- A large majority (86%) expects the recent global inflationary surge to ease.
- The prolonged tightening of financial conditions is expected to have lasting impacts, including a squeeze on business lending, increases in corporate debt defaults, and potential corrections in property and equity markets. (World Economic Forum's Global Risks Report 2023 and Polycrisis)
- The economic outlook varies across regions for 2023-2024.
- The chief economists are most optimistic about growth in Asia.
- The outlook for China has dimmed since the May 2023 survey, following signs of deflationary pressures and fragility in the country's real estate market.

3.17 Strengthening of Power Sector in India

The Central Electricity Authority (CEA) recently projects India's power sector demand to increase 1.8 times between 2021-22 and 2031-32. At this rate, India's annual per capita electricity consumption will be about 1,700-1,800 units in 2031-32.

Power Sector in India:



- India was ranked 4th in wind power, 5th in solar power and 4th in renewable power installed capacity, as of 2020.
- Installed Generation Capacity (Fuel wise): Fossil Fuel – 2,37,269MW (56.8%) in which Coal and Lignite has largest share 50.7%,
- India is the only country among the G20 nations that is on track to achieve the targets under the Paris Agreement.
- As of October 2022, India's installed renewable energy capacity (including hydro) stood at 165.94 GW, representing 40.6% of the overall installed power capacity.
- Solar energy is estimated to contribute 62 GW, followed by 41.84 GW from wind power, 10.70 GW from biomass, 4.92 GW from small hydropower, and 46.85 GW from hydropower.

Challenges in India's Power Sector Transformation:

- Policy and Regulation of power Sector: Electricity is listed in a 'concurrent list' in seven schedules, therefore there is lack of coordination and cooperation between centre and states.
- Generation of electricity in the power sector: In spite of the renewables push, coal still accounts for about 50% of India's installed power capacity.
- Central Electricity Authority (CEA) identified land acquisition, fund constraints with contractors, and contractual disputes as some key issues leading to delays.
- Subsidies: Government subsidy and cross-subsidy from industrial and commercial consumers attempt to keep electricity affordable for residential and agricultural consumers.
- For example, in 2019-20, while 21% of the total electricity supply was sold to agricultural consumers, their share in the total revenue was only 2%.
- Transmission issue in power sector: The country's weak transmission grid remains a serious hurdle.
- For example: A planned approach to build huge solar plants in Leh was recently cancelled due to a lack of transmission infrastructure.
- Climate Finance and decarbonization: India's pledge at the COP-26 summit to have 500 GW of non-fossil generation capacity by 2030. These will require investments of about Rs 32 lakh crore.
- Transmission lines overloading: Due to higher loads during peak hours, transmission lines frequently experience issues.
- Distribution in power sector: Discoms are the weakest link in India's Power sector.
- Discoms continue to register financial losses, technical and commercial losses remain high.
- Although private participation is permitted, their presence among discoms is limited.
- Underutilization of Renewable Energy Potential: The National Electricity Plan (NEP) projects a compounded annual growth rate (CAGR) of 7% in energy demand from FY22 to FY27.
- The report estimates that the pace of solar installations will need to double to over 30 GW per year to meet the NEP targets.

Solutions to tackle these challenges:

- Fuel Reforms: Various aspects like ramping up coal production by both public and private sector in a time-bound manner, increased participation of private sector in coal production and easing of regulatory framework etc need to be addressed while formulating such reforms.
- Taxation: Power-generating companies should not be saddled with the burden of cross-subsidising the renewable sector.
- This can be borne by the society (through taxation) and not by the entities that are already in trouble.
- Cooperative federalism: To resolve water disputes, government must help states to come to a common ground.
- Emphasis should be on cooperative federalism with shared benefit to all the states.
- Balanced Regulatory Interventions: Regulators need to be sensitised to the challenges faced by the sector and policy framework needs to be crafted and enforced to ensure a win-win situation for all the stakeholders.
- They must pro-actively intervene to resolve the immediate issues ailing the power sector.
- Increased Financing Facilities for Energy Sector: A robust and sustainable credit enhancement mechanism for funding in Energy Sector needs to be put in place through increased participation by global funding agencies like The World Bank, ADB etc. in the entire value chain.
- Merger of ministries: There should be only one energy ministry to make coordination and implementation of policies better.
- It will remove policy paralysis too.
- Reduction of transmission losses: This should be achieved by better infrastructure and technological efforts.
- Old plants should be shut and should be replaced with new.

Government Initiatives to Reform the Power Sector:

- The Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA): It aims to achieve universal household

electrification by providing electricity connections to all un-electrified households.

- Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY): The DDUGJY launched in 2014 a program to achieve 100% village electrification.
- The Unnat Jyoti by Affordable LEDs for All (UJALA) scheme: To provide energy efficient LED bulbs to domestic consumers at an affordable price.
- Restructured Distribution Sector Scheme (RDSS): To enhance the efficiency of power distribution.
- UDAY Scheme: Launched in 2015 for Operational and Financial Turnaround of Power Distribution Companies.

Way Forward:

Therefore India's growing economy demands an exponential increase in electricity supply, which requires a comprehensive reforms in policy, regulation, and the entire power sector are essential. By embracing decentralization, upgrading technology, and privatizing distribution companies, India can pave the way for a more efficient and sustainable power sector, ensuring a brighter future for its citizens.

3.18 Global Innovation Index 2023

The Global Innovation Index 2023 was released recently.

Background:-

- India has retained 40th rank in the Global Innovation Index 2023.

About Global Innovation Index 2023 rankings:-

- Publication: annual.
- Published by: World Intellectual Property Organization.
- WIPO is a self-funding agency of the United Nations, with 193 member states.
- Edition: 16th edition.
- The Global Innovation Index is a leading reference for measuring an economy's innovation ecosystem performance.
- It is also a valuable benchmarking tool used by policymakers, business leaders, and other stakeholders to assess progress in innovation over time.
- The 2023 edition of the Global Innovation Index (GII) takes the pulse of global innovation trends against the background of an economic environment fraught with uncertainty.
- Global Innovation Tracker 2023 captures key trends in innovation investments and measures the pace of technological progress and adoption, as well as the resulting socioeconomic impact.
- The index reveals the ranking of this year's most innovative economies in the world amongst 132 economies.

Key highlights:-

- Most innovative economies in 2023:-
- For the 13th year in a row, Switzerland is the most innovative economy in 2023 followed by Sweden, the United States, the United Kingdom, and Singapore.
- The top Science and Technology innovation clusters in the world in 2023 are: –
- Tokyo–Yokohama, followed by Shenzhen–Hong Kong–Guangzhou, Seoul, Beijing and Shanghai–Suzhou.
- China now has the largest number of clusters in the world, overtaking the United States.

India's performance:-

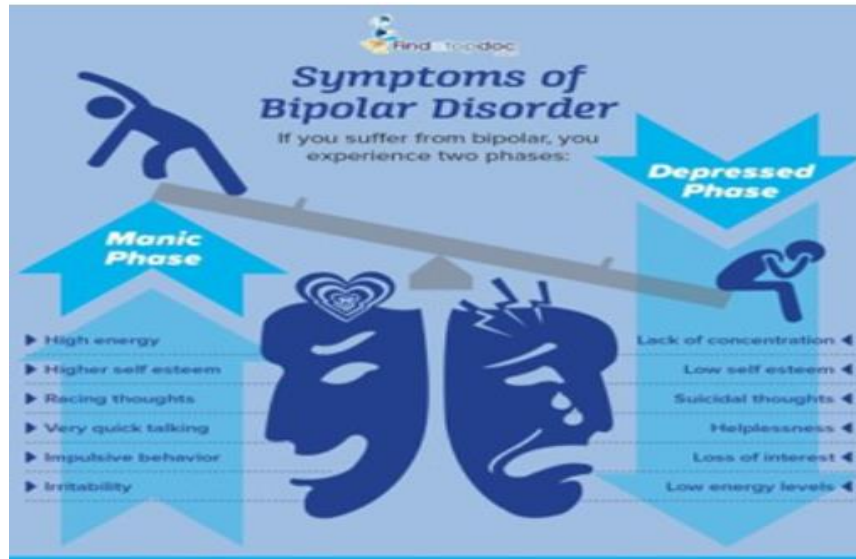
- India retained the 40th rank out of 132 economies.
- Over the past few years, India has consistently climbed the ranks in the GI, rising from 81st place in 2015 to its current position.

4. Science & Technology

4.1 Bipolar disorder

Pakistani actress Mahira Khan recently revealed that she was suffering from bipolar disorder.

About Bipolar disorder:-



- It is a mental health condition that causes extreme mood swings that include emotional highs (mania or hypomania) and lows (depression).
- The symptoms of the condition can cause unpredictable changes in mood and behavior, resulting in significant distress and difficulty in life. (Mental Health)

Types of Bipolar Disorder:-

- There are several types of bipolar and related disorders.

Bipolar I disorder:-

- One has had at least one manic episode that may be preceded or followed by hypomanic or major depressive episodes.

Bipolar II disorder:-

- One has had at least one major depressive episode and at least one hypomanic episode, but never had a manic episode.

Cyclothymic disorder:-

- One has had at least two years or one year in children and teenagers of many periods of hypomania symptoms and periods of depressive symptoms (though less severe than major depression).

