



CURRENT AFFAIRS PROGRAM

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1) PARLIAMENTARY PROCEDURE: NO CONFIDENCE MOTION

- **Why in news?**
 - Lok Sabha Speaker Om Birla admitted a motion of No-Confidence against the government moved by Congress Deputy Leader in Lok Sabha Gaurav Gogoi (July 2023)
- **Example Questions**
 - What is meant by Vote of No Confidence? Discuss the significant role that vote of no-confidence plays in Indian political system [10 marks, 150 words]
- **Introduction**
 - Article 75(3) of Indian Constitution says that the council of ministers shall be collectively responsible to the Lok Sabha.
 - Similarly, in Part VI of the Constitution, Article 164(2) says "The Council of Ministers shall be collectively responsible to the Legislative Assembly of the State."
 - This means that majority of the Lok Sabha members/Legislative Assembly members must support the PM/CM and her Council of Ministers.
 - In other words, Lok Sabha/Legislative assembly can remove the ministry from office by passing a no-confidence motion.
 - A no-confidence motion is an attempt, usually by an opposition party, to get the government of the day to prove its majority on the floor of the house.
 - Rule 198 of the **Rules of Procedure and Conduct in Lok Sabha** specifies the procedure for a motion of no-confidence.
 - Any member of the Lok Sabha can move the motion. The member moving the motion doesn't have to give reasons in support of the motion.
 - If the speaker is of the opinion that the motion is proper, then she reads the motion to the house. A minimum of 50 members have to accept the motion. If not, the motion fails and the member who moved the motion is informed about it.
 - **If a no-confidence motion is passed** (i.e., accepted by the majority)
 - Government has to resign.
- **Significance of No Confidence Motion**
 - The motion helps in testing the majority of the government. Thus, it ensures collective responsibility and thus accountability of council of ministers towards the Lok Sabha.
 - When the motion is being taken up, members of Lok Sabha have an opportunity to present their views on performance of the government.
 - It provides an opportunity to debate and discuss key issues of national significance.
- **History of No-Confidence Motion in India:**

- **27 No-Confidence Motion** have been moved so far. None of these motions, including the one against the PM Modi government in 2018, has been successful.
 - In **1979**, PM Morarji Desai realized that he didn't have the support of the majority of MPs, and therefore resigned before the house votes on the motion.
- **Note2:**
 - Difference between "No-Confidence Motion" and "Motion of Confidence / Trust Vote"
 - Motion of confidence/trust vote is moved by government, as an ordinary motion under Rule 184.
 - The term '**No-confidence motion**' is **not mentioned in the constitution of India**. It is provided in the Rules of Procedure of the Lok Sabha.

2) STATUTORY BODIES: NATIONAL COMMISSION OF WOMEN (NCW)

- **Why in news?**
 - After the leak of Manipur videos, a lot of questions are being raised about the functioning of National Commission of Women (July 2023)
- **Practice Questions:**
 - Is the National Commission for Women able to strategize and tackle the problems that women face at both public and private spheres? Give reasons in support of your answer [Mains 2017, 15 marks, 250 words]
 - What are the limitations and challenges faced by the National Commission of Women in terms of its jurisdiction and enforcement of recommendations? Suggest ways to overcome these challenges and strengthen its impact? [15 marks, 250 words]
- **Basics:**
 - NCW was set up as a statutory body in **Jan 1992** under the National Commission for Women Act, 1990.
 - It consists of a chairperson, five members and a member secretary all to be nominated by Central government.
 - **Key Functions of the National Commission of Women (NCW)** includes:
 - **Reviewing the existing constitutional and legal framework** related to women and recommend changes to make them more effective.
 - Take up violation of rights of women with appropriate authority.
 - Act on complaints suo motu in relation to issues concerning deprivation of women.
 - **Inspect institutions where women are kept** as prisoners or otherwise and if necessary, take up with relevant authorities any remedial action.
 - The commission also has powers that are vested in a **Civil Court**.
 - It submits an annual report before the central government. Apart from this, it submits other reports which it deems to be fit.
- **Key Achievements of National Commission of Women (NCW)** in the last 21 years of its existence:
 - **Gender Mainstreaming:** The NCW has collaborated with non-governmental organizations and civil society groups to extend its reach and impact in addressing women's issue.

- **Addressing Violence against women:** The NCW has played a crucial role in addressing violence against women, including domestic violence, dowry-related violence etc. It has also raised awareness, provided support to victims, and advocated for stronger legal measures to protect rights of women.
 - **Policy Advocacy:** NCW has been involved in laws and policy related to women including Protection of Women from Domestic Violence Act and the Sexual Harassment of Women at Workplace (Prevention, Prohibition, Rehabilitation) Act etc.
 - **Gender Sensitization and Awareness Programs** are being run by the Commission
 - For e.g. in collaboration with Kendriya Vidyalayas they are running these kinds of programs for class XI and Class XII students.
 - **Helplines and Support Services:** To provide assistance to women facing various forms of violence and discrimination. These helplines offer counselling, legal aid, and other forms of support.
 - **International Engagements:** NCW has engaged in international collaborations and partnerships to address gender issues.
 - **Research cell** of the NCW also looks after emerging problems of Indian women due to discrimination and gender bias.
- **But,** over the years NCW has also been criticized for failing to tackle the problems faced by women in various parts of India.
- Serious issue of sexual violence against women during the Manipur Violence.
 - The practice of dowry in direct and indirect forms is rampant within the country
 - The representation of women in senior leadership position including as MLAs and MPs is still below the global standards.
- **Key Criticisms and Limitations:**
- **Limited power to enforce its recommendations:** This has made it challenging for them to ensure compliance with its directives.
 - **Women's Commissions** at the National Level and State Levels have become toothless tigers, merely pushing papers around.
 - They seem busy more in paper work, failing to prioritize field visits.
 - **Political Appointments** in the commission: Since the members of the commission are nominated by government, most of the commission (National Commission as well as State Commissions) are wary of even minor criticism of the government. Also, they are over-enthusiastic in taking up matters in states ruled by opposition.
 - **Resource Constraints:** The commission suffers from financial and logistical constraints, limiting its reach and effectiveness in addressing issues at grassroot levels.
 - They are dependent on grants offered from central government which are very less to cater to its needs.
 - For e.g. in the recent case of Manipur violence, NCW was so overwhelmed with the number of complaints that it could just forward the complaints to appropriate authority.
 - **Lack of Awareness:** Many women are not even aware of the NCW's existence or its services, leading to underutilization of its resources.
 - **Complex legal framework** also hinders the work of NCW in ensuring grievance redressal of women.

- **Deep rooted Social and Cultural Norms, stereotypes and attitudes towards women** continue to perpetuate gender-based discrimination and violence, making it difficult to eradicate such issues solely through institutional interventions.
- All these factors hinder the grievance redressal in various women issues and the evil of dowry, domestic violence, sexual harassment etc. against the women continued.
- **Way Forward:**
 - The NCW needs to be provided with more executive power to ensure enforceability of its recommendations.
 - **Reforming the Selection Process for Chairperson and Members of Commission:**
 - Advertise for the post of chairpersons and members.
 - From the people who have applied and have required qualifications, selection should be made by a committee consisting of member from ruling party, from opposition party, a Supreme Court Judge and a representative of Women NGOs.
 - **Regular Social Audit of the performance of the Commission:** This would give citizens an idea of their actual working and increase their accountability towards citizens.
 - **Allocate more resources to NCW**, enabling it to conduct comprehensive investigations, outreach programs, and awareness campaigns to reach to marginalized and vulnerable communities.
 - **Foster collaboration with Civil Society** to better understand the situation on ground and impact of various initiatives.
 - **NCW along with other stakeholders** also need to continuously work towards changing societal attitudes towards gender roles.

- **Conclusion:**
 - By the implementation of suggested solutions, the National Commission for Women can enhance its effectiveness and play a proactive role in safeguarding women's rights, promoting gender equality, and addressing the challenges faced by women in India.

3) SOCIAL JUSTICE: MANUAL SCAVENGING

- **Why in news recently?**
 - 530 districts reported as free of manual scavenging: Centre (July 2023: Source: TH)
- **Example Questions**
 1. What is manual scavenging? Discuss the key factors hindering the eradication of manual scavenging in India. [10 marks, 150 words]
 2. Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 is definitely an improvement over the previous laws against manual scavenging, but, it has not been able to eradicate manual scavenging from the country. Why? [15 marks, 250 marks]
- **Introduction**
 - Even after more than seven decades of independence, India is still striving to put a stop to one of the most inhumane and humiliating of human activities- manual scavenging.
 - Manual scavenging is the practice of manually cleaning excrement from private and public dry toilets, pipes, sewerage, open drains etc.

- It is a hereditary, caste based occupation that predominantly involves forced labor. More than an occupation, it is a custom or practice that has continued un-interrupted despite all the available technology and alternatives.
- ILO recognizes three forms of manual scavenging in India
 - i. Removal of human excrement from public streets and dry latrines
 - ii. Cleaning septic tanks
 - iii. Cleaning gutters and sewers

- **Why Manual Scavenging needs to end?**

i. **Human Rights Violation:**

- Manual Scavenging is modern day slavery. Its continuance in 21st century should horrify and outrage us all. It degrades and dehumanizes a human being by forcing one human to take excreta of other human.
- Supreme Court of India has held that manual scavenging violates international human rights law and has called for prohibition of manual scavenging.
- In 2014, in **Safai Karmchari Andolan & Ors vs Union of India** it also provided for a compensation of Rs 10 lakh to the family of a person who dies while working as manual scavenger.

ii. **Health Hazards**

- Several studies on occupational health hazards among sewage and sanitation workers in India reveal that the direct handling of human excreta without any protective gear by these workers lead to **serious health consequences**, and often **death**.
- **Exposure to harmful gases** like methane and hydrogen sulfide leads to cardiovascular degeneration, skin problems, respiratory system problems, infections like hepatitis, leptospirosis and helicobacter.

iii. **It perpetuates caste discrimination**

- Traditionally, people from a particular caste group were responsible for this work. Today, on many occasions, they are forced to continue to work as manual scavengers.
- This **caste-designated occupation reinforces social stigma** that they are unclean or untouchable and perpetuates the wide-spread discrimination.
- Further, village panchayats and urban local bodies hire people only from particular caste groups for manual scavenging.
- The discrimination then extends to all facets of their lives, including in access to education for their children, makes it more likely that their children will have no choice but to continue to work as manual scavengers.
- These sub castes of Dalits are considered untouchables by other Dalit communities too.

iv. **It perpetuates gender discrimination**

- Of all the manual scavengers in the country, most of them are women. Especially in rural areas, it is women from weaker communities who walk out every morning to manually clean excreta in other households.

v. Hinders fight against Open defecation

- Manual Scavenging becomes one of the reasons which perpetuates open defecation as people defecating in open know that someone would be available to clean the excreta.
- So eradication of manual scavenging will also reduce/eliminate open defecation.

