

- It was declared a bird sanctuary in 1973 under the **Wildlife Protection Act**.
- It is also core of the **Ramasar** designated wetlands of Chilika lake.
- **About Chilika Lake:**
 - » It is the largest brackish water lake and largest wintering ground for birds in India.
 - » As per the **bird status survey-2022** conducted in the Chilika, a total of 10,74,173 birds of the 107 water bird species and 37,953 individuals of 76 wetland dependent species were counted in the entire lagoon.
 - » **Last year**, the count in Chilika was over 12 lakhs.
 - » **Who conducted the census:** Chilika Development Authority and BNHS.
 - » Chilika lake is the largest wintering ground in Indian subcontinent.



14) THANE CREEK FLAMINGO SANCTUARY

- In 2015, Thane Creek was declared as Flamingo Sanctuary by the Maharashtra government under Section 18 of the WPA 1972.
 - It was Maharashtra's second marine sanctuary after Malvan Sanctuary (Sindhudurg district).
 - By November, about 30,000 birds come to this sanctuary, 90% are lesser flamingos. They stay here till May, then migrate to Kutch in Gujarat.
 - **Other bird species**
 - » About 200, including the globally threatened species like the Greater Spotted Eagle (VU)

15) 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 zone 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.



16) BHADRA WLS (TIGER RESERVE)

- It is a protected area and a tiger reserve as part of Project Tiger. It is located in Chikkamangaluru town in Kar.

17) BUKKAPATNA CHINKARA WLS

- Bukkapatna Chinkara WLS was notified recently in 2019 only. The proposal was approved by the State Board of Wildlife.
- **More Details**
 - Bukkapatna happens to be only the second protected habitat for the rare antelope in the state after Yedehalli in Bagalkot district.
 - Bukkapatna is larger than Yedehalli and it will also be the southernmost tip of the distribution range of Chinkara in India.

18) DANDELI WLS

- It is in Uttara kannada district of Karnataka and covers an area of 866.14 Km².

19) RANGANATHITTU BIRD SANCTUARY (PAKSHI KASHI OF KARNATAKA)

- **About Ranganathittu Bird Sanctuary**
 - Ranganathittu Bird Sanctuary, also known as **Pakshi Kashi of Karnataka**, is a bird sanctuary located in Mandy district of Karnataka. It is located only 3 km away from the historic town of Srirangapatna.
- **Geography**
 - It is the largest bird sanctuary in the state (about 40 acres in area) and comprises of six islets on the banks of Kaveri river.
- **Bird Species**
 - The park is known for roughly 170 bird species including painted stork, Asian openbill stork, common spoonbill, Woolly necked stork, black headed ibis, lesser whistling duck etc.

20) THATTEKAD BIRD WLS

- **About Thattekad WLS**
 - The Thattekad bird Sanctuary, with an area of 25 km² is a small bird sanctuary, located in Kothamangalam, Kerala.
 - It was the first bird sanctuary of Kerala and has been described by Salim Ali (one of the best known ornithologist of India) as the richest bird habitat on peninsular India.
 - It is an evergreen low-land forest located between the branches of Periyar River, the longest river in Kerala.

Key Species

- The bird sanctuary is known for Sri Lankan Frogmouth and other bird endemic to the region. There are 330 bird species in the region, 300 of them endemic to the area.
- The important bird species include Orange headed thrush, large billed leaf barber, Jerdon's nightjar, Oriental Darter, Yellow browed bulbuls etc.