Other types:-

- These include, bipolar and related disorders induced by certain drugs or alcohol or due to a medical condition

Symptoms of Bipolar Disorder:-

Symptoms of mania ("the highs"):-

- Excessive happiness, hopefulness, and excitement
- Sudden changes from being joyful to being irritable, angry, and hostile

- Restlessness
- Rapid speech and poor concentration
- Increased energy and less need for sleep
- Unusually high sex drive
- Making grand and unrealistic plans
- Showing poor judgment

Symptoms During depressive periods (“the lows”):-

- Sadness
- Loss of energy
- Feelings of hopelessness or worthlessness
- Not enjoying things they once liked
- Trouble concentrating
- Forgetfulness
- Talking slowly
- Less of a sex drive
- Inability to feel pleasure
- Uncontrollable crying
- Trouble making decisions
- Irritability

Treatment:-

- Bipolar disorder is a lifelong condition, but one can manage your mood swings and other symptoms by following a treatment plan.
- In most cases, bipolar disorder is treated with medications and psychological counseling (psychotherapy).

4.2 Spamouflage

Meta recently, claimed that it is fighting a Chinese ‘Spamouflage’ operation.

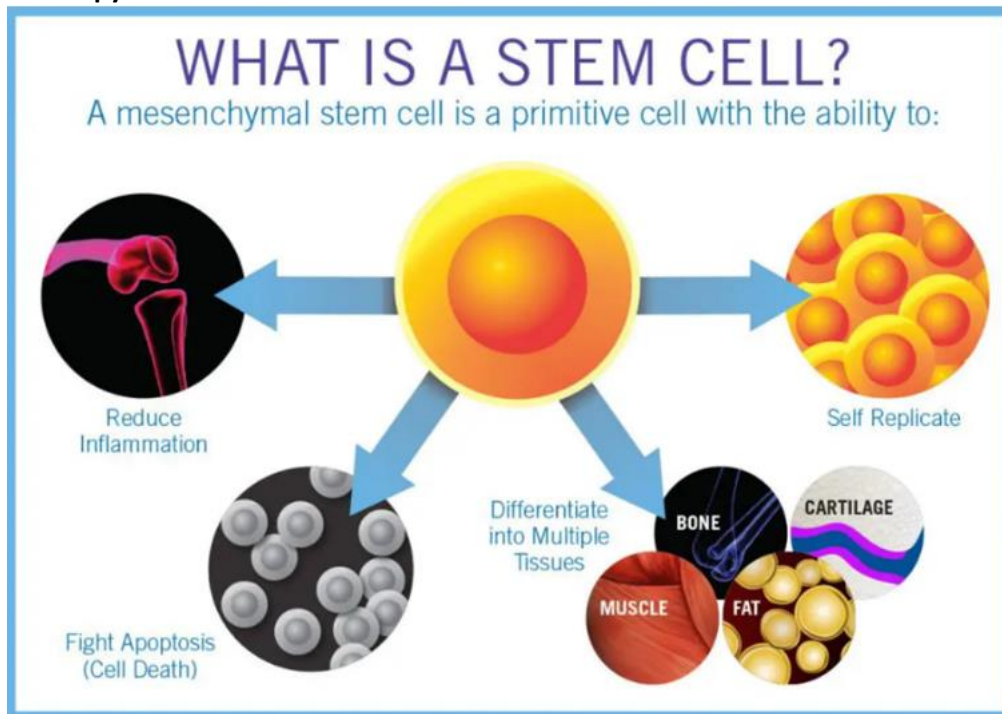
About Spamouflage:-

- It is an online Chinese spam operation. (Cyberattacks)
- It pushes positive narratives about China and negative commentary about the United States, Western foreign policies, and critics of the Chinese government.
- Origin: China.
- Targets: Taiwan, the United States, Australia, Britain, Japan, and global Chinese-speaking audiences.
- It mimicked websites of mainstream news outlets in Europe and posted stories about Russia’s war on Ukraine and then spread it online. (Cybercrime)
- The accounts in the campaign have a tendency to intersperse political posts.
- It has been active on over 50 platforms and forums, including Facebook, Instagram, TikTok, YouTube, and X (formerly Twitter).
- Companies involved in the campaign were recently sanctioned by the European Union.

4.3 Stem cell therapy

The Delhi High Court Recently permitted two children with autism spectrum disorder (ASD) to undergo stem cell therapy for treatment of their condition.(AUTISM SPECTRUM DISEASE)

About Stem cell therapy:-



- Stem cell therapy is a novel therapeutic approach.
- It utilizes the unique properties of stem cells, to regenerate damaged cells and tissues in the human body or replace these cells with new, healthy, and fully functional cells.
- Stem cells: cells that have the natural ability to generate new cell types.
- Apart from stem cells, no other cell in the body has the natural ability to generate new cell types.

Types of stem cells:-

- Embryonic stem cells: These stem cells come from embryos that are 3 to 5 days old.
- These are pluripotent stem cells, meaning they can divide into more stem cells or can become any type of cell in the body.
- Adult stem cells: These stem cells are found in small numbers in most adult tissues, such as bone marrow or fat.
- Compared with embryonic stem cells, adult stem cells have a more limited ability to give rise to various cells of the body.
- Induced pluripotent stem cells: These are stem cells that scientists make in the laboratory.
- They are pluripotent and can develop into any cell type just like embryonic stem cells.

Mechanism:-

- Under the right conditions in the body or a laboratory, stem cells divide to form more cells called daughter cells.
- These daughter cells become either new stem cells or specialized cells (differentiation) with a more specific function, such as blood cells, brain cells, heart muscle cells, or bone cells.

Uses:-

- To treat many human diseases and to repair tissue damage resulting from injury or ageing.
- In Organs transplantation
- Damaged organs can be replaced by obtaining healthy organs from a donor.
- However, donated organs may be rejected by the immune system.
- Induced pluripotent stem cells generated from the patient could be used here to grow new organs that would have a lower risk of being rejected.

Regulations in India:-

- In March 2019, the Union Health Ministry notified the 'New Drugs and Clinical Trial Rules, 2019' which state that stem-cell-derived products are to be used as "new drugs".
- This meant that any doctor who uses stem-cell therapy needs to get permission from the government.
- In India as well as globally, only blood stem cells from bone marrow to treat blood cancers and different blood disorders are permitted. (Base Editing)
- The clinical use in any other disease or use of any stem cells other than these is still in the research stage.

4.4 CSIR PRIMA ET11

Recently, CSIR-CMERI developed a Compact Electric Tractor- CSIR PRIMA ET11.

About CSIR PRIMA ET11:-

- Developed by: CSIR-CMERI.
- CSIR PRIMA ET11 is an indigenously designed, compact, 100% Pure Electric Tractor. (First-ever Electric Tractor)
- Capacity: It can tow a 8-ton capacity trolley with a max speed of 25 mph. (Tractor industry)
- Objective: to cater to small and marginal farmers of India.
- Application: It caters to the demands of agriculture field applications.
- Design: Its dynamics, weight distribution, transmission engagements, then lever and pedal position everything has been well designed.
- Special characteristic: It has been made women-friendly with all the levers, switches, etc. being placed for an easy approach to the women.
- Many mechanical systems are also being replaced with electronic switches for easy operations.
- Battery: It has a state-of-the-art Lithium-ion battery with Prismatic cell confirmation.
- When the tractor is not in operation, its battery power can be utilized for other secondary applications like pump and irrigation, etc.
- The farmers can charge the tractor using a conventional home charging socket in 7 to 8 hours and operate the tractor for more than 4 hours at the field. (Lithium reserves in India)
- Benefit: The tractor design helps to achieve the desired efficiency at a minimum cost.

4.5 Comet Nishimura

Recent reports suggest, that Comet Nishimura could be visible in September.

Background:-

- As per NASA 'It seems like a good bet' that Comet Nishimura could become visible to the naked eye this September (2023).
- Its orbit could bring it on a close approach to Earth on 12, September 2023, when it could be as close as 125 million kilometers away.

About Comet Nishimura:-



- Discovered on: August 11, 2023.
- Discovered by: Hideo Nishimura. (Bernardinelli-Bernstein comet)
- It was discovered during 30-second exposures with a standard digital camera.
- Comet Nishimura was imaged from June Lake, California, USA.
- Comets: Comets are celestial objects composed of frozen gases, dust, and rocks that orbit the Sun.
- They originate from the early solar system and develop tails when they approach the Sun due to the release of gas and dust.
- These tails make them visible from Earth.
- It was pictured sporting a green coma and a thin tail.
- It's expected to brighten to a magnitude of 1.8.
- Its closest approach to us will be on Sep 12 and its perihelion on Sep 17/18.
- The comet is currently located in the constellation Leo.
- Constellation Leo: A prominent constellation in the night sky, represented by the shape of a lion.
- It is one of the zodiac constellations and contains various stars and celestial objects.
- The constellation is visible toward the east-northeastern horizon about 90 minutes before sunrise.
- As the comet approaches the sun, the visitor is also getting closer to the horizon, thus making it more difficult to observe it after this week.
- Since its discovery, C/2023 P1 Nishimura has increased in brightness and its path across the inner Solar System determined.
- As the comet dives toward the Sun, it will surely continue to intensify and possibly become a naked-eye object in early September.
- The comet will also be angularly near the Sun, so it will only be possible to see it near sunset or sunrise.