- Steps Taken by government of India.

▫ Laws dealing with manual scavenging

1. The Protection of Civil Rights Act, 1955 -> banned forced manual scavenging.
2. The employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993
 - Declared the employment of manual scavengers and construction of dry toilets to be punishable with fines (upto Rs 5 Lakh) and imprisonment (upto 5 Years).
 - **Has the law been effective?**
 - Not a single conviction has taken place under the law in 25 years.
3. Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013
 - It supersedes the 1993 act.
 - Extends the coverage: Goes beyond prohibition of dry latrines, and prohibits not only cleaning of dry latrines but also outlaws all type of manual cleanings such as cleaning of sewers, gutters and septic tanks without protective gears.
 - Local authority or agency is required to use appropriate technological appliances for cleaning of sewers, septic tanks and other spaces to eliminate manual scavenging.
 - Rehabilitation Package: It recognizes the constitutional obligation to correct the historical injustices and indignity suffered by manual scavenging communities by providing alternate livelihood opportunities and other assistance in the form of cash assistance, Housing Provisions, Scholarships for children, legal assistance etc.

- Present Schemes which deal with ending manual scavenging

i. NAMASTE Scheme

- National Action For Mechanized Sanitation Ecosystem (NAMASTE) is a central sector scheme launched in 2022.
- It is undertaken jointly by the MoHUA and MoSJ&E and aims to eradicate unsafe sewer and septic tank cleaning projects.
- The objective of the scheme is to achieve zero fatalities in sanitation; achieve all sanitation work by skilled workers; No sanitation worker should come in direct

contact with faecal matter; Sanitation workers are collectivized in SHGs and are empowered to run sanitation enterprises.

- Key features:

- Identification of sewer/septic tank workers (SSWs)
- Occupational Training and Distribution of PPE Kits to SSWs
- Assistance to Safety Devices to Sanitation Response Units (SRUs)
- Extending health Insurance Benefits to identified SSWs and families
- Livelihood Assistance: Promote Mechanization and Enterprise development by providing funding support and subsidy (capital + Interest) to the sanitation workers, to procure sanitation related equipment
- IEC (Information Education and Communication) Campaign: Massive Campaigns would be undertaken jointly by ULBs & NSKFDC to spread awareness about NAMASTE

ii. Swatch Bharat Mission

- One of the goals was to make Indian manual scavenging free by 2019
- Under this scheme all the dry latrines were converted into watered latrines.

- **Current Situation:**

- **As per Government:**

- The Union Government in Parliament has said that India had seen no deaths due to manual scavenging in the last five years, while adding that 330 people have died while engaged in cleaning sewers and septic tanks (July 2023)
- The MoS&E also said that a total of 530/766 districts across the country had so far reported themselves to be free of manual scavenging with rest yet to do so.
- According to data released by the government in Parliament in 2021, over 90% of manual scavengers identified in the surveys till 2018, were from scheduled caste communities.
- The government also says that surveys conducted in 2013 and 2018 had identified all existing manual scavengers (58,000).
 - According to Scheme for rehabilitation of manual scavengers, the 58,000 identified sewer workers have been given a one-time cash payout of Rs 40,000 each.
 - In addition, around 22,000 of them have been connected to skills and training program.
 - Subsidies and loans are available to any of them wishing to set up their own business.

- **NGO's and other Critics say that the above classification is inappropriate.**

- The Central government does not identify deaths due to manual scavenging and instead calls them deaths due to hazardous cleaning of septic tanks and sewers. According to Bezwada Wilson, the definition of manual scavenging is clear and that the Centre is trying to manipulate it.

- **Why the scourge still continues:**

- **Failure to properly identify people still engaged in manual scavenging.**
 - **Lack of modernization of the sanitation infrastructure** -> forces Railways, local bodies to hire manual scavengers either directly or indirectly.
 - **Lack of political pressure** - the manual scavengers constitute a miniscule % of voters and that too is not concentrated in particular constituencies but distributed throughout the country. Thus, it hasn't emerged as an important political issue.
 - **Socio-Economic Conditions**
 - **High Unemployment rate** -> Forced labor
 - **Deep rooted cultural and religious traditions** are also responsible for the continuation of the scourge.
 - **Poor implementation of anti-manual scavenging laws and weak law and order situation**
 - There is a shortage of sanitary inspectors (officers responsible for implementation of 2013 act) in most of the ULBs -> Not a single person has been convicted under the law in last 25 years.
 - Further poor law and order situation allows forced manual scavenging to continue.
- **Way Forward / How to deal with Manual Scavenging**
- i. **Identification of Manual Scavengers**
 - An accurate estimation of the number of dry latrines and the number of people involved in manual scavenging would be the first step towards ending the scourge.
 - ii. **Upgrading Sanitation Infrastructure**
 - It is impossible to end this scourge without creating an advanced sanitation infrastructure. ULBs and state governments across the country, following the example of Delhi and Hyderabad, must ensure that every sanitation worker is provided with equipment that ensures their safety.
 - Mechanized cleaning of sewers and septic tanks should be made mandatory, the word "manhole" should be replaced by "machinehole" in official usage;
 - Steps like completely watered toilets in home, bio toilets in Railways are good initiatives and should cover the whole country quickly.
 - iii. **Timely and Proper Implementation of various laws and schemes**
 - Effective Implementation of NAMASTE will lead to proper identification, infrastructure improvement and leading to people moving away from manual scavenging.
 - **Enforce law against local government officials and bodies** who employ people to work as manual scavengers
 - **End Coercion:** Ensure that officials effectively intervene to stop communities from being coerced to practice manual scavenging, including when members of such communities face threats and intimidation for attempting to leave manual scavenging.
 - **Ensure the rehabilitation entitlement under the 2013 act**
 - iv. **Annihilation of caste**
 - **Caste system** has played an important role in perpetuation of this practice and decreasing the role of caste in society will play a very important role in ending manual scavenging.

- Issue has roots in cultural and religious tradition of India -> Religious leaders can play a very important role -> integrates members of the community within society by taking them to temples, eating with them etc.

4) SOCIAL JUSTICE: HEALTH – GENERIC MEDICINES

- Why in news recently?
 - Will generic supply of Bedaquiline be accessible (July 2023: Source - TH)
 - On 18th July 2023, the patent on Bedaquiline expired.
 - J&J have filed secondary patents over Bedaquiline till 2027 which have been granted in 66 low- and middle-income countries.
 - But the Indian Patent office has rejected the U.S. corporations J&J's secondary patent.
 - Indian Manufacturers will now be able to supply affordable, quality assured generic version of Bedaquiline. However, they will not be able to export the medicine to 34 of the 43 countries with high burden of TB.
- Example Questions
 - "Generic medicines can play a key role in making India's health sector affordable". Discuss. [15 marks, 200 words]
- What is a generic drug?
 - Generic drug is a low cost version of pharmaceutical drug that is equivalent to a brand-name product in dosage, strength, route of administration, quality, performance and intended use.
 - They usually enter market after patent protection of the original drug expires.
 - Branded Generics
 - Even after expiration of patents, drugs are made available under certain brands and are called branded generics.
- Government's attempt in promoting generic drugs
 - Making it mandatory for all chemists to display generic medicines prominently
 - Medical Council's code of conduct advises generic prescriptions by doctors as part of their duties and responsibilities. MCI has issued a circular saying doctors to face disciplinary action if they prescribe brand name drug
 - **Pradhan Mantri Bhartiya Janaushadhi Pariyojna (PMBJP)** was launched by Department of Pharmaceuticals, Ministry of Chemical and Fertilizers, Government of India as a direct market intervention scheme in 2008.
 - As of Jan 2023, 9,000 Jan Aushadhi Kendras are functional across the country.
 - The government has set up a target to increase the number of Jan Aushadhi Kendras to 10,000 by March 2024.
 - It offers 1759 medicines, and 280 surgical devices covering all major therapeutic groups.
- Advantages
 1. Affordable healthcare

- Products sold as unbranded generic medicines are cheaper than the branded medicines
 - It doesn't include manufacturer's marketing cost, cost spent on prescribing doctors.
 - Various studies have shown that high out of pocket expenditure is pushing a lot of families into poverty.
2. **Breaks the doctor-pharma nexus**
 - Presently, doctors and pharma companies have a nexus under which doctors prescribe only the brand of companies giving them some kind of advantages.
 3. **Reduce unnecessary prescription**
 - This is resorted to by doctor if pharma companies are paying them
 4. **Promotes domestic pharma companies**
 - As India is a world leader in generic drug manufacturing, promoting it would further improve the growth of domestic pharma sector.
 5. **Difficult for quacks to function**
 - They might not even know the generic names

- **Limitations**

1. **Quality concerns**
 - There are concerns about lack of uniformity in the quality of generic versions
 - Clinical practices have shown than many generic versions don't work.
 - Doctors trust the popular, visible and multinational brand more.
2. **Erode doctor-patient relationship**
 - As by prescribing generic drugs, doctor refuse to take responsibility for clinical outcomes.
3. **Low profit margins for retailers**
 - Retails pharmacists, in turn, have little incentive in stocking and selling low price generic medicines since they have lower profit margins.
4. **Shortage**
 - Availability of generic medicines have faced shortage. Even the few Jan Aushadhi stores that have been opened since 2008 have not been able to continuously supply these medicines regularly.
 - Still, 90% of the Indian pharmaceutical needs are fulfilled by the branded versions.
5. **Difficult for common person to understand**
 - Salt names, especially for FDCs will be difficult for common people to understand.
6. **May discourage big pharma companies to launch their new medicines in India**

- **Way forward**

- **Increasing production and availability**
 - » Government should ensure more Jan Aushadhi kendras to ensure easy availability and accessibility of generic medicines before taking any such decision.
- **Improving regulations of pharma sector**
 - » Currently, ensuring the quality of drug is a problem in the absence of adequate regulations and shortage of drug inspectors and lab facilities to check drug quality
 - » There is a shortage of drug quality inspectors with only about 18,00 inspectors for the entire country.

- **Allow pharmacist to substitute for alternative:** Laws for enabling substitution of generic and branded equivalents by pharmacists need to be introduced.
 - **No Branding for out of patent drugs**
 - » Medicines out of patent should not be allowed to be sold in branded form.
 - **Increased awareness** on generics needed among consumers, pharmacists
 - **Short names for generic FDCs**
 - » Briefer officially approved trade names for all rational fixed dose combinations so that doctors do not have to painfully write out the generic names of their multiple constituents
 - **Improving government health facilities**
 - » We also need a fully functioning health system with free healthcare for all like in UK, Canada and Scandinavian countries is needed.
- **Conclusion**
- Overall, generic prescribing is a good move in the right direction and will have several positive ramifications for healthcare in India. However, like everything, successful implementation would require a series of enabling steps at different levels from production to prescription and from Quantity to Quality.