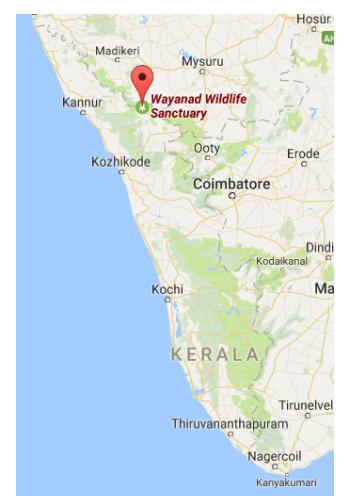
21) CAUVERY WLS

- **Location**
 - The Cauvery WLS is a protected area located in the Mandya, Chamaraja and Ramanagaram districts of Karnataka, India.
- **Physical features**
 - **Largest Protected area in Karnataka**. The sanctuary, is spread over more than 1000 km². It's northern and southern boundary limited by Cauvery river, which drains from west to east.
 - It's eastern and north eastern borders are bounded by the TN state.
 - Cauvery river flows through it for a distance of 101 kilo meters
- **Biodiversity**
 - **Flora**
 - » The dominant species of trees found in the sanctuary are Terminalia arjuna and jambul.
 - **Fauna**
 - » Elephants, wild boar, leopard, dhole, spotted deer, barking deer, sambar, four horned antelope, black naped hare, Malabar giant squirrel, Grizzled giant squirrel which is under the highly endangered category in the state, smooth coated otter.
 - » **Reptiles**
 - Mugger crocodile, Indian mud turtle, Indian Rock Python, Cobra, Russel's viper etc.
 - **Birds**
 - » The sanctuary is listed as an Important Bird Area by Birdlife International.
 - » CR species of White rumped vulture and Indian vulture are found here.



22) WAYANAD WLS

- **Intro:**
 - It is an animal sanctuary in Wayanad Kerala, India.
 - It is an extent of 344.44 km² with four ranges namely Sulthan Bathery, Muthunga, Kurichiat and Tholpetty.
 - Second largest WLS in Kerala.
 - It is now an integral part of Nilgiri BR.
 - It is bounded by protected area network of Nagarhole and Bandipur in Karnataka in the north-east, and on the **South-east** by the Madumalai of Tamil Nadu.
 - **Note:** The sanctuary is separated into two disconnected parts known as the **North Wayanad WLS** and **South Wayanad WLS**. The area in between the two parts was originally a forest region, is now occupied majorly by plantation.



- **Wayanad WLS becomes a migratory destination** for animals from other NP and WLS in the region due to availability of water & fodder in the sanctuary.
 - Mammals such as gaurs migrate to sanctuary from the adjacent Bandipur and Nagarhole national parks in Karnataka and the Mudumalai NP in TN.
- **Proposal of Wayanad WLS as Tiger Reserve:**
 - The attempt of the Kerala forest department to push forward a proposal for notifying the sanctuary as the third tiger reserve in the state was **rejected by the State Wildlife Advisory Board** on account of the public resistance against the proposal.
 - **Arguments supporting the Tiger Reserve Status:**
 - » Highest number of tigers in the state
 - » Tiger reserve status will ensure better financial aid from the Centre and the NTCA which will also lead to better conservation and management of the tiger population and help generate more employment opportunities.
 - **Why the board rejected the demand?**
 - » **Public Protests:** Cattle lifting by the ailing tigers and their straying into human habitats had often triggered widespread public protests in the district.
 - » **Restriction on development activities** which will be brought by the notification have also become an issue.

23) IDUKKI WILD LIFE SANCTUARY

This sanctuary extends over the Thodupuzha and Udumpanchola taluks of Idukki district spreading over 105 Sq. Km. at 450 - 748m above sea level.



- The Idukki reservoir formed by three dams-Cheruthoni, Idukki and Kulamavu-extends to 33 sq km.

- Common Animals

- Elephants, Porcupine, Sambar Deer, Wild Dogs, Jungle Cats, Malabar Giant Squirrel, Wild boar etc.

- Common Birds

- Jungle fowl, Myna, Laughing thrush, Black bulbul, Peafowl, Woodpecker, Kingfisher etc.

24) CHINNAR WILDLIFE SANCTUARY

- **Location:** It is located 18 km north of Marayoor on SH 17, in the Idukki district of Kerala.
- It is under the jurisdiction of and contiguous with Eravikulam National Park to the South.
- Indira Gandhi Wildlife Sanctuary is to the north and Kodaikanal Wildlife Sanctuary is to the east.
- **Roads crossing:** The Munnar - Udumalpet road SH 17 passes through the sanctuary for 16 km and divides it into nearly equal parts.
- **Rivers:** Chinnar and Pambar rivers are the major perennial water resource in the sanctuary.
- **Settlements and crops:**

- 11 tribal settlements inside the Chinnar WLS, each is well demarcated by temporary stone walls
- The main inhabitants are Muthuvas and Pulayars.
- Cultivation of Maize, ragi and lemongrass is carried out
- Madhuvas carry out small scale ganza cultivation for their religious purposes.