4.6 Probiotics

Recent studies have shown the positive role of probiotics in reducing Cholesterol.

Background:-

- Using probiotics to reduce cholesterol is an upcoming area of interest and the research is promising.
- Probiotics are thought to help lower cholesterol levels via a number of mechanisms.
- These include helping to incorporate cholesterol into cells and adjusting the microbiome of the gut to favor the elimination of cholesterol via the faeces.
- In a 2018 study, researchers pooled results from 32 studies and analyzed them all together in a type of study known as a meta-analysis.
- The people who took probiotics reduced their total cholesterol level by 13 percent.
- Other systematic reviews support these findings. (Indian scientists develop a next-generation probiotic)

About Probiotics:-

- Probiotics are a combination of live beneficial bacteria and/or yeasts.
- Probiotic supplements are a way to add good bacteria to our body.
- A probiotic community is made up of things called Microbes.
- We have trillions of microbes on and in our body.

These microbes are a combination of:

- Bacteria.
- Fungi (including yeasts).
- Viruses.
- Protozoa.
- Everyone's microbiome is unique.
- No two people have the same microbial cells.
- Even twins are different.

- The most common type of probiotic bacteria is Lactobacillus and Bifidobacterium.
- Probiotics are also made up of good yeast.
- The most common type of yeast found in probiotics is Saccharomyces boulardii.

Working mechanism:-

- We constantly have both good and bad bacteria in our body. (iNCOVACC)
- When we get an infection, there are more bad bacteria, knocking your system out of balance.
- Good bacteria help eliminate extra bad bacteria, returning the balance

Characteristics of a probiotic:-

For a microbe to be called a probiotic, it must have several characteristics. These include being able to:

- Be isolated from a human.
- Survive in your intestine after ingestion (being eaten).
- Have a proven benefit.
- Be safely consumed.
- Help your body digest food.
- Keep bad bacteria from getting out of control and making you sick.
- Create vitamins.
- Help support the cells that line your gut to prevent bad bacteria that you may have consumed (through food or drinks) from entering your blood.
- Break down and absorb medications.

Probiotic-rich foods:-

- Yogurt.
- Buttermilk.
- Sourdough bread.
- Cottage cheese.
- Kombucha.
- Tempeh.
- Fermented pickles.

TTPs (tactics, techniques, and procedures)-based cybercrime investigation framework

- A new cybercrime investigation tool called TTPs (tactics, techniques, and procedures)-based cybercrime investigation framework was developed recently.

Background:-

- It can help in tracking and classifying cybercrimes identifying chains of evidence required to solve the case and mapping evidence onto the framework to convict criminals, says a press release.

About TTP (tactics, techniques, and procedures)-based cybercrime investigation framework:-

- Developed by: I-hub NTIHAC foundation (c3ihub) at IIT Kanpur with support from the Department of Science and Technology (DST).
- It has been developed under the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS).
- It is a methodology and tool for apprehending cybercriminals' modes of operations in a crime execution life cycle.
- It was developed with the help of literature study, case studies, and framework building.
- It incorporated pre-existing crime in the framework, evolving interactive framework navigator and mapping real cases onto the framework.
- The technology can create an approximate crime execution path and suggest a crime path based on a user-derived set of keywords.(Cyberattacks)
- It can also compare modus operandi used in different crimes manage user roles and track activity for crime paths.

Significance:-

- It identifies the chain of evidence required to solve a case and maps evidence onto the framework to convict criminals.
- It could be highly effective as it restricts the number of forms and methods the investigation can be conducted and primarily relies on criminals' TTPs.
- This can lead to precise and rapid conviction of cybercriminals. (Cyber Security)

About TTP Triangle:-

- Tactics: describe the technical objectives (the "why") an attacker is performing an action.
- Techniques: describe the methods used by the attacker to engage in their attack.
- Procedures: the detailed description of the components used in an attack, including the tools and practices that attackers

4.7 MISSIONS Psyche

The National Aeronautics and Space Administration (NASA) will be launching a Psyche mission soon.

About MISSIONS Psyche:-

- Launch date: 5 October 2023.
- Launch Site: NASA's Kennedy Space Center, Florida, USA.
- Launch Vehicle: SpaceX Falcon Heavy.
- Psyche is a NASA mission to study a metal-rich asteroid named Psyche.
- Asteroid Psyche is located in the main asteroid belt between Mars and Jupiter.
- This is NASA's first mission to study an asteroid that has more metal than rock or ice.
- The journey to the asteroid, also named Psyche, will span nearly six years.
- It will cover approximately 6 billion kilometers.
- The body of the Psyche spacecraft is about the size of a small van.
- It is powered by solar electric propulsion.
- It has a magnetometer, a gamma-ray and neutron spectrometer, and a multispectral imager to study asteroid Psyche.
- The spacecraft will start sending images to Earth as soon as it spots the asteroid.
- The asteroid orbits the Sun between Mars and Jupiter. (NASA's InSight Mars Mission)
- It is believed to be a remnant core of a planetesimal, composed primarily of iron-nickel metal.
- While there are no plans to mine the asteroid, studying it from orbit could provide invaluable insights into the composition of Earth's core.
- In addition to its primary mission, the Psyche spacecraft will also host a pioneering technology demonstration known as NASA's Deep Space Optical Communications (DSOC) experiment. (NISAR satellite)
- This experiment could revolutionize how data is transmitted across vast distances in space, potentially enhancing our ability to explore the farthest reaches of the solar system.
- Significance: This mission represents a significant step forward in our understanding of the early solar system and the formation of terrestrial planets.

4.8 ciTRAN

Researchers at the Indian Institute of Science Education and Research (IISER) in Bhopal have recently identified a Circular RNA virus, ciTRAN .

Background:-

- The development could potentially lead to novel drugs and therapies to fight HIV-1.

About ciTRAN:-

- It is a Circular RNA virus.
- RNAs are in general straight-chain, free-end structures but these circular RNA ('circRNA') form a closed-loop.
- The circRNA plays a pivotal role in regulating gene expression.
- It is essential for various biological processes.
- Its role in HIV-1 replication has remained unclear for a long time.
- Characterizing circular RNA can be tricky because it usually is less abundant, making it further challenging to detect in its native form.
- During viral infections, there's so much information from the virus that it can make it hard to find the less common ones like circular RNA.

About the recent study's implications:-

- The researchers deployed a novel approach called 'circDR-Seq', to successfully capture circRNAs from T-cells (white blood cells) infected with the HIV-1 virus and identified a specific circRNA named ciTRAN, which plays an important role in the multiplication of the virus.
- HIV-1 viral protein R (Vpr) is a multifunctional protein that plays specific roles at multiple stages of the HIV-1 viral life cycle and affects anti-HIV functions of the immune cells.
- Further it was found that HIV-1 infection induces ciTRAN expression in a Vpr-dependent manner and that ciTRAN interacts with serine/arginine-rich splicing factor 1 (SRSF1), a protein known to repress HIV-1 transcription

Unveiling ciTRAN's Role in HIV-1 Replication:-

- In a recent study, researchers at IISER Bhopal deployed a specialized protocol called circDR-Seq, utilizing direct RNA nanopore sequencing.
- Through this innovative approach, they were able to capture circRNAs from HIV-1-infected T cells (white blood cells) and pinpointed the existence of ciTRAN, a circRNA that exerts influence over HIV-1 transcription.

Potential for Novel Drugs and Therapies

- Understanding how ciTRAN modulates the transcription process of the virus could be a game-changer in the fight against HIV-1.
- This newfound knowledge opens doors to the development of novel drugs and therapies to combat this persistent virus.

5. Environment & Ecology

5.1 Red sand boa

In India, 172 incidents of seizures of red sand boa were recorded from 2016 to 2021 as per the recent report.

Key Highlights of the report:-

- Incidents of illegal sand boa trade were documented in 18 States and one Union Territory covering 87 districts across India; the highest number was recorded in Maharashtra (59) followed by Uttar Pradesh (33).
- The study also highlights the role of social media in the illegal trade of the species.
- The report also suggested that local and international conservation organizations should conduct formative research to better understand the situation of the illegal reptile trade and demand.

About Red sand boa:-

- Scientific Name: *Eryx johnii*.
- Family: Boidae.
- Habitat: arid and semi-arid regions.
- Distribution: India, Pakistan, Sri Lanka, and parts of Bangladesh.
- The Red Sand Boa is a rare non-poisonous snake.
- It is a non-venomous snake
- It is predominantly nocturnal.
- Nocturnal: most active during the night.
- It is Ovoviviparous.
- Ovoviviparous: They produce young ones by means of eggs which are hatched within the body of the parent.

Ecological importance:-

- Like other snake species, the Red Sand Boa also plays a significant role in the ecosystem by maintaining a healthy population between prey and predator. (Species in news: Gharials)

Application:-

- It has applications in medicine, cosmetics, and even black magic, making it highly valued in the global market. (Wildlife Protection)

Conservation Status:-

- IUCN: Near Threatened.
- CITES: Appendix II.
- Wildlife Protection Act of 1972: Schedule IV.