1) ECONOMY: EXTERNAL SECTOR – FOREIGN DIRECT INVESTMENT (FDI)

- Why in News?

- » Total FDI inflows (which includes equity inflow, re-invested earnings, and other capital) declined by 16% to \$70.97 billion in FY23 (May 2023). Last year, i.e., FY22, India has recorded FDI inflow of US\$84.8 billion which was the highest ever.
 - FDI equity dip 22% to \$46 billion in FY23 (May 2023)
- » Finance Ministry is pushing for reforms to spur FDI inflows in India. It called for more attention to issues faced by global investors, including infrastructure issues and the inability to set up larger factories (July 2023)

- Example Questions

- Justify the need for FDI for the development of the Indian economy. Why there is a gap between MoUs signed and actual FDIs? Suggest remedial steps to be taken for increasing actual FDIs in India (CSE Mains 2016, 200 words, 12.5 marks).
- "Too much focus on FDI may be associated with certain limitations for economy". Elaborate (10 marks, 150 words)
- Despite economic slow down due to COVID-19, the last two financial years have seen record FDI inflows in India. Why is it so? Suggest some measures to sustain this FDI growth.

- Introduction

- » FDI is a major driver of economic growth and a source of non-debt finance for the economic development of the country.
- » Government has put an investor friendly policy on FDI, under which FDI upto 100%, is permitted on the automatic route in most sectors/ activities.
- » **Intent and Objective of India's FDI Policy**
 - Attract and promote FDI in order to supplement domestic capital, technology and skills, for accelerated economic growth.

- Basics for prelims

- Foreign Direct Investment (FDI) is the investment through capital instruments by a person who is a resident outside India:
 - A. In an unlisted Indian company
 - B. In 10% or more of the post issue paid-up equity capital on a fully diluted basis of a listed Indian company
 - » (If the investment comes below 10% subsequently the FDI shall be continued to be classified as FDI. It will not be reclassified as FPI), i.e., once an FDI, always an FDI.

- FDI inflows in India:

- » **FY23: \$70.97 billion**
- » **Top Source Countries (FY23)**
 - Singapore (\$17.2 billion); Mauritius (\$6.13 billion); the US (\$6 billion), the UAE (\$3.35 billion), the Netherlands (\$2.5 billion).
 - Other important source countries include Japan, UK, Cyprus, Cayman Islands, and Germany.

- » **Top Five Sectors** to receive FDI.
 - **Computer Software (\$9.4 billion); (Dip from last year)**
 - **Service Sector (\$8.7 billion) (Rise from last year)**
 - **Trading, Telecommunication, pharma and Chemicals** have also recorded growth in FDI inflow.
- » **Statewise FDI reception:**
 - **Maharashtra** received the **highest inflows of \$14.8 billion** during the last fiscal year (though the inflow are down when compared to \$15.44 billion) of last year.
 - **Karnataka, Delhi, TN, Haryana, Telangana** and WB also saw a dip in FDI inflow.
 - **Gujarat** saw an **increase in FDI to \$4.71 billion** (against \$2.7 billion in FY22).
 - **Rajasthan** also saw a positive growth.
- **Why decline in FY23 and what are FDI threats for future:**
 - » Escalation in **geopolitical** stress
 - » Enhanced **volatility in global financial systems**
 - » **Sharp Price corrections** in global stock market
 - » High magnitude of **El-Nino**
 - » Frail Global Demand
- **Why has India emerged as an attractive destination for FDI:**
 - » **Liberalization of investment restrictions**
 - In India **FDI upto 100% is allowed in non-critical sectors through the automatic route, not requiring clearance from the Ministry of Home Affairs (MHA).**
 - Even in **strategic sectors like Defence**, government has allowed **FDI of upto 74% through automatic route and 100% through government route.**
 - Consultation activities with representation of different sectors
 - » **Make in India, Atmanirbhar Bharat, PLI Schemes, PM GatiShakti etc.**
 - » **Reforms in Indirect and Direct taxes:**
 - Corporate tax for most companies has been reduced to 25% and for new companies in manufacturing, it has been reduced to 15%
 - GST system has been streamlined, leading to simple tax regime.
 - » **Increased public capex expenditure** - It is also crowding in private and foreign investment.
 - » Strengthening of **India's footing in global supply chains**
 - » **Elimination of Regulatory barriers**
 - » **Improved Ease of Doing Business**
 - » **Improved International Relations**
- **Need of FDI in India**
 - » **Lack of Domestic Resources:**
 - Neither the government, nor the private sector in India has enough resources to fulfill India's infrastructure and industrial needs. For e.g. infrastructure sector alone needs more than 1 trillion dollars over the next few years. COVID-19 crisis has further deteriorated the situation.
 - » **Diffusion of new Technology:**
 - FDI, along with it brings in new technology which is very important for the growth and advancement of India.

» **Virtuous Cycle of Investment:**

- High FDI in any country gives confidence to other investors and creates a virtuous circle of more investments. So, increasing FDI will also increase private investments which has gone stagnant over the years.

» **Other advantages associated with FDI**

- **Economic Growth:** More Investment leads to more growth which in turn leads to higher incomes, more employment etc.
- **Improved performance of governments at state level:** Increases competition among states to attract FDI -> promotes good/efficient business practices among the states
- **Provides opportunity to government to focus more on social sector**

- **Main Problems that are restricting FDI inflows in the country**

- » Complex and rigid Labour Laws
- » Significant Delay in Land Acquisition due to slow environmental clearance and difficult Land Acquisition Act.
- » Bureaucratic Red Tapism and Corruption still dissuades foreign investors from investing in the country.
- » Regulatory framework also needs simplification as it is still too complex for many investors.
- » Regulatory Certainty is something the investors crave the most.
 - Frequent rule changes, including retrospective changes worry the investors.

- **Problems associated with increasing dependency on FDI:** Till now, we have only discussed the positive aspects associated with FDI, but, if not managed properly FDI can bring along with it certain disadvantages.

1. **Volatile Investments:** Unreliable in the long term

- FDI tend to switch to countries where there is more profit, cheap labor and cheap land.

2. **Diffusion of technology is limited:**

- It is in the interest of foreign firm to withhold profitable technology. Thus, generally diffusion of new technology is very less.
- Moreover, in a developing country like India, where the state of both physical and human capital is not yet on a par with advanced countries, the diffusion also becomes difficult.

3. **Job Creation Not very effective due to FDI** -> FDI is mostly coming in service sector or capital-intensive sector.

- Despite the central government's push to boost manufacturing sector through 'Make in India' and various PLI initiatives, FDI's continue to chase bets in the services sector.
 - For e.g. in FY23, the highest FDI came in sectors like IT, Services etc.
- Further, the bulk of FDI in manufacturing is not greenfield.

4. **Regional inequities are perpetuated** -> Most FDI come in already industrialized regions.

- For e.g. Maharashtra, Karnataka, Gujarat and Delhi - collectively accounted for 83% of the FDI between Oct 2019 and March 2022.
- This further leads to metro - non metro divide and inequitable distribution of opportunities throughout the country.

- **Way Forward:**

- **Promote Ease of Doing Business in Manufacturing sector:**
 - » Fast track the implementation of labor reforms
 - » Last mile infrastructure issue has to improve.
- **Deal with problems faced by foreign players in setting up large capacities (large factories)**
- **Focus on other impending downside risks** like
 - » Carbon Border Adjustment Mechanism (CBAM), for which carbon content reporting is mandatory from 1st Oct 2023.
 - » Polarization risks arising out of the prevailing geopolitical situation reflected in the possible adoption of trade-restrictive measures.
- **Conclusion:**
 - While India has achieved a healthy growth in FDI, to sustain it we need to ensure sound trade policy, inclusive development, implementation of labor codes etc.

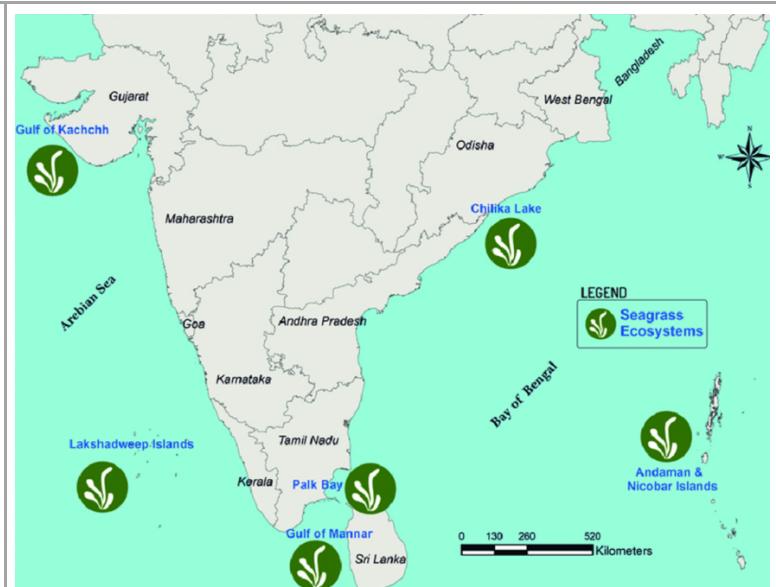
2) EB&CC: SEAGRASS

- **Why in news?**
 - » In Baltic sea, citizen drivers restore seagrass to fight climate change (July 2023)
 - This is part of a new project that trains local citizens to restore seagrass meadows in the Baltic Sea. The hope is that this painstaking work can help tackle climate change. **Seastore Seagrass Restoration Project**, run by the GEOMAR Helmholtz Centre for Ocean Research in Keil, Germany, is one of the first that aims to enable citizens to restore seagrass autonomously.
- **Practice Questions**
 - » Discuss the key ecosystem services provided by seagrass. Explain the factors responsible for the degradation of seagrass habitats globally. Suggest key measures to reverse this degradation [15 marks, 250 words]
- **Introduction:**
 - » Seagrasses are marine flowering plants that thrive fully submerged in shallow oceanic and estuarine habitats. They are one of the most important coastal habitats.
 - » **Global** coverage of seagrass is estimated to be **$3.45 \times 10^5 \text{ km}^2$** , which represent **about 0.1% - 0.2% of the ocean floor**.
 - » In India, total seagrass cover is estimated to be 517 km^2 with 14 reported species and six genera.
 - ***Halophila beccarii* (IUCN: VU)**, is the most commonly distributed species reported from all the coastal states except islands, acts as a pioneer species in the succession process of mangrove formation.
 - » **Distribution of seagrasses in India:**

The overall distribution of seagrass meadows in India occurs from the intertidal zone to a maximum depth of 15 m with varying species diversity.