25) SATHYAMANGALAM WLS (SATHYAMANGALAM TIGER RESERVE (STR))

- The core or critical tiger habitat in STR is 793.49 sq. km while the buffer or peripheral area is 614.91 sq km. It has a significant population of tiger, elephant, leopards, black buck, gaur, four horned antelope striped hyena, birds, reptiles, amphibians etc.
- It is the largest protected area of TN. It is in the eastern ghats in the Erode district of TN.
 - It acts as gateway to eastern ghats and acts as a significant ecosystem and a wildlife corridor in the Nilgiri Biosphere Reserve between Western Ghats and rest of the Eastern Ghats.
- Also, there are 9 tribal settlements and 18 tribal revenue settlements in STR which are not part of the tiger reserve.



26) SRIVILLIPUTHUR WLS AND MEGAMALAI WLS

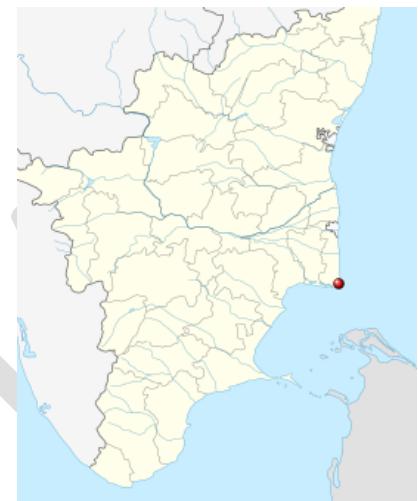
- **Why in news?**
 - In Feb 2021, the Srivilliputhur-Megamalai Tiger Reserve (SMTR), was jointly declared by the Central Government and Tamil Nadu Government.
- **Details**
 - The new tiger reserve (SMTR) is spread over 1016.57 sq km and it has been formed by clubbing Srivilliputhur WLS and Megamalai WLS.
 - Now, they would be eligible for funds from National Tiger Conservation Authority (NTCA).
- **Note:**
 - Megamalai region acts as a catchment for Vaigai river.
 - Vaigai river had faced a lot of problems in the past and it was revived when the water from Periyar river was brought to it after formation of the Periyar dam. Today, Vaigai gets around 80% of its water from Periyar dam. The remaining 20% is got from the watershed of the Megamalai region during the north-eastern Monsoon season.



27) POINT CALIMERE WILDLIFE AND BIRD SANCTUARY

- **About Point Calimere WBS**
 - **Geography**
 - It is a WLS located in Nagapattinam district of TN and is spread across an area of 30 sq m.
 - It comprises of sandy coastal, saline swamps, backwaters, and thorn scrub forests around the backwater.
 - It is located along the Palk Strait where it meets the Bay of Bengal at point Calimere at the south-eastern tip of Nagapattinam.
 - It is also a **Ramsar wetland site**.

- **Important Fauna**
 - **Black buck** (now LC) is the flagship specie of the WLS.
 - It is also famous for large congregation of waterbirds, especially **greater flamingo** (LC).
- **Key Problems faced by the Sanctuary**
 - **Pollution** from surrounding chemical companies.
 - **PH and salinity** of water have exceeded the permissible levels.
 - **Ecological disturbance** by fish farmers
 - **Climate change** has led to an increase in temperature which is negatively affecting the eggs during the pre-incubation period. The higher temperatures are providing better growth conditions for micro-organisms around eggs.
 - There are also high chances of antibiotic resistance among the coliform bacteria.
- **Decrease in number of migratory birds to the WLS**
 - From thousands of birds in the past, now, the numbers have gone down to a few hundred. The birds have started to avoid the sanctuary.



28) KALAKAD WLS AND MUNDANTHURAI WLS

- These were both established in 1962.
- In **1988**, **Kalakkad Mundanthurai Tiger Reserve** was created by combining the two sanctuaries.
 - It is located in the Southern Western Ghats in Tirunelveli district and Kanyakumari district in the southern state of TN.
 - It is the **second largest protected area in TN** (after the Sathyamangalam WLS) in Erode district.
 - It is part of the **Agasthyamalai Biosphere Reserve**.
 - It is also **India's southernmost tiger reserve**.
- The area acts as catchment of Thamiraparani river.