5.2 UNESCO World Heritage sites

According to a joint assessment by UNESCO and IUCN done recently, Protecting the UNESCO World Heritage sites can help conserve biodiversity.

Background:-

- UNESCO World Heritage sites are home to 75,000 species of plants, and over 30,000 species of mammals, birds, fish, reptiles, and amphibians — a fifth of all the species mapped globally.

About UNESCO World Heritage sites:-

- A World Heritage site is classified as a natural or man-made area or a structure that is of international importance.
- It is a space that requires special protection.
- These sites are officially recognized by the UN and the United Nations Educational Scientific and Cultural Organization (UNESCO).

The list is:-

- Maintained by: the International World Heritage Programme.
- Administered by: the UNESCO World Heritage Committee.
- It is composed of 21 UNESCO member states which are elected by the General Assembly.
- Each World Heritage Site remains part of the legal territory of the state wherein the site is located and UNESCO considers it in the interest of the international community to preserve each site.
- Eligibility: To be selected, a World Heritage Site must be an already classified landmark, unique in some respect as a geographically and historically identifiable place having special cultural or physical significance.
- Significance: The sites classified as World Heritage are important for humanity, and they hold cultural and physical significance.

UNESCO World Heritage Sites in India:-

- The Archaeological Survey of India (ASI) is the nodal agency for forwarding any request for World Heritage status to any Indian site whether cultural or natural.

India currently has 40 World Heritage Sites:-

- 32 cultural (UNESCO Heritage Sites in Maharashtra)
- 7 natural sites and
- One mixed site.

5.3 Air Quality Life Index (AQLI)

The recently released Air Quality Life Index (AQLI) report suggests that air pollution shortens the lives of the residents of Delhi by around 11.9 years.

Key Highlights of the report:-

- On account of the number of people that high particulate matter levels affect in India, the country faces the greatest health burden from air pollution among all the countries in the world.
- In South Asia, particulate pollution has increased by 9.7 percent from 2013 to 2021.
- In India, 5 levels rose 9.5 percent.
- Particulate matter (PM): particles found in the air, including dust, dirt, soot, smoke, and liquid droplets that remain suspended in the air for long periods of time.
- According to PM_{2.5} data for 2021 derived from satellites, pollution in India has increased from 56.2 µg/m³ in 2020 to 58.7 µg/m³ in 2021.
- This is more than 10 times the WHO guideline of 5 µg/m³.
- Delhi's annual average PM_{2.5} level in 2021 was found to be 126.5 µg/m³, which is more than 25 times the World Health Organization (WHO) (Delhi and Air Pollution)
- The report said particulate matter pollution is also the biggest threat to human health in India in terms of lowering life expectancy, beating cardiovascular diseases, and child and maternal malnutrition.
- The average Indian resident is set to lose 5.3 years of life expectancy if the WHO guideline is not met.

About Air Quality Life Index (AQLI):-

- Produced by: Energy Policy Institute at the University of Chicago (EPIC).
- Published: Annually.

- The Air Quality Life Index (AQLI), provides details of impact of air pollution on life expectancy.

Special Features of AQLI:-

- The research underlying the AQLI is based on pollution data at the very high concentrations that prevail in many parts of the world today.
- The causal nature of the AQLI's underlying research allows it to isolate the effect of air pollution from other factors that impact health.
- The AQLI delivers estimates of the loss of life expectancy for the average person.
- The AQLI uses highly localized satellite data, making it possible to report life expectancy that impacts at the county or similar level.

5.4 Criminalising Ecocide

- Recently Mexico's 'Maya train' project has been criticised as a "megaproject of death" causing an ecological disaster in the region.
- The Tribunal for the Rights of Nature said the project caused "crimes of ecocide and ethnocide".

About Ecocide:

- It is defined as "as unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts".

Commonly cited examples include:

- Deforestation during the Vietnam War,
- The destruction of the environment during the Russian invasion of Ukraine, deforestation in Indonesia and the Amazon rainforest,
- Oil pollution in the Niger Delta and the Chernobyl disaster.
- The term was popularised by Olof Palme when he accused the United States of ecocide at the 1972 UN Conference on the Human Environment.
- There is no international law against ecocide that applies in peacetime, but the Rome Statute makes it a crime.
- The Rome Statute of the International Criminal Court (ICC) deals with four atrocities: genocide, crimes against humanity, war crimes, and the crime of aggression.
- The provision on war crimes is the only statute that can hold a perpetrator responsible for environmental damage, but only if it is intentional and in wartime.

Ecocide – a crime:

- Ecocide is a crime in 11 countries, with 27 others considering laws to criminalise environmental damage that is wilfully caused and harms humans, animals, and plants.
- The European Parliament voted unanimously this year to enshrine ecocide in law.
- Most national definitions penalise "mass destruction of flora and fauna", "poisoning the atmosphere or water resources" or "deliberate actions capable of causing an ecological disaster."
- The ICC and Ukraine's public prosecutor are also investigating Russia's role in the collapse of the Nova Kakhovka dam, which unleashed a flood that drowned 40 regions, and released oils and toxic fluids into the Black Sea.

Significant evidences to consider ecocide as a crime:

- Over a third of the earth's animal and plant species could be extinct by 2050.
- Unprecedented heat waves have broken records worldwide.
- Changing rainfall schemes have disrupted flood and drought patterns.
- Deforestation of the Amazon, deep-sea trawling or even the catastrophic 1984 Bhopal gas disaster could have been avoided with ecocide laws in place.

- Ecocide laws could also double up as calls for justice for low- and middle-income countries disproportionately affected by climate change.

Limitations in defining ecocide as a crime:

- Varied arguments: Regarding the need for a separate law and the definition of 'ecocide'.
- Ambiguous definition: Words like "long-term" or "widespread damage" are abstract and leave room for misinterpretation.
- Complexity: This constructs a development-versus-environment narrative, with the implication that it is okay to destroy the environment as long as it benefits humans.
- Great Nicobar Project is criticised for endangering indigenous communities and biodiversity. But the government claims the Project is in service of holistic development.
- Threshold– In 1948 genocide requires proof on two accounts
- Mens rea (an intention to kill) and
- Actus reus (a guilty act) — to prove a crime was committed.
- It creates confusion as some argue that environmental disasters are not caused intentionally or deliberately.
- Limited power to ICC: ICC has a low track record when it comes to converting prosecutions into convictions.
- The court's power is limited to "natural persons," and without any changes, ICC would be unable to hold corporate entities criminally liable.

India and Ecocide:

- Chandra CFS and Terminal Operators Pvt. Ltd. v. The Commissioner of Customs and Ors (2015) case: The Madras High Court noted "the prohibitory activities of ecocide has been continuing unbridled by certain sections of people by removing the valuable and precious timbers".
- N. Godavarman Thirumulpad vs Union of India & Ors: The Supreme Court called attention to an "anthropogenic bias" and argued that "environmental justice could be achieved only if we drift away from the principle of anthropocentric to ecocentric".
- India's legislative framework vis-à-vis environmental and ecological governance includes:
 - The Environmental (Protection) Act 1986,
 - The Wildlife (Protection) Act 1972, and
 - The Compensatory Afforestation Fund Act (CAMPA) 2016, as well as separate Rules to prevent air and water pollution.
- The National Green Tribunal, India's apex environmental statutory body, does not have the jurisdiction to hear matters related to
 - The Wildlife (Protection) Act 1972,
 - The Indian Forest Act 1927, and
 - Other State-enacted laws.
- Indian laws are themselves in a state of conflict: The Parliament passed the controversial Forest Conservation (Amendment) Bill 2023 and Biodiversity (Amendment) Bill 2023, which experts have said will dilute current legal protections and will lead to the loss of 20-25% of forest area in the country and the attendant biodiversity and ecosystem issues.

Way Forward:

- Therefore an ecocide law should be a part of the broader process of changing public consciousness, recognising that we are in a relationship with our environment, we are dependent for our well-being on the wellbeing of the environment. India needs to first bring its environmental laws in tune with ecocide idea before the ecocide laws come up internationally.

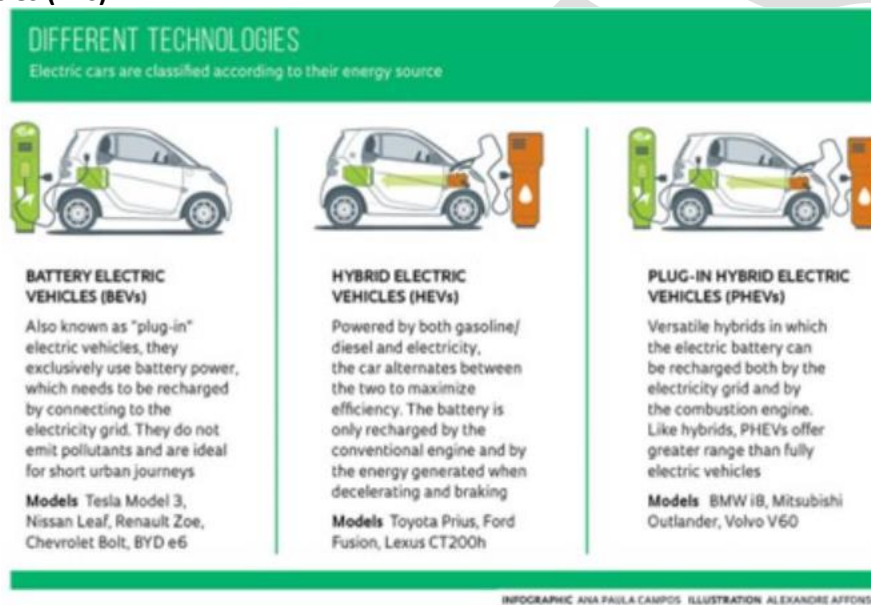
5.5 Electric vehicles (EVs)

The preparations for the upcoming World Electric Vehicles (EVs) Day were seen in full swing recently.