The Major seagrass ecosystem along the coast of India are found in:

1. Gulf of Mannar and Palk Bay regions on the east coast comprise the largest seagrass meadows in India, covering 80 and 320 km² respectively.
2. The Ramasar site of Chilika Lagoon in Odisha state also has seagrass meadows that have expanded from 20 km² to 80 km² after the opening of the new bar mouth.
3. Gulf of Kuchchh on the west coast;
4. The lagoons of islands in the Lakshadweep in the Arabian Sea and;
5. Andaman and Nicobar Islands in Bay of Bengal.



Significance of Seagrasses Ecosystem:

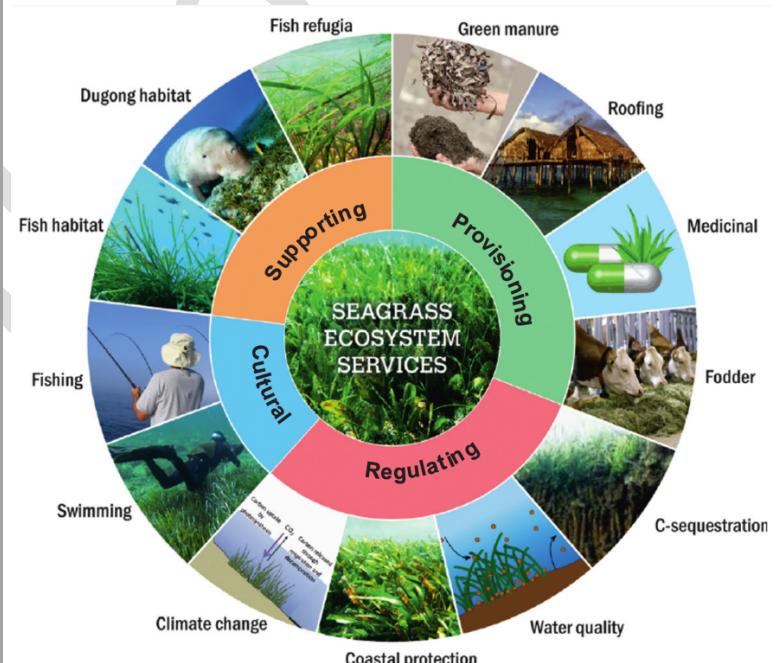
Provisioning Services:

- **Medicine** (treatment of heart conditions, sea sickness etc.)
- **Food** (Nutritious seeds)
 - » Recently, a study has shown the presence of various biological metabolites in some India seagrass that can be used effectively in the food and pharmacological industries.
- **Fertilizer** (Nutrient rich biomass)
- **Livestock feed** (food for goats sheep etc.)
- **Building Material** (Such as roofing for houses)

Supporting Services:

- **Key Fishing Grounds** as they offer a complex habitat for a variety of fish and other marine organisms like Dugongs.
 - » Seagrass based fisheries are globally important and are present wherever seagrass exists, supporting subsistence, commercial and recreational activities.
 - » Their high rates of primary production result in well-oxygenated waters that support complex food webs.

Regulating Services:



- **Coastal Protection:** Seagrass reduce the energy of waves and thus protect the seashore.
- **Carbon Sequestration:** Seagrass store more than twice as much carbon from planet warming CO₂ per square mile than forests do on land, according to a 2012 study. They accumulate CO₂ from both in-situ production and sedimentation of particulate carbon from the water column.
- **Water Purification:** They trap fine sediments and suspended particles in the water column and increase water clarity.

Threats to Seagrass Ecosystems: Globally, seagrass habitations have declined in area and several species are threatened due to several natural and anthropogenic stressors:

- » **Natural Stressor:** Cyclones, heavy rainfall, coastal uplift and subsidence, grazing herbivores, and diseases
- » **Anthropogenic Stressors:**
 - i. **Commercial Fishing and trawling activities:** this is the most important threat to seagrass in India.
 - ii. **Boat activities** for recreational purposes
 - iii. **Runoff (Pollution)** from coastal aquaculture and agriculture
 - iv. **Shell Harvesting and Seaweed cultivation**
 - v. **Accidents like Oil Spills.**

- **Key Steps** which protect Seagrasses:

- **CRZ Notification** 2011, issued under Environmental (Protection) Act, 1986, has classified seagrass meadows as CRZ1-A (Ecologically sensitive area). It prohibits developmental activities in its vicinity.

- **Way Forward:**

- **Mapping of existing seagrass areas and areas with potential of growth of seagrass.**
 - Here steps can be taken for natural expansion of seagrass.
- **Effective implementation of available legislation** may help reduce the threats.
 - Ensuring that the provisions of protection accorded to CRZ-1 are strictly followed can prevent degradation and can lead to self-restoration of seagrass meadows.
- **More study** on the various uses of seagrass by local communities and then spreading awareness among all the stakeholders about the various ecosystem services provided by the seagrasses, especially their role in carbon sequestration.
- **More R&D** on the various applications of seagrass by local communities
- **Research** is also needed on the techniques for seagrass transplantation to increase the coverage of seagrass.
 - Learn from **Seastore Seagrass Restoration Project** on how to train local population to autonomously transplant and increase seagrass cover.

- **Increased collaboration between various stakeholders** - Government, researchers, local communities etc to develop an action plan for seagrass conservation.

3) EB&CC: BIOLOGICAL DIVERSITY ACT, 2022

- **Introduction**
 - In order to help it realize the objectives of CBD, India has enacted an umbrella legislation called the Biological Diversity Act 2002. India was the first country, to pass a law to uphold the CBD nationally.
 - The objective of the act are conservation, sustainable utilization, and fair and equitable sharing of benefits arising out of use of biological resources and associated knowledge.
 - The act extends to whole of India.
- **Institutional Framework for the implementation of the law**
 - The act is being implemented through three tiered institutional structure
 - i. National Biodiversity Authority (at central level): It performs facilitative, regulatory and advisory function for Government of India on issue of Conservation, sustainable use of biological resource and fair equitable sharing of benefits of use
 - ii. State Biodiversity Boards (at state level)
 - iii. Biodiversity Management Committees (at local level)
- The act works towards biodiversity protection in the following ways:
 - **Regulation of extraction to biological resources**
 - **Protection of Biodiversity Heritage Sites**
 - **Biodiversity Management Committees** play a crucial role in promoting conservation and sustainable use of biological resources within their respective areas and facilitate people's participation in biodiversity conservation.
 - **Conservation of Endangered species**: The act prohibits the transfer of any endangered species, parts, or products without the permission of the State Biodiversity Board (SBB) or the NBA
 - **Conservation of Traditional Knowledge** – the act recognizes the importance of traditional knowledge associated with biodiversity conservation and ensures its protection and preservation.
- **The act recognizes the contributions of Indigenous local communities in conservation of biodiversity** and a company using these resources is required to share 0.5% of the sales post tax to these ILCs. Only those companies whose turnover is more than 3 crore are required to make this payment.

A) ISSUE OF FAIR AND EQUITABLE SHARING OF BENEFITS ARISING OUT OF USE OF BIOLOGICAL RESOURCES AND ASSOCIATED KNOWLEDGE

- **Introduction**
 - **The Biological Diversity Act, 2002** regulates the extraction of biological resources through the state Biodiversity Boards and the National Biodiversity Authority.

- » Broadly, all foreign entities (companies, institutions and individuals) are within the jurisdiction of NBA while all Indian entities are the subject matter of the state board.
- **What does the law say about sharing of Benefits?**
 - » Before a commercial entity extracts biological resources, it must make prior approval of the state board or the NBA and also undertake to share benefits arising out of the use of such biological entities within the local community, which has conserved and protected these biological resources. **The benefits** can be in the form of monetary compensation as well as 'joint ownership of IPRs' and/or 'transfer of technology'.
- **Divya Pharmacy vs Union of India case:** Landmark Judgment by Uttarakhand High Court on Dec 28, 2018
 - **Background of the judgment**
 - Divya Pharmacy had opposed either seeking prior approval from the State Biodiversity Board or sharing a part of its revenue with the local communities as 'fees' under what is termed as 'fair and equitable sharing of benefits'.
 - It raised contentions such as 'a swadeshi company' was not required under the law to share its revenue with desi people and only a Videshi company should share its revenue with Indian people.
 - **Core Issue:** Whether the State Biodiversity Board could impose 'Fair and Equitable Benefit Sharing' as one of the regulatory functions on the Indian entities using Biological Resources.
- **Key Highlights of the Judgment:**
 - Indian companies which are extracting biological resources are liable to seek prior approval as well as share part of their revenue with the local communities that are responsible for conserving and protecting such resources.
 - The court also referred to international conventions and treaties such as Nagoya Protocol on Access to Genetic Resources and Fair and Equitable Sharing of Benefits arising from their utilization to the Convention on Biological Diversity.
 - The court held that rights of indigenous and local communities have to be protected, equally from outside as well as from within.
 - The court finally ordered that the **State Biodiversity Board** does have jurisdiction to demand "fair and equitable sharing of benefits" from Divya Pharmacy and, by implication, from all Indian companies.
- **Significance of the judgment**
 - **Bringing clarity** on the matter
 - **Many big industry players** will have to follow this order and thus get in benefit sharing agreement with the respective SBBs.
 - **Better protection of rights** of indigenous people
- **Way Forward**

- The real test will be the implementation of the HC judgment and transfer of the money to real beneficiaries. Further, it is important that a favourable and equitable sharing of benefits are collected and reaches the indigenous people.