37. CONSERVATION RESERVES AND COMMUNITY RESERVES

- Conservation reserve and community reserves are the outcome of amendment to WPA in 2003.
- They are protected areas, which typically act as buffer zones or connectors and migration corridors to established NPs, WLS, and reserved and protected forests.
- It also provides mechanism to provide recognition and legal backing to the community initiated efforts in wildlife protection.
 - It provides for flexible methods wherein wildlife conservation is achieved without compromising the community needs.

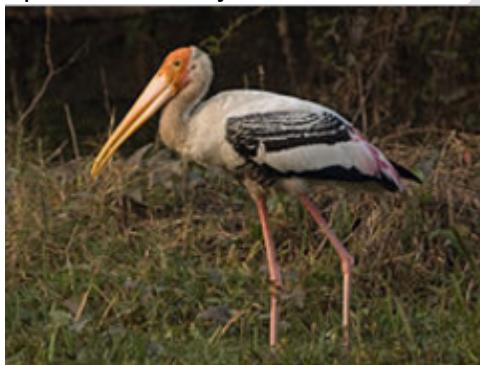
1) CONSERVATION RESERVES

- The area is owned by state government.
- Managed by Conservation Reserve Management Committee.
- **Who declares an area as conservation reserve?**
 - » State government may, after having consultations with the local communities, declare any area owned by the government as conservation reserve.
- When area is marked as conservation reserve, it becomes mandatory for any development projects to get approval of the National Board for Wildlife, and State Board of Wildlife.

A) TIRUPPADAIMARATHUR CONSERVATION RESERVE

- » It was the first conservation reserve established in India.
- » It is an IUCN Category V protected bird nesting area in the 2.84 hectares (7.0 hectares) compound of Siva temple, in Tiruppadaimarathur village, Tirunelveli District, TN.
- » On Feb 14, 2005 it became the first conservation reserve established in India.
- » The reserve is 10 kms from Kalakkad Mundanthurai Tiger Reserve.

Over 400 little egrets, pond heron, and near threatened painted stork nest in the grove of 20 huge, century old marutha, mahwa, neem and illuppai trees and feed in many agricultural fields, a few ponds and the Tamiraparani River adjacent to it



Painted stork



Little egret

B) THREE NEW WILDLIFE CONSERVATION RESERVES IN RAJASTHAN (APRIL 2023)

- **Sorsan** in Baran, Khichan in Jodhpur, and Hamirgarh in Bhilwara
- **Sorsan in Baran:**
 - The grasslands of Sorsan in Baran is a safe home for the Great Indian Bustard, Blackbucks (the state animal of Rajasthan).
- **Khichan in Jodhpur:**

It hosts thousands of migratory Demoiselle cranes. It will be safe home for these birds and will be the first conservation reserve in India for Demoiselle cranes.



IUCN: LC

- With these three additions, there are 26 wildlife conservation reserves in Rajasthan.

2) COMMUNITY RESERVE

- The state government may notify any community land or private land as a community Reserve, provided that the members of the community or individual concerned are agreeable to offer such areas for protecting fauna and flora, as well as their traditions, cultures and practices.
- The reserve is managed through Community Reserve Management Committee.
- No change in the land use pattern shall be made within the community reserve, except in accordance with a resolution passed by the management committee and approval of the same by state government.

A) SINGCHUNG BUGUN VILLAGE COMMUNITY RESERVE

- **Why in news?**
 - Arunachal Pradesh showcased its Singchung Bugun Village Community Reserve, a 17 sq km biodiversity hotspot during the Republic Day parade (Jan 2024)
- **Location:** The village is located in West Kameng district of Arunachal Pradesh and is located about 130 km from Tejpur in Assam. It lies adjacent to Eaglenest reserve.
- **What was the need of creating a community reserve?**
 - Environmentalists and forest department realized that area outside the eagle nest sanctuary was equally diverse and needed protection. This followed multiple rounds of discussions with the villagers over the years to explain what community reserve would mean and most importantly they would retain the land rights. In case the villagers needed to use some of the land for cultivation, they could get it de-reserved through the management committee.
 - Finally the villagers were convinced and they decided to make 17 sq. km of their land into community reserve. The community reserve came into being in 2017 when the state government approved it.
- **In the short time since, the reserve has won the India Biodiversity Award given jointly by the Centre and the UNDP.**



- Reserve has also become a model, with new batches of IFS officers visiting Singchung every year to understand how the reserve was created.
- **Note:** The Buguns are an indigenous community with a population of about 2,000 people, spread across 12 villages that are dotted outside the forests of Eaglenest Wildlife Sanctuary.