Background:-

- Every year, on September 9, the World Electrical Vehicle (EV) Day is celebrated.
- It is an initiative created by the sustainability media Co. GreenTV.
- 2020: the inauguration of the World EV Day.
- The day is designated as World EV Day to honour electric vehicles.
- It is an international movement that unites people in pursuing change.
- Science shows that replacing internal combustion engines (ICE) that power our diesel and petrol cars can eliminate toxic tailpipe emissions in our polluted cities, along with significantly lowering heat-trapping carbon emissions from fuel combustion.
- Global trends show that this shift from ICE to electric vehicles (EV) is inevitable in the next few decades.

About Electric vehicles (EVs):-



- An electric vehicle, uses one or more electric motors or traction motors for propulsion.
- They may be powered through self-contained batteries, solar panels or an electric generator to convert fuel to electricity.
- They run on electricity instead of gasoline. (Hybrid Electric Vehicles (HEV))
- They emit no tailpipe pollution or greenhouse gas emissions.
- They tend to be quieter and smoother than other vehicles.
- Most electric cars have batteries that have to be recharged from an outside source of electricity.

Advantages of electric vehicles (EVs):-

- EVs are eco-friendly.
- They have low maintenance costs.
- They protect the environment from noise pollution.
- They are an alternative to combustion engines powered by fossil fuels, which discharge harmful greenhouse gases into the atmosphere.
- The adoption of electric vehicles is consistent with India's pledge to lower carbon emissions and provide renewable energy sources more support.
- They are unaffected by geopolitical tensions or rising oil prices.
- They can lessen India's reliance on the Gulf countries for fuel imports.
- It provides a catalyst for future innovation in mobility- and hybrid-based technologies.
- EV production will benefit regional industries and expand India's homegrown manufacturing sector.

- Setting up new production and charging systems infrastructure will improve skill-building programs and create more jobs. Thus providing

Challenges of Electric Vehicles:-

- Lack of Associated Infrastructural
- Lack of a Stable Policy for EV Production.
- Long time for Charging Batteries.
- Battery manufacturing process and supply chain.
- Lack of Skilled Workers.

Important Government Initiatives:-

- FAME India: Faster Adoption and Manufacturing of Electric and Hybrid Vehicles in India.
- It is an incentive scheme that encourages the adoption of electric and hybrid vehicles.
- Manufacturers and infrastructure providers of electric vehicles receive this incentive in the form of subsidies.

National Electric Mobility Mission Plan 2020:-

- It aims to deploy 5 to 7 million electric vehicles nationwide by 2020.
- It aims to promote the adoption of electric and hybrid vehicles in the country.
- The plan includes the following measures: providing incentives for manufacturers, promoting charging infrastructure, and encouraging research and development in the sector.

Concessions on the GST: –

- The government promotes the use of electric vehicles by levying a 5% GST on electric vehicles as compared to a GST of 28% on internal combustion automobiles.

Go Electric Campaign:

- The objective of this campaign is to create awareness and promote the use of electric vehicles and kitchen appliances and to ensure the nation's energy security.

5.6 Zero Draft of Global Treaty to End Plastic Pollution

The Intergovernmental negotiating committee (INC) to develop an international legally binding instrument on plastic pollution, recently released a zero draft to end plastic pollution.

Highlights of the draft: The text is divided into four parts:

- Part I: It covers the objectives of the instrument and leaves placeholders, as requested at the second session of the committee from May 29-June 2 for elements that Members may wish to include but were not discussed at the second session.
- Part II: Elements in this Part are broadly structured around the life cycle of plastics and plastic products with the aim of addressing plastic pollution.
- It aims to collectively promote the sustainable production and consumption of plastics through product design and environmentally sound waste management, including through resource efficiency and circular economy approaches.
- Part III and IV: The third and fourth parts outline different options of measures aimed at collectively addressing the implementation of the instrument.

About plastics and its pollution:

- Plastics are a group of materials, either synthetic or naturally occurring, that may be shaped when soft and then hardened to retain the given shape.
- Plastics can be divided into two general categories—thermoplastics and thermosets.
- Thermoplastics are defined as polymers that can be melted and recast almost indefinitely.

- Thermosets is a polymer that irreversibly becomes rigid when heated.
- Plastic pollution occurs when plastic has gathered in an area and has begun to negatively impact the natural environment and create problems for plants, wildlife, and even the human population.
- This includes killing plant life and posing dangers to local animals.
- Plastic is an incredibly useful material, but it is not biodegradable.

Significance of Plastics:

- Properties of plastics such as resistant, inert, and lightweight offers many benefits to companies, consumers, and other links in society.
- This is all because of its low-cost and versatile nature.
- In the medical industry, plastics are used to keep things sterile.
- Syringes and surgical implements are all plastic and single use.
- In the automotive industry, it has allowed a significant reduction in vehicle weight, reducing fuel consumption and, consequently, the environmental impact of automobiles.
- Plastics protect our heads in the form of helmets.
- They keep us safer in our cars in the form of seatbelts, fuel tanks, windscreens and airbags.

Major Concerns with Plastic pollution:

- Pollution: Plastic waste is blocking sewers, threatening marine life and generating health risks for residents in landfills or the natural environment.
- Food and health: Invisible plastic has been identified in tap water, beer, salt and are present in all samples collected in the world's oceans, including the Arctic.
- The transfer of contaminants between marine species and humans through the consumption of seafood has been identified as a health hazard.
- Financial costs of marine plastic pollution: According to conservative forecasts made in March 2020, the direct harm to the blue economy of the Association of Southeast Asian Nations will be \$2.1 billion per year.
- Boats become entangled in abandoned or discarded fishing nets or their engines may become blocked with plastic debris.
- Coastal pollution: Residents of coastal regions suffer from the harmful health impacts of plastic pollution and waste brought in by the tides and are inextricably linked to the fishing and tourism industry for their livelihoods.
- Tourism: Plastic waste damages the aesthetic value of tourist destinations, leading to decreased tourism-related incomes and major economic costs related to the cleaning and maintenance of the sites.
- Climate change: Plastic, which is a petroleum product, also contributes to global warming. If plastic waste is incinerated, it releases carbon dioxide into the atmosphere, thereby increasing carbon emissions.

Govt of India's initiatives to tackle plastic waste:

- The Plastic Waste Management Rules, 2016: It clearly stipulates that urban local bodies (ULBs) should ban less than 50 micron thick plastic bags and not allow the usage of recycled plastics for packing food, beverage or any other eatables.
- It introduced the concept of EPR(Extended Producer Responsibility) to manage plastics in India.
- Plastic Waste Management (Amendment) Rules, 2022: The guidelines on EPR(Extended Producer Responsibility) coupled with the prohibition of identified single-use plastic items.
- It banned the manufacture, import, stocking, distribution, sale and use of carry bags made of virgin or recycled plastic less than seventy-five microns.
- Swachh Bharat Mission – Urban 2.0: Under this, every Urban Local Bodies (ULB) is required to adopt 100% source segregation of waste, and have access to a Material Recovery Facility (MRF) for sorting the dry waste (including plastic waste) into further fractions for recycling and/ or processing into value-added products.
- Central Pollution Control Board (CPCB): CPCB along with state pollution bodies, will monitor the ban, identify violations, and impose penalties already prescribed under the Environmental Protection Act.

- Plastic Parks: India has set up Plastic Parks, which are specialized industrial zones for recycling and processing plastic waste.
- Project REPLAN: REDucing PLastic in Nature launched by Khadi and Village Industries Commission (KVIC) aims to reduce consumption of plastic bags by providing a more sustainable alternative.

Way Forward:

- A comprehensive extended producer responsibility is also needed to ensure manufacturers are accountable for recycling, on the lines of rules for electronic waste. The whole world is mobilising efforts to decrease plastic footprint. Every country is reeling under this menace and there is a huge support system globally continuously created to tackle this menace.

5.7 Bhoj wetland

The National Green Tribunal (NGT) recently, ordered the Madhya Pradesh government to stop the operation of cruise vessels as well as other motor-propelled boats in the Bhoj wetland.

About Bhoj wetland:-



- Location: Bhopal, Madhya Pradesh.
- Bhoj Wetland consists of two contiguous human-made reservoirs.
- The upper and lower lakes are located in the city of Bhopal.

Historical Background:-

- The Bhoj wetland was first conceived by the visionary king Paramara Raja Bhoj in 1005-1055 CE.
- He built the lake by raising an earthen dam across the Kolans.
- The Lower Lake was built much later in 1794 by Chhote Khan, a minister to Nawab Hayath Mohammad Khan.
- Bhadbhada dam was built on the southeast corner of Bhojtal in 1965.
- It was designated as the Ramsar site in 2002.