B) THE BIOLOGICAL DIVERSITY (AMENDMENT) BILL, 2021

- The bill was introduced in LS by MoEF&CC in Dec 2021. It was later referred to the Joint Parliamentary Standing Committee which submitted its report in Aug 2022. The bill was finally passed in Lok Sabha in July 2023.
- **Key Highlights**
 - i. **Simplify compliance requirements for domestic companies:**
 - ii. **Users of codified traditional knowledge and AYUSH practitioners will be exempted from sharing benefits with local communities**
 - **Issue/Criticism:** The term Codified Traditional Knowledge hasn't been defined by the bill or by CBD. A broad interpretation might exempt all local traditional knowledge from benefit sharing requirements.
 - Legal experts also feel that exemption to Ayush practitioners would be detrimental to ecology and go against the principle of sharing commercial benefits with indigenous communities.
 - iii. Removes **research and bio-survey from the purview of benefit sharing**.
 - iv. Benefit sharing will be based on terms agreed between the user and the local management committee represented by the National Authority
 - **Issue/Criticism:** The bill removes direct role of local communities in determining the benefit sharing provisions.
 - v. **Simplifying the IPR Process:**
 - The act specifies that approval of NBA is required before applying for IPR involving biological resources obtained from India, or (ii) sealing of patent.
 - The bill says that approval would be required before the approval of IPR instead of before the application itself.
 - vi. The bill **decriminalizes all offences** under the act and provides for wide range on penalties. Further, it authorizes government officials to hold enquiries and determine penalties.
 - **Issue/Criticism:** Such discretion with government official may promote corruption/rent seeking.
 - vii. The bill allows for foreign investment in research into biodiversity. However, this investment will necessarily have to be made through Indian companies involved in biodiversity research.
 - viii. **A new section - 36(A)** has been added emphasizing on the monitoring of the Biological Resources obtained from foreign countries for use in India as per the provisions of the Nagoya Protocol on access to benefit sharing.
 - ix. **Section 36(B)** enables state government to develop strategies and plans for conservation and sustainable use of biological diversity.
- **Other criticisms:**
 - » **Lack of Focus on Biodiversity Conservation:** the bill prioritize intellectual property and commercial trade at the expense of the key aim of conserving biological diversity.

- **Positives:**
 - » The bill encourages a conducive environment for investments - by promoting Ease of Doing Business
 - » Simplification of patent process would encourage innovation in India and ensure more IPR for companies in India.

- **The report by the joint parliamentary committee** examining Biological Diversity Amendment Bill 2021, was finally submitted in Parliament in Aug 2022. **Key Recommendations:**
 - **Promoting Indigenous Medicines:**
 - Reducing the pressure on wild medicinal plants by encouraging cultivation of medicinal plants.
 - Indian system of medicine should be encouraged by clearly defining codified traditional knowledge.
 - Promote indigenous research
 - **Exemption to Ayush Practitioners** (agreed with the provisions of the bill)
 - **FDI Inflows:**
 - There is a need to attract more foreign investments in the chain of biological resources, including research, patent, and commercial utilization, without compromising national interest by defining foreign companies as per the companies act and by defining a protocol for utilization of biological resources from India.
 - The committee recommended that **biodiversity management committee** under the proposed law and indigenous communities should be empowered by clearly defining benefit claimers to be conservers of biological resources.
 - Offences should attract civil penalties with **proportionate fine structure** so that the violators don't escape. It shouldn't be too meagre.

4) EB&CC: FOREST CONSERVATION (AMENDMENT) BILL, 2023

- **Why in news?**
 - » The Joint Parliamentary Committee (JPC) on the Forest (Conservation) Amendment Bill, 2023, approved all proposed amendments to the principal Act on July 20, 2023

- **Introduction**
 - » The Act came into force on 25th Oct, 1980 and was enacted for the conservation of forests by restricting de-reservation of forest and forest land for non-forest purposes.
 - Section 2 and Section 3 of the act states that such dereservation of the forest and forest land can't be done without prior approval of the central government under the advice of an advisory committee .
 - **Compensatory Afforestation is mandated** under the FCA for any diversion of forestland for non-forest purposes.
 - » **The Act also covers**
 - Requirement for declaring an area as a protected forest, Wildlife Sanctuary or a national park.

- Maintenance of water supply in springs, rivers and tanks.
 - » The act thus conserves country's forests and facilitate growth of forest biodiversity.
- **Supreme Court Verdict and Expansion of the Conservation Function:**
 - » In 1996, the Supreme Court in a verdict in TN Godavarman Thirumulpad vs Union of India had expanded the definition and scope of forest land to include all areas recorded as forest in government record, irrespective of ownership, recognition and classification. Before this, the act was primarily applicable to reserve forests and national parks.
 - » The court expanded the definition of forests to encompass the "dictionary meaning of forests", which would mean that a forested patch would automatically become a "deemed forest" even if it is not notified as protected, and irrespective of ownership. The order was also interpreted to presume that the act is applicable over plantations in non-forest land.
- **Exemptions Provided by the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights Act), 2006:**
 - In this act, certain exemptions to forest clearance for the forest dwelling scheduled tribes and other forest dwelling communities have been provided.
 - Section 3 of the act provides that the Central government can provide diversion of forest and for providing certain facilities managed by the government such as for creation of schools, hospitals, anganwadis, fair price shops, roads, electric and telecommunication lines, tanks and other minor water bodies, minor irrigation canals etc.
 - This clearance shall be subjected to the condition that the same is recommended by Gram Sabha.
 - Thus, it can be understood that the 2006 Act brings in a balance between conservation of forest rights and protection of rights of forest dwelling communities and even this is achieved only by an elaborate procedure after seeking sanction of various communities.

A) FOREST CONSERVATION (AMENDMENT) BILL, 2023

- Adding of a preamble to the act.
- Changing the name to Van (Sanrakshan E�am Samvardhan) Adhiniyam, i.e. Forest (Conservation and Augmentation) Act.
- The bill provides that two types of land will be under the purview of the act:
 - i. Land declared/notified as a forest under Indian Forest Act, 1927 or under any other law, or
 - Note: The land which has not been notified will not be included under the purview of the act.
 - ii. Land notified as a forest on or after Oct 25, 1980 in a government record.
 - Note: Land which changed from forest use to non-forest use before Dec 12, 1996 will not be included.
- **Exempted Category of Land:**

- **Under the 1927 Act, decisions regarding diversion of forest land for non-forest purposes are taken by the state government. The 1980 act requires additional prior approval from central government.**
- **The bill provides that such approval will not be required when forest land is diverted for constructing**
 - i. **Strategic Linear Projects** (roads, railways) of national importance and concerning national security within 100 km of India's border.
 - ii. **Security related infrastructure** upto 10 hectares,
 - iii. **Defence related projects**, a camp for paramilitary forces, or public utility projects as specified by the central government, not exceeding five hectares in a left-wing extremism affected area.
- The bill also exempts **certain type of land** from the provisions of the act, such as **forest land along a rail line or a public road maintenance by the government providing access to a habitation, or to a rail, and roadside amenities upto a maximum size of 0.10 hectare.**
- **Assignment/Leasing of forest land:**
 - The Original act **restricts the de-reservation of forests for use of forest and non-forest purposes**. Such restrictions can be lifted **only with the prior approval of central government.**
 - The act specifies **certain activities** that will be **excluded from non-forest purposes**, meaning that restrictions on the use of forest land for non-forest purposes will not apply. These activities include **works related to the conservation, management, and development of forest and wildlife** such as establishing check posts, fire lines, and wireless communication.
 - The **bill adds** more activities to the list such as (i) zoos and safaris under WPA, 1972 **owned by the government or any authority**, in forest areas other than protected areas, (ii) **ecotourism facilities**, (iii) **silviculture operations (enhancing forest growth)**, and (iv) any other purpose specified by central government.
- **Powers to issue directions:** The bill adds that the **central government** may issue directions for the implementation of the act to any authority/organization under or recognized by Centre, State, or UT.
- **Significance:**
 - **Increase Plantation in non-forest areas:** The environment ministry says that the **application of the act on land covered under dictionary meaning of forests (or deemed forests)** has resulted in a "declining tendency in plantations in non-forest lands owing to **the apprehension among individuals, organizations, and authorities regarding such plantations being considered forests**".
 - **Removal of mandatory central government approval** for diversion of forests in certain cases is **expected to reduce delays** in the implementation of **strategically important projects**.
- **Criticism:**

- The amendment by providing blanket exemptions from the act for several types of lands and several types of projects is going contrary to the intent of the 1980 act which was enacted for prevention of de-reservation of forest lands and large scale deforestation.
- Such forest clearance activities will also violate rights of forest dwellers which were secured under the 2006 Act.
- The Apex Court in T.N. Godavarman Thirumulpad v. Union of India (UOI) and Ors (AIR 1997 SC 1228), has given a wider meaning to forest land to broaden the scope of their protection. However, the 2023 bill provides a much narrower interpretation to the term forest land by inserting section 1A to encompass only two types of land under its ambit.
- Exemption near border area would cover large parts of the north-eastern region, Uttarakhand and Himachal Pradesh and could lead to loss of biodiversity in biodiversity hotspots.
- **The purpose of allowing a zoo** inside a forest is not clear.
 - Even Supreme Court (2023) has remarked that they don't appreciate the necessity of having a zoo inside tiger reserves or national parks.
- There is also a lack of clarity on compensatory afforestation for this diverted land. Similarly, it doesn't provide for how rehabilitation/resettlement/livelihood opportunities etc. would be provided for tribals affected by this kind of diversion.

- **Conclusion:**

The overall tenor of the proposal is to make it a little easier to use forest land for non-forestry purpose. The idea is to balance the development and security needs with the forest conservation needs of India. But while doing so, it should be ensured that long term forest conservation and rights of tribals and forest dwellers are not affected in long run.

5) EB&CC: CONSERVATION EFFORTS: WETLANDS

- **Why in news?**
 - » Urban Wetlands in India need urgent attention (July 2023: Source ORF)
- **Practice Questions:**
 - » What is wetland? Explain the Ramsar concept of 'wise use' in the context of wetland conservation. Cite two examples of Ramsar sites from India. [150 words, 10 marks] [Mains 2018]
 - » Discuss the major ecological functions and services provided by wetlands. Enumerate the key challenges faced by wetlands in India.
- **What is a Wetland?**
 - » A Wetland is a **transitional land between terrestrial and aquatic ecosystem**. It is an ecosystem that is flooded either permanently or seasonally.
 - **UN Ramsar Convention** defines wetlands as 'areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh brackish or salt, including areas of marine water the depth of which at low tide doesn't exceed six meters'.
- **Significance of Wetlands:** Wetlands provide a wide range of important resources and ecosystem services such as:

- » **Water and Food Security:**
 - Rice cultivation, fishery etc.
 - » **Ecosystem Services:**
 - Ground water recharge; Water Purification (e.g. East Kolkata Wetlands)
 - **Biodiversity** -> wetlands are transition zones between two different ecosystems and thus are highly productive.
 - » **Disaster mitigation:** **Buffer** from floods, droughts, cyclones and other extreme events.
 - For e.g. Deepor Beel of Guwahati serves as the flood prone city's natural stormwater drain.
 - » **Climate Change Mitigation and Adaptation Action**
 - » **Tourism** is another area where Wetlands such as large lakes have played crucial role.
 - For e.g. Ashtamudi lake of Kerala is one of the most popular tourist attractions in Kollam.
 - » **Coastal Protection** is ensured by Wetlands as they act as buffer zones.
- **Threats faced by Wetlands of India:** As per the recently released IPBES assessment, wetlands are the most threatened ecosystem. This impacts **40% of the world's plants and animals** that live or breed on wetlands.
- » **Water Pollution**
 - **Disposal of untreated sewage; Dumping of municipal waste** etc are threatening the natural functioning of the wetlands.
 - » **Noise Pollution** caused by rapid urbanization around the wetlands continues to be an irritant and is putting migratory visitors away.
 - » **Encroachment on wetlands** in the form of haphazard real-estate development.
 - » **Very less focus on** small non-notified wetlands.
 - Absence of any inventory related to wetlands.
 - » **Lack of resources with local bodies** to ensure proper care and protection of the wetlands.
 - » **Unclear and overlapping jurisdictions** between various government agencies (for example - wetlands in Delhi are under the jurisdiction of Delhi Jal Board, Delhi Urban Shelter Improvement Board, Public Works Department, ASI and Forest Department).
 - But other than Delhi Jal Board and Forest Department, none of the other bodies have any expertise in management of wetlands.