B) GOGABEEL COMMUNITY RESERVE AND CONSERVATION RESERVE

- Notified by State of Bihar in Aug 2019.
- **About Gogabeel:**
 - It is an ox-bow lake in Bihar's Katihar district. It is formed from the flow of rivers Mahananda and Kankhar in the north and the Ganga in the South and east. It is a permanent water body though it shrinks to some extent in the summer but never dries up.
 - It is the 15th protected area (PA) in Bihar.
 - It is an important Bird Area. More than 90 bird species have been recorded from this site, of which, about 30 are migratory.
 - » Among the threatened species, the Lesser Adjutant Stork is listed as Vulnerable by the IUCN while the Black Necked Stork, White Ibis and White-eyed Pochard are 'Near Threatened'.
 - The water body was notified as a 57 hectare Community Reserve and a 30 Hectare 'Conservation Reserve'. It is Bihar's first community reserve.
- It is a **big win for conservationists** who had been trying for long to convince both local residents as well as the authorities to declare the important birding site as a Protected Area

C) TILLARI CONSERVATION RESERVE

- In June 2020, the Maharashtra government declared the Tillari Forest Area in the Dodamarg and Sawantwadi range in the coastal Sindhudurg district as a Conservation reserve area.
 - » The reserve covers 9 villages in the forest range and is known to serve as a corridor and even as a habitat for the population of tigers and elephants moving between the three states of Goa, Karnataka and Maharashtra.
- Tillari is the 7th Corridor in Maharashtra which has been declared as a 'Conservation Reserve'.
- **Note:**
 - » The 38 km-long Dodamarg wildlife corridor connects Radhanagri WLS in MHA to Bhimgad WLS in Karnataka. This corridor frequently witnesses elephant and tiger movement.

38. CONSTITUTIONAL PROVISIONS

There are few provisions in Indian constitution which directly or indirectly call for biodiversity conservation.

1. Article 21 (Right to Life and Personal Liberty)

- The Supreme Court on many occasion has interpreted this fundamental right to encompass within its ambit the protection and preservation of environment.

2. Article 48A directs the state to protect and improve the environment and to safeguard forests and wildlife (Article 48A)
 - This was added by 42nd Constitutional amendment in 1976.
3. Article 51A(g) makes it a duty of every citizen of India to **protect and improve the natural environment including forests, lakes, rivers and wildlife** and to have compassion for living creatures

39. INSTITUTIONS

1) NATIONAL GREEN TRIBUNAL (NGT)

- **National Green Tribunal Act, 2010**
 - An act to provide for the establishment of a National Green Tribunal for the effective and expeditious disposal of cases relating to environment protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incident thereto.
- It is expected to provide **speedy environmental justice** and help **reduce burden of litigation** in higher courts.
 - The tribunal is mandated to make and endeavour for **disposal of applications or appeals** finally **within 6 months** of filling of the same.
- **Other Facts Useful for Pre**
 - **Branches:** The Principle Bench of the NGT has been established in the National Capital - with **regional benches** in Pune, Bhopal, Chennai and Kolkata.
 - **Chairperson** of NGT is a retired judge of the SC.
 - **Other Judicial Members** are retired judge of the High Courts.
 - **Each Bench** -> At least 1 judicial member and one expert member
 - **Expert Members** should have a professional qualification and a minimum of 15 years of experience in the field of environment/forest conservation and related subjects.
- **Powers**
 - The NGT has the power to hear all civil cases relating to environmental issues and questions that are linked to the **implementation of laws listed in Schedule I of the NGT Act**. These include the following:
 - i. The Water (Prevention and Control of Pollution) Act, 1974;
 - ii. The Water (Prevention and Control of Pollution) Cess Act, 1977;
 - iii. The Forest (Conservation) Act, 1980;
 - iv. The Air (Prevention and Control of Pollution) Act, 1981;
 - v. The Environment (Protection) Act, 1986;
 - vi. The Public Liability Insurance Act, 1991;
 - vii. The Biological Diversity Act, 2002.
 - This means that any violations pertaining to these acts only, or any other decisions order taken by government under these laws can be challenged before NGT.