Threats to the Bhoj Wetland:-

- The Bhoj wetland faces various threats from urbanization and human settlements on all sides.

5.8 Antlion species

Recently, two new antlion species were discovered in Kerala.

Background:-

- Scientists have discovered two new antlion species of the Myrmeleontidae family of order Neuroptera from Kerala.
- A research team of Shadpada Entomology Research Lab (SERL), Christ College, Irinjalakuda, Thrissur, is behind the discovery.

About Antlion species:-

These two new antlion species belong to:-

- Family: Myrmeleontidae family.
- Order: Neuroptera.
- Habitat: These are found throughout the world, primarily in dry, sandy regions.
- Background: This is the 5th and 6th antlion species reported from Kerala and the 125th and 126th species from India.
- The genus Nemoleon is reported for the first time from the Oriental region. (Expansion of the Invasive Plants)
- The research was conducted with financial assistance from the Council of Scientific and Industrial Research (CSIR).

Special Features:-

- Antlions are distinguished by their long, distinct antennae.
- They are commonly known for their pit-building habit.
- Larval stages of only some antlion genera construct the conical pits in loose, dry soil as their predation strategy.
- Larvae of Nemoleon do not build pits.
- They live under the surface in loose soils where they are protected from direct sunlight, wind, and rain.

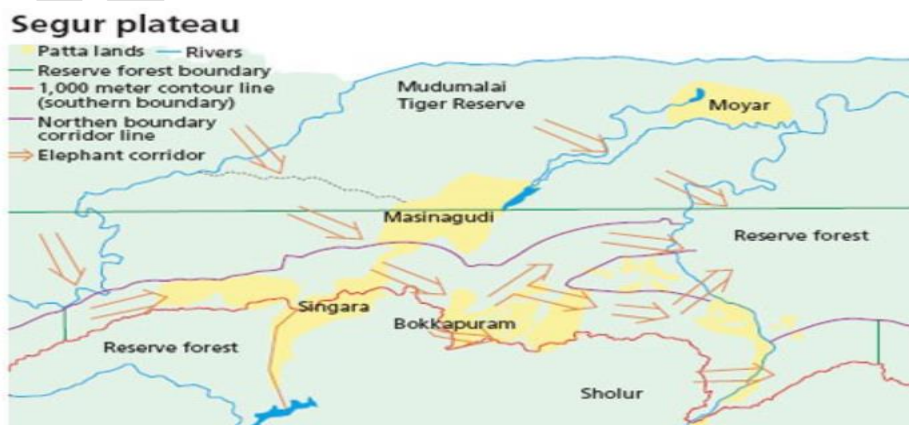
5.9 Segur elephant corridor

A Supreme Court-appointed committee recently declared 12 private resorts, along the Segur elephant corridor, illegal.

Background:-

- The committee's ruling highlighted that the resorts had constructed unlawful structures that impeded the natural movement of elephants.
- Despite assertions from resort owners who disputed the corridor's designation as an elephant habitat, the committee ultimately sided with preserving the corridor's integrity.
- While this decision secures the protection of the corridor, it carries economic implications for the local communities that depend on employment opportunities provided by these resorts.

About Segur elephant corridor:-



- The Segur elephant corridor serves as a crucial passageway for the movement of elephants and various other wildlife species between different habitats within the Nilgiri Biosphere Reserve. (Endangered Asian elephant in Nilgiri Biosphere Reserve)
- The corridor is situated in the ecologically fragile Sigur plateau.
- Sigur plateau connects the Western and the Eastern Ghats.
- It facilitates easy movement of about 6,300 Asiatic elephants from Kerala, Tamil Nadu, and Karnataka.
- It sustains elephant populations and their genetic diversity. (Elephant Conservation)
- The elephants cross the plateau in search of food and water.
- It has the Nilgiri Hills on its southwestern side.
- Moyar River Valley is on its northeastern side.
- The plateau is a low-rainfall marginal land.
- It has poor soils and in recent times, also had a low population density.
- There are five major streams in the Sigur plateau: Moyar River, Sigur River, Avarahalla River, Kedarhalla River, and Gundattihalla River.
- All these rivers originate in the Nilgiris plateau.

5.10 Anamudi Shola national park

- The Pazhathottam area in Anamudi Shola National Park, near Munnar, in Idukki has been transformed into a green heaven teeming with life, by the initiative of the Forest department.
- An eco-development committee named “Haritha Vasantham” was formed for the project, involving local residents in its implementation.

About Anamudi Shola national park:-

- Location: in Devikulam, Idukki, Kerala.
- It is located in the western Ghats.
- The Munnar Wildlife division includes Eravikulam National Park, Chinnar Wildlife Sanctuary, and the Shola National Parks.
- It was declared National Park, in the year 2003.
- It is located in the high ranges of the Southern Western Ghats. (Eravikulam National Park)
- It has the largest Shola Forest patch in South India.
- The Park is contiguous with Anamalai Tiger Reserve, Palani Hills, and the forests of Kannan Devan Hills.
- It also forms the catchment area of Mattupetti Dam and Amaravathi Dam.
- Vegetation: Southern Sub-tropical Hill Forests and Southern Montane Wet Temperate Forests.
- Fauna: mammals, birds, reptiles, amphibians, butterflies, odonates and ants.
- Flora: plant species belonging to Pteridophytes and Angiosperms.

5.11 Mithun

Recently, Northeast’s Mithun got the ‘food animal’ tag.

Background:-

About Mithun:-

- Scientific Name: *Bos frontalis*.
- Distribution: It is native to the lush and hilly regions of Northeast India, particularly the states of Arunachal Pradesh, Nagaland, Manipur, and Mizoram.
- It is often referred to as the “Cattle of the Hills”.
- is considered a descendant of the Indian Gaur or bison. (Animal Welfare Board of India (AWBI))

Physical Characteristics:-

- Mithun resembles the domestic cattle but exhibits distinctive features such as:-
- a hump over its shoulders,
- Long upward-curving horns, and
- a dewlap (skin flap) under its throat.
- Their coat color varies, including shades of black, brown, and white.
- The coloration is often influenced by their age and region.

Cultural Significance:-

- It plays a central role in the cultures and traditions of many indigenous communities in Northeast India.
- It is often referred to as the “family bank” due to its economic importance.
- In various tribal societies, Mithun is used in rituals, festivals, and ceremonies.

Economic Value:-

- Mithun is a valuable asset for local communities, serving as a source of livelihood and sustenance.
- They are used for meat, milk, and hides.
- Their meat is considered a delicacy in the region.
- Mithun farming is an integral part of the traditional agro-pastoral system in these regions.
- Mithun milk, though produced less in quantity, is of high quality and can be used for the preparation of various milk products.
- Leather obtained from this species has been found to be superior to cattle.

Conservation Status:-

- IUCN: Vulnerable.
- Wildlife (Protection) Act of India: Schedule I.
- CITES: Appendix I.

5.12 World Rhino Day 2023

The World Rhino Day 2023 was celebrated recently.

Background:-

- The World Rhino Day is observed on 22nd September every year.

About World Rhino Day 2023:-

- Date: 22th September.
- Objective: to spread awareness for all five species of rhino and the work being done to save them.
- Historical Background: It was first announced by WWF-South Africa in 2010.
- This special day provides the opportunity for cause-related organizations, NGOs, zoos, and members of the public to celebrate rhinos in their own unique ways.
- The scientific name and conservation status of the five species are: –
- Javan Rhinos (*Rhinoceros sondaicus*): Critically Endangered
- Sumatran rhinos (*Dicerorhinus sumatrensis*): Critically Endangered
- Black rhinos (*Diceros bicornis*): Critically Endangered
- White rhinos (*Ceratotherium simum*): Near Threatened (Southern white rhino)
- Greater One-Horned Rhinos (*Rhinoceros unicornis*): Vulnerable

About Indian One-Horned Rhino:-

- The greater one-horned rhino (or “Indian rhino”) is the largest of the rhino species.
- Distribution: Nepal, Bhutan, Pakistan, and Assam, India.
- The greater one-horned rhino is identified by a single black horn about 8-25 inches long and a grey-brown hide with skin folds, which gives it an armour-plated appearance.

- The species is solitary, except when adult males or rhinos nearing adulthood gather at wallows or to graze.
- Food: They primarily graze, with a diet consisting almost entirely of grasses as well as leaves, branches of shrubs and trees, fruit, and aquatic plants.

Conservation Status:-

- IUCN Red List: Vulnerable.
- CITES: Appendix-I.
- Wildlife Protection Act, 1972: Schedule I.

Threats:-

- Poaching for the horns
- Habitat loss
- Population density
- Decreasing Genetic diversity

Conservation Efforts by India:-

- New Delhi Declaration on Asian Rhinos 2019: India, Bhutan, Nepal, Indonesia, and Malaysia have signed a declaration for the conservation and protection of the species.
- DNA profiles of all rhinos.
- National Rhino Conservation Strategy: It was launched in 2019 to conserve the greater one-horned rhinoceros.
- Indian Rhino Vision 2020: It was an ambitious effort to attain a wild population of at least 3,000 greater one-horned rhinos spread over seven protected areas in the Indian state of Assam by the year 2020.