C) EFFORTS FOR CONSERVATION OF WETLANDS

- **Global/International Efforts:**
 - a) **The Convention on Wetlands of International Importance**, called the Ramsar Convention
 - It is an intergovernmental treaty that provides the framework for the conservation and wise use of wetlands and their resources.

| | |
|----------------|---|
| Prelims | The convention was <u>adopted</u> in the Iranian city of <u>Ramsar</u> in 1971 and came into force in 1975. Since then <u>almost 90% of UN member states</u> , from all the world's geographic regions, have <u>accepted and become contracting parties</u> . Headquartered in Geneva |
|----------------|---|

- The aim of the Ramsar list is "to develop and maintain an international network of wetlands which are important for the conservation of global biological diversity and for sustaining human life through the maintenance of their ecosystem components, processes and benefits".
- **Concept of Wise Use:**
 - Through this, the convention continues to emphasize that human use on sustainable basis is entirely compatible with Ramsar principles and wetland conservation in general. **Application of "wise use" concept is crucial to ensure that wetlands continue to support biological diversity as well as human well-being.**
 - The wise use guidelines emphasize on:
 1. **Adoption of national wetland policies**, involving review of local legislation and institutional arrangements to deal with wetland matters.
 2. **Development of programs** of wetland inventory, monitoring, research, training, education etc.
 3. **Take action at wetland sites**, involving the development of integrated management plans covering every aspect of the wetlands and their relationships.
 - The concept applies to all wetlands and water resources in contracting parties territories (not just to Wetlands of International Importance)

b) World Wetland Day: 2nd February

- **Domestic Efforts**
 1. **Mapping of Wetlands:**
 - As per the "National Wetland Decadal Change Atlas, 2017 published by Space Application Centre - ISRO Ahmedabad, a total of 2,31, 195 wetlands (are ≥ 2.25 ha) have been mapped in the country. The total wetland area estimated is 15.98 million hectare (mha) including rivers and excluding paddy field areas that is around 4.8% of the geographical area of the country.
 2. **Wetland (Conservation and Management) Rules 2017**, was notified by MoEF&CC under the EPA, 1986. It replaced the 2010 rules.
 - **Decentralization** -> empowers states and Uts to identify and manage their wetlands.
 - **Institutions:**
 - State Wetland authorities (SWAs) headed by State environment minister, to be established in each state and UT
 - The SWAs are responsible for effective conservation, management and monitoring of ecological condition of wetlands within their jurisdiction.
 - National Wetland Committee to replace Central wetland regulatory authority and is responsible for monitoring the implementation of these rules
 - Headed by Secretary, MoEF&CC.
 - It will also advise the central government on appropriate policies and action programmes.
 - **Banned activities like dumping solid waste, electronic etc.**

- **Applicability**

- Wetland classified under RAMSAR
- Wetland notified by Central, state or UTs.

3. **Comprehensive Guidelines** for the implementation of the above rules have also been published by MoEF&CC

- These guidelines recommend that management of each notified wetlands is to be guided by an Integrated Management Plan which provides for monitoring requirement to measure changes in the wetlands and for measuring the effectiveness of management.

4. **National Plan for Conservation of Aquatic Ecosystem (NPCA)** by MoEF&CC

- It is a single conservation program for both wetlands and lakes and was formulated in 2015 by merging National Lake Conservation Program and National Wetland Conservation Program.
- It covers various activities like interception, diversion, and treatment of waste water; shoreline protection; lake front development etc.

5. **Mission Sahbhagita**

- MoEF&CC has also launched Mission Sahbhagita, on the occasion of Azadi Ka Amrit Mahotsav, which is important step towards participatory conservation and wise use of wetland to enable a society ownership approach with communities leading at the forefront.

6. **Save Wetland Campaign** has also been launched by the Ministry as part of the Mission Sahbhagita.

D) WAY FORWARD AND CONCLUSION:

- **Identification / Inventorization** of all the small/big wetlands in the country
- **Implementation of various rules** regarding protection of wetlands, prohibition of dumping etc.
- **Involving local people** especially farmers and fishermen who are dependent on the wetlands in its conservation through awareness campaigns etc.
- **Integrating Wetlands in Urban Planning:**
 - » At urban level, wetlands management should be assigned to local municipalities to increase public accountability.
 - » At the same time, there is a need to strengthen municipalities through proper allocation of resources.

Coherent management and governance of wetlands in India will not only secure ecological balance, but will also provide protection from climate risks and add to economic value of the region through employment generation in multiple forms.

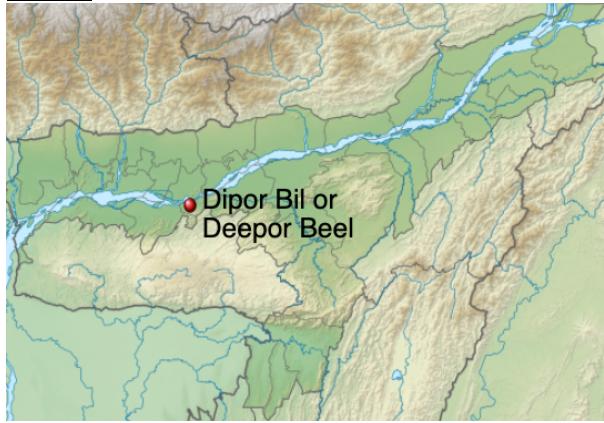
6) PRELIMS: LIST OF RAMSAR SITES IN INDIA

| # | Name of the Site | State | Other Speciality |
|---|------------------|-------|------------------|
| | | | |

| 1 | Tso Kar Wetland Complex | Ladakh | <p>Tso Kar Wetland Complex was included in the Ramsar list in Dec 2020.</p> <table border="1"> <thead> <tr> <th>Location</th><th>Two Lakes</th></tr> </thead> <tbody> <tr> <td></td><td></td></tr> </tbody> </table> <p>The complex is a <u>notable example of two connected lakes</u>, the freshwater Startsapuk Tso & the hypersaline Tso Kar. They are situated in <u>Changthang region of Ladakh</u>.</p> <p>Tso Kar means white lake, because of the <u>white salt efflorescence</u> found on the margins due to the evaporation of highly saline water.</p> <p>The Tso Kar Basin is also an <u>A1 category Important Bird Area (IBA)</u> as per <u>Bird Life International</u> and a <u>key staging site in the Central Asian Flyway</u>.</p> <p>The site is also amongst the <u>most important breeding areas</u> of the <u>Black-necked Crane (Grus nigricollis) in India</u>.</p> <p>This IBA is also the <u>major breeding area of Great Crested Grebe (Podiceps cristatus)</u>, <u>Bar-headed Geese (Anser indicus)</u>, <u>Ruddy Shelduck</u>, <u>Brown headed Gull</u>, <u>Lesser Sand-Plover</u>, and many <u>other species</u>.</p> | Location | Two Lakes |  |  |
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| Location | Two Lakes | | | | | | |
|  |  | | | | | | |
| 2 | Tso Moriri Lake | Ladakh | | | | | |
| 3 | Wular Lake | J&K | | | | | |
| 4 | Surinsar-Mansar Lakes | J&K | | | | | |
| 5 | Hokera Wetland | J&K | | | | | |
| 6 | Hygam Wetland Conservation Reserve | J&K | <p>It falls <u>within Jhelum River Basin</u> and plays an <u>significant role as a flood absorption basin, biodiversity conservation site, eco tourism site, and livelihood security of the local community</u>.</p> <p>It is located in the <u>Baramulla district</u>. It serves as an <u>abode to many residents and migratory bird species</u>. It is also <u>recognized as an IBA</u>.</p> | | | | |

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| | | | High rate of siltation is leading to <u>wetland characteristics being changed to landmass in several areas.</u> |
| 7 | Shallbugh Wetland Conservation Reserve | J&K | It is located in <u>Srinagar district</u> . It is an abode to <u>more than 4 lakh resident and migratory birds</u> of at least 21 species. |
| 8 | Harike Lake | Punjab | |
| 9 | Kanjli Lake | Punjab | |
| 10 | Ropar Lake | Punjab | |
| 11 | Keshopur-Miani Community Reserve | Punjab | |
| 12 | Beas Conservation Reserve | Punjab | |
| 13 | Nangal WIS | Punjab | |
| 14 | Chandertal Wetland | Himachal Pradesh | |
| 15 | Pong Dam Lake | Himachal Pradesh | |
| 16 | Renuka Wetland | Himachal Pradesh | Smallest of all Ramsar site in India. |
| 17 | Asan Conservation Reserve | UK | Became Ramsar Site in Oct 2020 It is a <u>444 hectare stretch of the Asan river</u> running down to its confluence with Yamuna river in Dehradun district of UK. The river was <u>dammed by the Asan Barrage</u> in 1967 and it resulted in <u>siltation above the dam wall</u> which created <u>suitable habitat for birds</u> . This supports, <u>330 species of birds</u> including the critically endangered vultures - (red headed vulture and white-rumped vulture) and <u>Baer's Pochard</u> . It is also a <u>significant ground for migratory birds</u> . It is strategically located <u>within the Central Asian Flyways</u> . This was <u>declared conservation reserve</u> in 2005 under <u>Section 36A of Wildlife Protection Act, 1972</u> . |
| 18 | Sultanpur | Haryana | Sultanpur National Park from Haryana supports more than <u>220 species</u> of resident, winter migratory and local migratory waterbirds at critical stages of their life cycles. More than ten of these are globally threatened, including the critically endangered sociable lapwing, and the endangered Egyptian Vulture, Saker Falcon, Pallas's Fish Eagle and Black-bellied Tern |