- **Important Note:** The NGT has not been vested with powers to hear any matter relating to the **Wildlife (Protection) Act, 1972**, the **Indian Forest Act, 1927** and various laws enacted by States relating to forests, tree preservation etc. Therefore, specific and substantial issues related to these laws **cannot be raised before the NGT**. You will have to approach the State High Court or the Supreme Court through a Writ Petition (PIL) or file an original suit before an appropriate civil judge of the Taluk.
- **Principles of Justice adopted by NGT**
 - The tribunal not guided by the Code of Civil Procedure, 1908, but shall be guided by **principal of natural justice**.
 - Further, the NGT is not bound by rules and evidence enshrined in the Indian Evidence Act, 1872.
 - » This ensures that it will be relatively easier for conservation groups to show facts and figures before the NGT.
- **Review Appeal** can be made to NGT
- If the review appeal fails, the **NGT order can be challenged** before the Supreme Court within ninety days.

40. COMPENSATORY AFFORESTATION

- **Introduction**
 - Forest land can be diverted for non-forest developmental activities like infrastructural project with approval of state and central government. For this diversion **afforestation must be done as compensation** for diversion of forest and is called compensatory afforestation.
 - Compensation must be paid for loss of forest, including for loss of ecosystem and biodiversity i.e., both tangible and intangible losses. The total valuation of this is called **Net Present Value**. This cost has to be borne by agency responsible for diversion of the state land.
 - In India, according to the Forest Conservation Act, 1980, and the rules and guidelines formed under it, in case of diversion of forest land for non-forestry purposes.
 - The equivalent non-forest land has to be identified for compensatory afforestation.
 - Funds for raising compulsory afforestation has to be imposed.
 - For certain activities additional conditions are imposed.
 - For e.g. in case forest land is being converted for mining purposes - additional conditions like maintaining a safety zone area, fencing and regeneration etc are stipulated.
- **MoEFCC is the nodal agency**
 - Application for clearance (land conversion) must be made to MoEF&CC through the concerned forest department of the state government.
 - The application/proposal should include details of non-forest/degraded forest identified for afforestation purposes, year wise phased targets, species to be planted and a suitability certificate from afforestation/ management point of view.
 - If clearance is given, the **compensation for the lost forest land** is also decided by Ministry and regulators.
- **Criteria for identifying non-forest land for compensatory afforestation.**
 - It should be identified contiguous to or in proximity of reserved forest or protected forest.

- In case the non-forest land is not available in the same district then it should be identified within the same state/UT.
 - If land is unavailable in entire state, funds for raising the CA in double the area in extent of forest land diverted need to be provided by the user agency. And this non-availability of the suitable non-forest land for CA in the state/UT would be accepted by central government only on the certificate of Chief Secretary to the state/UT.
- **Who implements afforestation and development work?**
- After receipt of the money, State Forest department is to accomplish the afforestation for which money is deposited in the Compensatory afforestation fund within a period of one year or two growing seasons.
- **How many saplings have to be planted?**
- In Raghunath Jha vs Ministry of Urban Development Judgment, the National Green Tribunal said that permission to cut tree can be obtained only on the condition that "if any tree is fell or permitted to cut in place thereof **at least, 10 trees** shall be planted.
- **Advantages of Compensatory afforestation**
- Balances development with environmental requirements
 - Can help in increasing the tree cover as the compensatory forestation is larger than the fell tree

41. COMPENSATORY AFFORESTATION FUND ACT, 2016

1) BACKGROUND: FORMATION OF CAMPA (COMPENSATORY AFFORESTATION FUND MANAGEMENT AND PLANNING AUTHORITY)

- **Background**
- In July 2009, the Supreme Court of India issued orders for the formation of **CAMPA** (Compensatory Afforestation Fun Management and Planning Authority) as National Advisory Council under the chairmanship of Union Minister of Environment and Forest for monitoring, technical assistance and evaluation of compensatory afforestation activities.
- **Objectives of CAMPA**
- Promote afforestation and regeneration activities as a way of compensating for forest land diverted to non-forest uses.
 - National CAMPA Advisory Council has been established as per the orders of the Hon'ble Supreme Court with following mandates
 - » Lay down broad guidelines for state CAMPA
 - » Facilitate scientific, technological, and other assistance that may be required by state CAMPA
 - » Make recommendations to state CAMPA based on their plans and programmes
 - » Provide a mechanism to state CAMPA to resolve issues of an inter-state or Center-state character.