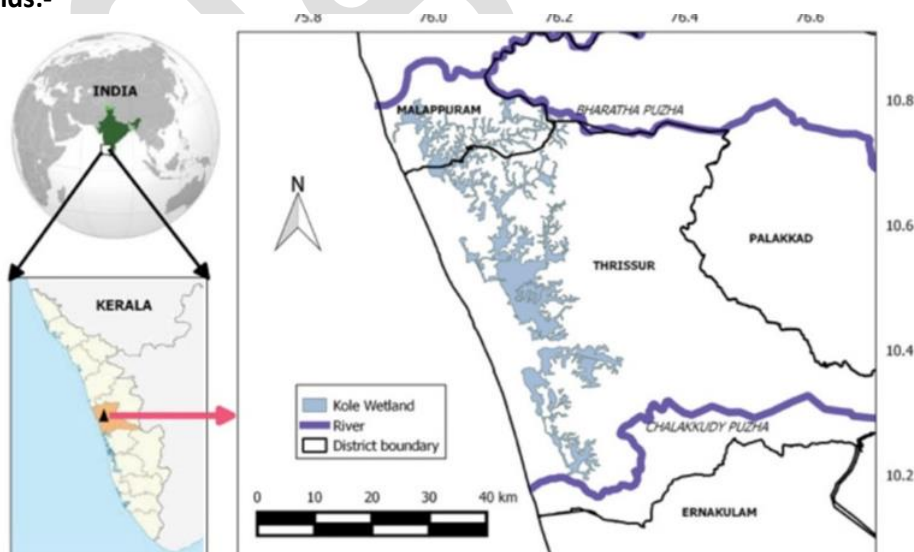
5.13 Kole wetlands

The Kole wetlands of Kerala are facing the threat of alien plants.

Background:-

- *Cabomba furcata*, popularly called as Pink Bloom due its massive flowering, has been a new threat in addition to water hyacinth and *Salvinia molesta* to the Kole wetlands.

About Kole wetlands:-



- Location: Thrissur and Malappuram districts in Kerala, India.
- River: The area extends from the Chalakudy River in the South to the Bharathappuzha River in the North, and to Ponnani Taluk
- It fulfills 40 percent of Kerala's rice requirement.

- It acts as a natural drainage system for Ponnani City, Thrissur City, Thrissur District, and Malappuram District.
- It is one of the largest, highly productive, and threatened wetlands in Kerala.
- It is fertile with alluvium soil which is deposited Kechery and Karuvannoor rivers in the monsoon.
- In terms of the number of birds, the Thrissur Kole Wetlands is the third largest in India after Chilika Lake in Orissa and Amipur Tank in Gujarat. (Launch of 'Wetlands of India' Portal)
- It comes in the Central Asian Flyway of migratory birds.
- It has been recognized as one of India's Important Bird Areas by BirdLife International.
- It is an internationally important Ramsar site. (COP14 of Ramsar Convention on Wetlands)
- It is known for its high biodiversity.
- Threat: It is facing a new threat from an invasive alien plant species called *Cabomba furcata*, also known as Pink Bloom.

About *Cabomba furcata*:-

- *Cabomba furcata* is a species of aquatic plant in the water shield family.
- It is known by the common names red cabomba and forked fanwort.
- It is native to Central and South America and as far north as Cuba and the tip of Florida.
- It reaches a maximum height between 30 and 80 centimeters and is up to 8 centimeters wide.
- It bears purple flowers.
- This is used as an aquarium plant.
- Carbon dioxide addition is usually necessary, mostly because this plant requires high light and regular fertilization for optimal growth.
- It has been reported as an invasive species in Kerala, India.
- Its active stem propagation prevents light from penetrating the surface of water.
- It suffocates the water bodies, economically and ecologically hindering the growth of native aquatic plants and freshwater fish.
- It requires a huge quantity of oxygen, resulting in a decline in biodiversity and water quality.
- While its vibrant pink appearance may seem picturesque.
- It poses a significant threat to the biodiversity and agricultural productivity of the region.

6. Security issues

6.1 DSC A 20 (Yard 325)

Recently, the 'DSC A 20' (Yard 325) ship was launched.

About DSC A 20 (Yard 325):-

- Built by: M/s Titagarh Rail Systems Ltd (TRSL), Kolkata (formerly known as M/s Titagarh Wagons Ltd (TWL)) for the Indian Navy.
- Launched: 31 Aug 2023.
- Launched at Titagarh, Kolkata (WB).
- The Launch Ceremony was presided over by VAdm Sanjay Mahindru, Deputy Chief of Naval Staff (DCNS).
- In keeping with Naval tradition, Mrs. Aradhana Mahindru launched the ship with an invocation from Atharva Veda.
- Historical Background: The contract for building five (05) Diving Support Craft (DSC) was signed between MoD and M/s Titagarh Wagons Ltd (TWL), Kolkata on 12 Feb 2021.
- All five (05) DSC are anticipated to be delivered to the Indian Navy in FY 2024-25.
- DSC A 20' (Yard 325) is the first ship of the Five (05) Diving Support Craft (DSC) project.
- These ships are designed to undertake operational/ training diving operations in harbours and coastal waters.
- They are 30 m long catamaran hull ships, with a displacement of approx 300 tons.
- DSC are being fitted with state-of-the-art diving equipment and tools for performing diving operations.
- These ships are indigenously designed and built under relevant Naval Rules and Regulations of the Indian Register of Shipping (IRS).
- The hydrodynamic analysis/ model testing of the ships during the design stage was undertaken at the Naval Science and Technological Laboratory (NSTL), Visakhapatnam.
- Significance: These ships are proud flag bearers of Make in India and Make for the World initiatives of the Government of India (GoI)/ Ministry of Defence (MoD).

6.2 Thal Sena Bhawan

As per recent reports, the Indian Army's new Thal Sena Bhawan will conform with GRIHA-IV (Green Rating for Integrated Habitat Assessment) norms.

Background:-

- The Indian Army's new Thal Sena Bhawan (TSB), coming up on a sprawling 39-acre site with a built-up area of 143,450 sq. m.
- The building will be ready by May-June 2025.

About Thal Sena Bhawan:-

- Area: 143,450 sq. m.
- It has been designed to be earthquake-resistant.
- The complex is designed to cater to the needs of 5,600 personnel.
- It will bring together the Indian Army Headquarters currently split into eight pockets across Delhi,

including South Block, Sena Bhawan, Hutments Area, R. K. Puram, and Shankar Vihar.

- Thal Sena Bhawan adheres to GRIHA-IV specifications and criteria.
- For instance, the topsoil of the entire site will be preserved, and its fertility will be maintained during the construction phase.
- This preserved soil will then be used for landscaping the area after construction.
- GRIHA: It is the national rating system that evaluates the environmental performance of a building holistically over its entire life cycle.
- It evaluates the environmental performance of a building holistically over its entire life cycle, thereby providing a definitive standard for what constitutes a 'green building'.
- These buildings consume resources from municipal wastes or indirectly from emissions of electricity generation.
- The rating system, based on accepted energy and environmental principles, will seek to strike a balance between the established practices and emerging concepts, both national and international.
- It is under the Ministry of New and Renewable Energy.
- The 'Thal Sena Bhawan' is conceptualized as a multi-story green building. (Green Buildings Need & Benefits)
- It will house offices, a residential area for security personnel, and basic amenities.

Significance:-

- The new structure will bring together various pockets of the Army headquarters spread across Delhi under one roof.
- It will improve working efficiency while reducing the carbon footprint and logistics requirements.
- It would also allow more family time for all personnel at peace posting in Delhi.
- The newly created Department of Military Affairs (DMA) headed by the Chief of Defence Staff (CDS) will work from here. This will help in jointness.

6.3 Maritime Infrastructure Perspective Plan (MIPP) 2023-37

The Minister of State for Defence recently released the Maritime Infrastructure Perspective Plan (MIPP), 2023-37 at the second edition of the biennial Naval Commanders Conference.

About Maritime Infrastructure Perspective Plan (MIPP):

- It aims to synchronise and enmesh the infrastructure requirements of the Navy, over the next 15 years, through a comprehensive perspective plan model.
- It is aligned with the government's vision on creation of sustainable infrastructure, and encompasses salient for compliance with broader policy directives on PM Gati Shakti project, disaster resilience, transition to net zero, among others.
- The Navy received a revised set of "IRS Rules and Regulations Handbook for Construction and Classification of Naval Combatants" to accommodate technological advancements and promote self-reliance in naval shipbuilding.
- This rule book represents the self-reliance of the naval shipbuilding industry and aims to keep pace with modern technology.
- Two new initiatives: the "Family Logbook for Defence Civilian Personnel of the Indian Navy" for personal records and the "Electronic Service Document Project" to enhance HR records within the Navy.