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| 19 | Bhindwas | Haryana | Bhindwas Wildlife Sanctuary, <u>the largest wetland in Haryana is a human-made freshwater wetland</u> . Over 250 bird species use the sanctuary throughout the year as a resting and roosting site. The site supports more than ten globally threatened species including the endangered Egyptian Vulture, Steppe Eagle, Pallas's Fish Eagle, and Black-bellied Tern. |
| 20 | Keoldeo Ghana NP | Rajasthan | |
| 21 | Sambhar Lake | Rajasthan | |
| 22 | Upper Ganga River (Brijghat to Narora Stretch) | Uttar Pradesh | |
| 23 | Nawab Ganj | Uttar Pradesh | |
| 24 | Parvati Agra | Uttar Pradesh | |
| 25 | Saman | Uttar Pradesh | |
| 26 | Samaspur | Uttar Pradesh | |
| 27 | Sandi | Uttar Pradesh | |
| 28 | Sarsai | Uttar Pradesh | |
| 29 | Sur Sarovar Lake (Keetham lake), Agra | Uttar Pradesh | <p>It is a <u>human made lake</u> that was created to <u>supply water to the city of Agra</u>. The wetland soon became an <u>important and rich ecosystem</u>. It now provides <u>refuge to resident and migratory birds</u>, and <u>more than 60 species of fish</u>. It is located on <u>Delhi-Mathura Highway</u> in Agra district.</p> <p>It was <u>declared a bird sanctuary in 1991</u>.</p> <p>It is also listed as an <u>Important Bird Area</u>.</p> <p>Sur Sarovar also has the <u>biggest Bear Rescue Center</u> for rescued dancing bears.</p> |
| 30 | Bakhira WLS | Uttar Pradesh | |
| 31 | Heiderpur Wetland | Uttar Pradesh | Haiderpur is one of the <u>largest human-made wetland</u> that was <u>formed in 1984 after the construction of Madhya Ganga Barrage</u> at the <u>confluence of Saloni and Ganga rivers</u> . It is a part of <u>Hastinapur WLS</u> . |

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| | | | <p>It covers an <u>area of 6,908 hectares</u> and is <u>situated on the Muzaffarnagar-Bijnor border</u></p> <p>Significance:</p> <p>Source of fresh water and ground water recharge</p> <p>Biodiversity Protection:</p> <p>It hosts, <u>more than 30 species of plants, over 300 species of birds including 102 waterbirds</u> and <u>more than 40 fish and 10 mammals species</u>.</p> <p>It has <u>CR Gharials; EN Hog Deer, Swamp Deer, Black bellied Tern, Steppe Eagle, etc.</u></p> |
| 32 | Kebartal Wetland (Kanwar Lake) | Bihar | <p>Kabartal (Kanwar Jheel) Wetland, Bihar</p> <p>Became Ramsar site in Oct 2020</p> <p>This is <u>Bihar's first Ramsar site</u>. It is located in Bihar's Begusarai district. It covers <u>2,620 hectares</u> of the Indo-Genetic plains in Northern Bihar. It is a <u>residual oxbow lake</u>, formed during the <u>meandering of Gandak river</u>, a tributary of Ganga in the geological past.</p> <p>It is an <u>important stopover along the Central Asian Flyway</u>, with <u>58 bird species</u> using it to rest and refuel.</p> <p>Some <u>critically endangered birds</u> of the site include <u>re-headed vulture, white rumped vulture, Indian Vulture, Baer's pochard</u>, and the <u>Sociable Lapwing</u>.</p> <p>Note: Kabartal is Asia's largest freshwater oxbow lake</p> |
| 33 | Deepor Beel | Assam | <p>It is a <u>lake located to the South West of Guwahati city</u> in Assam. It is a <u>permanent freshwater lake</u>, in a <u>former channel of Brahmaputra river</u>, to the south of the main river.</p> <p>It is also an <u>Important Bird Area</u>. It is the only Ramsar site of Assam.</p>  <p>The Deepor Bil WLS measures <u>4.1 sq km</u> within this wetland</p> |

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| 34 | Loktak Lake | Manipur | |
| 35 | Pala Wetland | Mizoram | |
| 36 | Rudrasagar Lake | Tripura | |
| 37 | Nalsarovar Bird Sanctuary | Gujarat | |
| 38 | Thol Lake | Gujarat | Thol Lake Wildlife Sanctuary from Gujarat lies on the Central Asian Flyway and more than 320 bird species can be found here. The wetland supports more than 30 threatened waterbird species, such as the critically endangered White-rumped Vulture and Sociable Lapwing, and the vulnerable Sarus Crane, Common Pochard and Lesser White-fronted Goose |
| 39 | Wadhwani Lake | Gujarat | Wadhwani Wetland from Gujarat is internationally important for its birdlife as it provides wintering ground to migratory waterbirds, including over 80 species that migrate on the Central Asian Flyway. They include some threatened or near-threatened species such as the endangered Pallas's fish-Eagle, the vulnerable Common Pochard, and the near-threatened Dalmatian Pelican, Grey-headed Fish-eagle and Ferruginous Duck |
| 40 | Khijadia WLS | Gujarat | |
| 41 | Bhoj Wetlands | Madhya Pradesh | |
| 42 | Sakhya Sagar | Madhya Pradesh | |
| 43 | Sirpur Sagar | Madhya Pradesh | |
| 44 | Yashwant Sagar | Madhya Pradesh | <p>It is <u>one of the two Important Bird Areas (IBA)</u> in the Indore region as well as one of the <u>most important birding sites in Malwa region of Madhya Pradesh</u>.</p> <p>Presently it is being used for <u>water supply</u> to the city of Indore and is being also used for <u>fish culture on a commercial basis</u>.</p> |
| 45 | Sundarban Wetlands | West Bengal | <p>Largest Ramsar site in India</p> <p>Sundarbans</p> <ul style="list-style-type: none"> • It comprises of <u>hundreds of islands</u> and a <u>network of rivers, tributaries and creeks</u> in the delta of the Ganga and the Brahmaputra at the mouth of Bay of Bengal in India and Bangladesh. • Indian Sundarban consists of 60% of the country's total mangrove forest area. |

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| | | | Sundarbans Reserve Forest (SRF) <ul style="list-style-type: none"> It is the <u>largest mangrove</u> in the world and is now a wetland of international importance. So, it has now become the largest protected wetland (4,23,000 hectare) in the country. |
| 46 | East Calcutta Wetlands | WB | <p>It comprises of <u>a larger number of waterbodies distributed east of city of Kolkata across the districts of South and North 24 Parganas</u>. It is spread over <u>125 km²</u>.</p> <p>Along with the wetlands, it also has <u>254 sewage-fed fisheries</u>, agricultural and solid waste farms and some built up areas.</p> <p>It was included in the Ramasar List in Aug 2002.</p> <p>The hydrology of this wetland is unique. It doesn't have a catchment area of its own. Approximately 250 million gallons of sewage flows into it everyday.</p> <ul style="list-style-type: none"> The sewage is then <u>drawn by the local fishery owners</u> into fish ponds or bheris directly from the tributary wastewater canals. . Sunlight is enough to <u>promote high growth of dense plankton and algae</u> which serves as food for the fish population which thrive on the nutrient rich plankton. Organic pollution in the wastewater is <u>thus reduced by 80%</u> and the coliform bacteria in the wastewater is reduced by 99.9 % in these ponds. <p>The Kolkata Municipal Corporation saves <u>Rs 5,000 - 7,000 crores every year</u> - the cost of sewage treatment plant for treating so much water.</p> <ul style="list-style-type: none"> <u>Channels drain out the effluents and slurry from the treated wastewater</u>, that is then used <u>to grow rice and vegetables</u>. <u>Around 25% of Kolkata's fish and vegetables are grown with the help of this water</u>. This wetland thus support livelihood of more than a lakh population. <p>It acts as kidney of Kolkata as <u>the wastewater from the city</u> is converted into food and used in fisheries and agriculture across this wetland.</p> |

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| | | | <p>Bheris are a unique feature of the Kolkata wetlands, and are shallow fishponds fed by naturally treated wastewater rich in algae, which allows for low-cost fish cultivation.</p> <p>Safety of Fish/Vegetables: Some experts have raised the issue of <u>heavy metal contamination</u> from this kind of fishery and vegetable cultivation.</p> |
| 47 | Bhitarkanika Mangroves | Odisha | <p>Bhitarkanika is also the <u>second largest mangrove ecosystem</u> in the country (after Sundarbans).</p> <ul style="list-style-type: none"> Freshwater mixed with seawater near the lower end of the <u>Brahmani and Kharasrota river</u> to produce <u>brackish water ideal for mangroves</u>. <p>Key threats:</p> <ul style="list-style-type: none"> Diversion of water from Brahmani river basin: The Talcher-Angul coal mines, steel and power generating units as well as the Kalinga Steel and power hub in Jajpur district were <u>drawing enormous quantities of freshwater from the Brahmani river</u>. |
| 48 | Chilka Lake | Odisha | |
| 49 | Satkosia Gorge | Odisha | |
| 50 | Tampara Lake | Odisha | <p>It is the <u>most prominent fresh water Lake</u> situated in the state of Odisha (Ganjam district). The depression in the ground gradually filled with rainwater from catchment flow and was called "Tamp" by the British and subsequently termed "Tampara" by the locals. It supports varied biodiversity including that of birds, fishes, phytoplanktons, and more than seven species of terrestrial plants and macrophytes. It is important habitat for <u>vulnerable species</u> such as <u>Cyprinus carpio</u>, <u>common pochard</u> (<u>Aythya ferina</u>), and river tern (<u>Sterna aurantia</u>).</p> <p>With large fish yield, it is an <u>important source of livelihood for the local communities</u>.</p> |
| 51 | Hirakud Reservoir | Odisha | <p>It is the <u>largest earthen dam</u> in Odisha which <u>started operating in 1957</u>.</p> |
| 52 | Ansupa Lake | Odisha | <p>It is the <u>largest freshwater lake</u> of Odisha situated in the <u>Banki</u> sub-division of Cuttack district and has its fame from time immemorial for its scenic beauty.</p> <p>It is an <u>oxbow lake</u> formed by <u>River Mahanadi</u> and is spread over 231 ha. It is home to several species of birds, fishes, mammals and macrophytes. It provides a safe habitat for <u>at least three</u></p> |

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| | | | <p>threatened bird species - <u>Rynchops albicollis (EN)</u>, <u>Sterna acuticauda (EN)</u> and <u>Sterna aurantia</u> and three threatened fish species - <u>Clarias magur</u> (Clariidae) (EN), <u>Cyprinus carpio</u> (Cyprinidae) (VU), and <u>Wallago attu</u> (VU).</p> <p>The lake also <u>sustains fresh water demand of the surrounding area</u> and supports <u>livelihood of local communities through fisheries and agriculture</u>.</p> <p>It is a <u>famous wintering ground for migratory birds</u> and is also <u>known for its scenic beauty</u>.</p> |
| 53 | Nandur Madhameshwar | Maharashtra | |
| 54 | Lonar Lake | Maharashtra | <p>It is an ancient circular crater lake created by Meteorite strike in Maharashtra</p> <p>It got <u>National geo-heritage tag in 1979</u>.</p> <p>It is <u>relatively young geo-logically, just about 50,000 years old</u>.</p> <p>A meteorite <u>estimated to weigh two-million-tonnes slammed into the Earth</u>, creating a 1.83-km diameter crater where the lake formed. It is distinguished by a near-perfect, circular ejecta blanket, which refers to earth thrown up during the collision, around it.</p>  <p>It is an <u>endorheic</u> (i.e. no outflow) basin, almost circular in shape. The lake is <u>high in salinity and alkalinity</u>, as the lack of outflow leads to a concentration of minerals as the lake water evaporates. <u>Outside the lake</u>, there is a considerable diversity of plant and animal life, as springs which help feed the lake provide a source of fresh water.</p> |
| 55 | Thane Creek | Maharashtra | <p>It is located in Maharashtra India. Thane Creek is an <u>inlet in the shoreline of the Arabian Sea</u> that <u>isolates the city of Mumbai from the Konkan region of the Indian Mainland</u>. There are <u>several source of fresh water to the Creek</u>, the largest being the Ulhas River. It has been declared as <u>Thane Creek Flamingo sanctuary</u>.</p> |

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| | | | <p>Thane creek is <u>fringed by Mangroves on both banks & comprise around 20% of the total Indian mangrove species.</u></p> <p>The mangrove serves as a nursery for several fishes & sustains the local fishery. The area is an <u>important part of the wetland complex of the Central Asian Flyway of the birds and has been categorized as IBA.</u></p> <p>Thane Creek Flamingo Sanctuary: The Western bank of the Thane Creek has been declared the "<u>Thane Creek Flamingo Sanctuary</u>".</p> |
| 56 | Kolleru Lake | AP | |
| 57 | Nanda Lake | Goa | |
| 58 | Ranganathittu Bird Sanctuary | Karnataka | |
| 59 | Point Calimere | TN | |
| 60 | Karikili Bird Sanctuary | TN | |
| 61 | Pallikaranai Marsh Reserve Forest | TN | |
| 62 | Pichavaram Mangrove | TN | |
| 63 | Gulf of Mannar Marine Biosphere Reserve | TN | |
| 64 | Konthankulam Bird Sanctuary | TN | |
| 65 | Udhayamarthandapuram Bird Sanctuary | TN | |
| 66 | Vedanthangal Bird Sanctuary | TN | |
| 67 | Vellode Bird Sanctuary | TN | |
| 68 | Vembannur Wetland Complex | TN | |
| 69 | Chitrangudi Bird Sanctuary | TN | Chitrangudi Bird Sanctuary, locally known as "Chitrangudi Kanmoli" is located in <u>Ramnathapuram district of TN</u> . |

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| | | | Notable waterbirds spotted from the site are <u>spot billed Pelican</u> , <u>little egret</u> , <u>grey heron</u> , <u>large egret</u> , <u>Open billed stork</u> , <u>Purple</u> , and <u>pond herons</u> . |
| 70 | Suchindram Theroor Wetland Complex | TN | <p>It is part of the <u>Suchindram-Theroor Manakudi Conservation Reserve</u>. It is an <u>important bird area</u> and <u>lies at the southern tip of the Central Asian Flyway</u> of migratory birds.</p> <p>It was <u>formed for birds' nesting purposes</u> and it attracts thousands of birds every year.</p> |
| 71 | Vaduvur Bird Sanctuary | TN | <p>It is a <u>large human made irrigation tank</u> and <u>shelter for migratory birds</u> as it <u>provides a suitable environment for food, shelter, and breeding ground</u>.</p> <p>While these irrigation tanks have <u>socio-economic and cultural significance</u>, very little is known of their ecological importance.</p> <p>These tanks have the potential to harbor good populations of resident and wintering water birds but no studies have been done to confirm this.</p> |
| 72 | Kanjirankulam Bird Sanctuary | TN | <p>It is a <u>protected area near Mudukulathur Ramanathapuram District, TN</u>. It is <u>notable nesting site for several migratory heron species</u> that roost in the prominent growth of babul trees here.</p> <p>The breeding population of migratory waterbirds arrive here between October and February and include: Painted stork, white ibis, black ibis, little egret, great egret.</p> |
| 73 | Ashtamudi Lake | Kerala | |
| 74 | Sashthamkotta Lake | Kerala | |
| 75 | Vembanad Kol Wetland | Kerala | |

A) HOW A SITE IS DESIGNATED AS RAMSAR SITE

- According to Ramsar convention "Each contracting party shall designate suitable wetlands within its territory for inclusion in a List of Wetlands of International Importance".
- **Grounds of selection:** International Significance in terms of ecology, botany, zoology, limnology, or hydrology.
 - Accordingly any wetland which meets **at least one of the criterion** of identifying **Wetlands of International Importance (9 criteria)** can be designated by the appropriate national authority to be added in the Ramsar list.

- **Group A of the Criteria:** Sites containing representative, rare or unique wetland types
 - Criterion 1: If the wetland contains a representative, rare, or unique example of a natural or near-natural wetland type found within the appropriate biogeographic region.
- **Group B of the Criteria.** Sites of international importance for **conserving biological diversity Criteria based on species and ecological communities**
 - » Criterion 2: It supports vulnerable, endangered, or critically endangered species or threatened ecological communities.
 - » Criterion 3: It supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region.
 - » Criterion 4: It supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.
- **Specific criteria based on water birds**
 - » Criterion 5: It regularly supports 20,000 or more water birds.
 - » Criterion 6: It regularly supports 1% of the individuals in a population of one species or subspecies of water bird.
- **Specific criteria based on fish**
 - » Criterion 7: It supports a significant proportion of indigenous fish subspecies, species or families, life-history stages, species interactions and/or populations that are representative of wetland benefits and/or values and thereby contributes to global biological diversity.
 - » Criterion 8: It is an **important source of food for fishes, spawning ground, nursery and/or migration path** on which fish stocks, either within the wetland or elsewhere, depend.
- **Specific criteria based on other taxa**
 - » Criterion 9: **It regularly supports 1% of the individuals in a population of one species or subspecies of wetland-dependent non-avian animal species.**

B) MONTREUX RECORD

- It is the principle tool of the Ramsar Convention for highlighting those sites, where an adverse change in ecological character:
 - » Has occurred
 - » Is occurring
 - » Is likely to occur as the result of technological developments, pollution or other human interference and which are therefore, in need of priority conservation attention.

3. PRELIMS FACTS

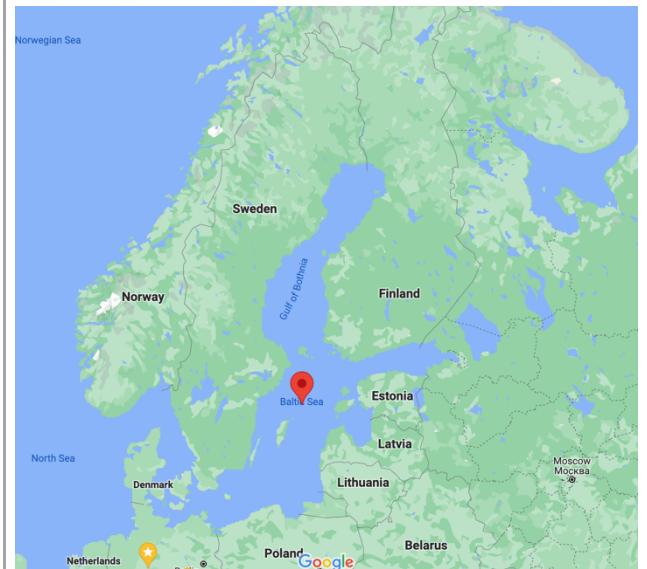
1) PLACES IN NEWS: BALTIC SEA

Baltic Sea is an arm of Atlantic Ocean. It is enclosed by Sweden, Finland, Russia, Estonia, Latvia, Lithuania, Poland, Germany and Denmark

Baltic Proper is bordered on its northern edge, at latitude 60 degree north, by Aland Islands and the Gulf of Bothnia, on its north eastern edge by Gulf of Finland.

Baltic Sea is connected to White Sea by White Sea Baltic Canal and to German Bight of the North Sea by Kiel Canal.

White-Sea Baltic Canal:



- **Recent News:**

- In **Baltic Sea**, citizen divers restore seagrass to fight climate change (July 2023)

2) EB&CC: INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)

- **Why in news?**

- » Scotsman **James Skea** elected new IPCC chair in Nairobi. He is a professor of sustainable development at Imperial College London and will lead IPCC through its seventh assessment report (July 2023: Source: DTE)
 - The election was held at 59th session of IPCC which was held at UNEP headquarter in Nairobi, Kenya.
 - » The Intergovernmental Panel on Climate Change (IPCC) is the UN body for assessing the science related to climate change. Its job is **to assess already published scientific literature** to update our knowledge of climate change science.
 - » IPCC's Assessment Reports (ARs), which are produced every few years, are the most **comprehensive and widely accepted** scientific evaluations of the state of Earth's climate.
 - » They form the basis for government policies against climate change and provide scientific foundation for the global Climate Change negotiations.
 - » So far, **Six Assessment Reports** have been produced.
- **IPCC** was set up in 1988 by World Meteorological organization (WMO) and United Nations Environment Program (UNEP) to provide policy makers with regular assessment of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigations.

3) MHADEI WLS

- **Why in news?**

- » The Goa bench of Bombay High Court has directed Goa government to notify the Mhadei WLS and other areas, referred to in National Tiger Conservation Authority communications and plans prepared by the Goa forest department, as a tiger reserve under the WPA within three months (July 2023: Source - IE)

- It also said that the state government should take all the steps to prepare a tiger conservation plan and forward it to the NTCA within three months of notifying the reserve.

About Mhadei WLS:

It is a protected area in the Indian state of Goa in Western Ghats. It is located in North Goa district.

The sanctuary is an area of high biodiversity, and is being considered to become a Project Tiger's tiger reserve because of the presence of Bengal Tiger.

The NTCA has suggested on multiple occasions that a tiger reserve be carved out from the uninhabited core zones of Goa's protected area and has requested the state to speed up the process of notifying the Mhadei sanctuary and certain contiguous areas as a tiger reserve.



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