Significance of Maritime security for India:

- India as a maritime nation: With 12 major and 200+ non-major ports situated along its 7500 km long coastline and a vast network of navigable waterways.
- Trade: The country's maritime sector plays a crucial role in its overall trade and growth, with 95% of the country's trade volume and 65% of the trade value being undertaken through maritime transport.
- Blue economy: Marine fisheries sector is one major contributor to the economy and livelihood of the fishing community.
- There are almost three lakh fishing vessels.
- India's foreign relations: Maritime security is a prominent feature of India's relations with Indian Ocean littoral states.
- The Indian Ocean, which has been an "ocean of peace", is now witness to rivalries and competitions.

Challenges associated maritime sector in India:

- Inadequate infrastructure: India's maritime infrastructure, including ports and inland waterways, is inadequate and requires significant investment and development.
- Poor connectivity: The lack of connectivity between ports, as well as ports and hinterland, leads to inefficiencies and increased costs.
- Skill gaps: There is a shortage of skilled manpower in the maritime sector, including seafarers, engineers, and other professionals.
- Environmental concerns: The maritime sector can have a significant impact on the environment, and there are concerns around issues such as oil spills, pollution, and the impact of climate change.
- Security challenges: Terrorism (26/11 attack), arms smuggling, piracy, drug trafficking, illegal migration and natural disasters became the major challenges in the maritime domain.
- China factor: With the growing Chinese belligerence, efforts to further strengthen maritime security and surveillance of India's coastline needs to be undertaken.

India's Initiatives for Maritime Security:

- Security and Growth for All (SAGAR) Policy: India's SAGAR policy is an integrated regional framework, unveiled by the Indian Prime Minister during a visit to Mauritius in March 2015.
- SAGAR is a maritime initiative which gives priority to the Indian Ocean region (IOR) for ensuring peace, stability and prosperity of India in the Indian Ocean region.
- Abiding by the International Law: India has time and again reiterated its commitment to respecting the rights of all nations as per the UN Convention on Law of Sea (UNCLOS)
- UNCLOS 1982, also known as Law of the Sea divides marine areas into five main zones namely: Internal Waters, Territorial Sea, Contiguous Zone, Exclusive Economic Zone (EEZ), and the High Seas.
- Data Sharing: Sharing data on threats to commercial shipping is an important component of enhancing maritime security.
- India established an International Fusion Centre (IFC) for the Indian Ocean region in Gurugram in 2018.

6.4 Counter Terrorism Field Training Exercise (FTX) 2023

Recently, the Indian Army Contingent departed for the ASEAN Defence Ministers Meeting (ADMM) Plus Expert Working Group (EWG) on Counter Terrorism Field Training Exercise (FTX) 2023.

About Counter Terrorism Field Training Exercise (FTX) 2023:-

- Date: 25th to 30th September 2023.
- Venue: Russia.
- It is a multinational joint military exercise being hosted by Russia as a co-chair of the EWG along with Myanmar. (Exercise IBSAMAR)
- It was preceded by the Table Top Exercise of the ADMM Plus EWG on Counter-Terrorism at Nay Pyi Taw, Myanmar from 2nd to 4th August 2023.

Historical Background:-

- Since 2017, the ADMM Plus has met annually to allow dialogue and cooperation among the Association of Southeast Asian Nations (ASEAN) and Plus countries.
- The inaugural ADMM Plus was convened in Ha Noi, Vietnam on 12th October 2010.
- This year ASEAN member states along with Plus Group will be participating in the exercise.
- Objective of the exercise: strengthening and promoting regional cooperation in the field of counter-terrorism.
- The exercise will comprise a number of counter-terrorism drills including destroying of terrorist groups in a fortified area.
- ADMM Plus EWG on Counter-terrorism 2023 will provide the Indian Army with a platform to share their expertise and best practices in counter-terrorism operations.
- It will increase the cooperation between the other 12 participating countries. (Military Exercises)
- The Indian Army looks forward to an enriching professional experience from the exercise.

7. Social issues

7.1 India's growing mental health issues

The Standing Committee on Health and Family Welfare recently tabled its report on 'Mental Health Care and Its Management in Contemporary Times' in the Parliament.

Highlights of the report:

- The report defines mental health as a state of well-being that enables people to cope with the stress of life.
- It highlighted that the mental health-related issues are rising in India and the country lags with inadequate staff, medical infrastructure and budgetary allocation.
- The Committee stated that India currently has 0.75 psychiatrists per lakh people, which is significantly low.
- The Committee observed that if India targets having three psychiatrists per lakh people, it will need 27,000 more psychiatrists.

Global Scenario:

- In 2010, global economic losses of around \$2.5 trillion annually were attributed to poor mental health, stemming from diminished well-being and productivity. This will surge to \$6 trillion by 2030.
- Inadequate funding: The report highlights inadequate funding for care and research.
- It requires not only increased financial support and expanded psychiatry residency programmes, but also establishment of positions for trained psychiatrists and ensuring an ample number of working psychologists.

Status of mental healthcare

India:

- It is estimated that 6-7 % of the population suffers from mental disorders in India.
- WHO estimates that the burden of mental health problems in India is 2443 disability-adjusted life years (DALYs) per 100 00 population.
- The age-adjusted suicide rate per 100 000 population is 21.1.
- The economic loss due to mental health conditions, between 2012-2030, is estimated at USD 1.03 trillion.

Global:

- As per World Bank, nearly 1 billion people live with a mental disorder and in low-income countries; more than 75% of people with the disorder do not receive treatment.
- Every 40 seconds, a person dies by suicide.
- About 50% of mental health disorders start by the age of 14.
- As per WHO Depression is one of the leading causes of disability and suicide is the fourth leading cause of death among 15-29-year-olds.
- People with mental illness may be subject to the UN Convention on the Rights of Persons with Disabilities (CRPD).

Causes of mental illness:

- Exposure to unfavourable social, economic, geopolitical and environmental circumstances including poverty, violence, inequality and environmental deprivation also increases people's risk of experiencing mental health conditions.
- Over the past two years, the pandemic-led lockdowns and the uncertainties associated with them have had a detrimental effect on mental well-being
- Early adverse life experiences, such as trauma or a history of abuse (for example, child abuse, sexual assault, witnessing violence, etc.)

- Use of alcohol or drugs, having feelings of loneliness or isolation, etc.

Impacts of poor mental health:

- Impact on relationships: Mental-health conditions during adolescence and young adulthood can have a significantly negative impact on the development of safe and healthy relationships with peers, parents, teachers, colleagues and partners.
- Impact on physical health: A study found that positive psychological well-being can reduce the risks of heart attack and stroke.
- On the other hand, poor mental status can lead to poor physical health or harmful behaviour.
- Depression has been linked to many chronic illnesses.
- These illnesses include diabetes, asthma, cancer, cardiovascular disease, and arthritis.
- Impact on productivity: It impacts a person's ability to concentrate and engage in productive activities.

Government of India Initiatives:

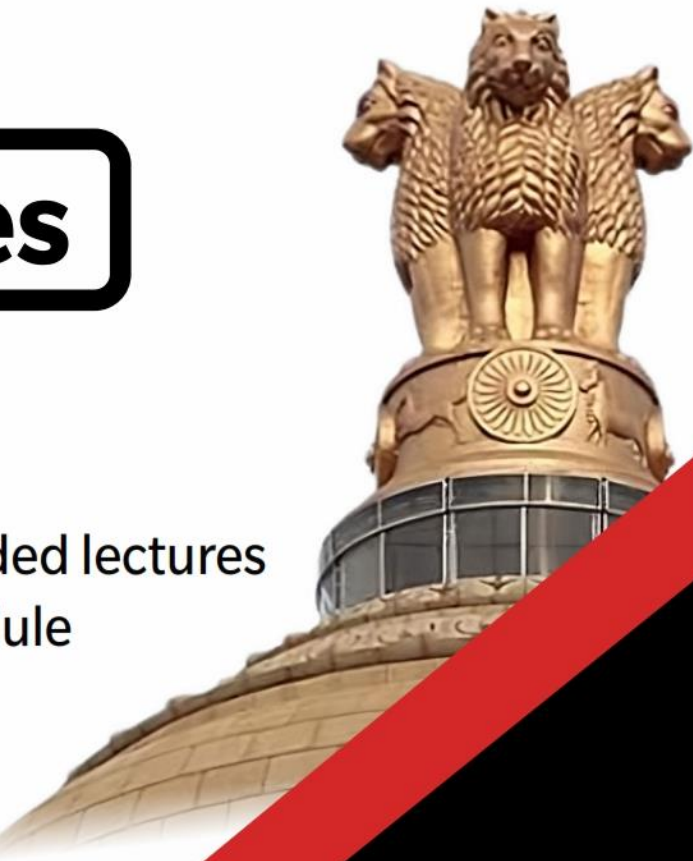
- National Mental Health Programme (NMHP) in 1982: To ensure the availability and accessibility of minimum mental healthcare for all in the foreseeable future.
- Mental Healthcare Act, 2017: It provides mental healthcare and services for persons with mental illness in India.
- Rights of Persons with Disabilities Act, 2017: The Act acknowledges mental illness as a disability and seeks to enhance the Rights and Entitlements of the Disabled.

National Suicide Prevention Strategy

- National Tele-Mental Health Programme: To improve access to quality mental health counselling and care services in the country.
- Kiran Helpline: It provides for suicide prevention and can help with support and crisis management.
- World Mental Health Day: To raise awareness of mental health issues around the world and to mobilize efforts in support of mental health.

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