- **State CAMPA**
 - » Would receive the funds
 - » Administer the amount received from Adhoc CAMPA and utilize the funds collected for undertaking compensatory afforestation, assisted natural regeneration, conservation and protection of forests, infrastructural development, wildlife conservation and protection and other related activities.
 - » Would provide an integral framework for utilizing multiple sources of funding and activities relating to protection and management of forests and wildlife.
 - » **In sum, the prime task of State CAMPA would be regenerating natural forests and building up institution engaged in the task in the state forest department.**

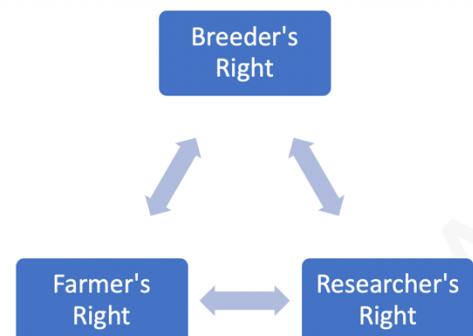
2) COMPENSATORY AFFORESTATION FUND ACT, 2016

- **Main Provisions of the Act**
 - **Statutory Backing to Funds and Authorities**
 - » The act provides legal backing to centre and state funds and regulate how this money will be utilized
 - » The funds would be created under Public Account of India and Public Account of State respectively
 - **What kind of payment would come into fund?**
 - » Payment for compensatory afforestation
 - » Payment for loss of forest ecosystem (Net present value)
 - » Payment for violation and diversion of forest land guidelines
 - » Additional payment for specific projects.
 - **How the funds will split between centre and state**
 - » The state would get bulk of the money (90%) and 10% would go to centre.
 - » The funds will go to Public account of State and Centre.
 - This will bring these funds within the overall oversight and control of parliament and state legislatures.
 - **How the money would be utilized**
 - » **State funds**
 - Compensatory afforestation
 - Regeneration of forests
 - Infrastructure development
 - Forest and wildlife protection
 - » **National Fund**
 - Monitoring purposes and approved schemes of forestry and wildlife
 - **How the fund will manage**
 - » **National CAMPA**
 - Core committee responsible for broader policy and day to day working
 - Specific group of experts from environment, science, economics and other fields responsible for monitoring
 - » **State CAMPAs**

- Responsible for managing state level funds
- **Auditing**
 - » The act also provides for annual audit of the account by CAG.
- **Expected Impact**
 - End of era of Ad Hocism
 - » The statutory authorities at centre and state levels.
 - Expedited Utilization
 - Employment Generation in backward and tribal areas:
 - Increase availability of timber and other forest products:
 - Improving quality of forest
- **MoEF&CC Modifies Compensatory Afforestation Rules for ease of business (May 2019)**
 - States with over 75% forest cover looking to divert forest land for non-forestry projects, can now carry out compensatory afforestation in other states.
 - It will promote ease of business and will give a push to projects stuck for want of non-forest land.

42. PROTECTION OF PLANT VARIETIES AND FARMERS RIGHTS ACT, 2001

- **Need of the law:**
 - Encourage plant breeding activities so that new varieties could be developed. Attract more investment in biotechnology.
 - Protect farmers' rights and interests.
 - Fulfilling the mandate of TRIPS:
 - Article 27.3(b) says that members may exclude plants from patentability - but requires protection for plant varieties in the form of an effective 'su-generis system' or through patents or both.
 - Fulfilling mandates of International Agreements like UPOV (International Union for Protection of Plant Varieties)
 - UPOV- International Union for the Protection of New Varieties of Plants
 - India has initiated the process of joining UPOV, but still not a member. India doesn't follow UPOV and has its own su-generis system.
 - Patent Act, 1970 excluded agriculture and horticulture methods of production from patentability.
- **About the Act**
 - The law was enacted in 2001 to grant IPRs to plant breeders, researchers and farmers who develop any new or extant plant varieties i.e., it has granted rights and protection to all three pillars of agriculture sector.



- **Objectives:**
 - » **Simulate investment for R&D** - both in public and private sector towards development of new plant varieties.
 - » **Facilitate growth of seed industry** in the country by making available high-quality seeds and planting material in the country.
 - » **Recognize the role of farmers** as cultivators and conservers and **contribution of traditional, rural, and urban tribal communities** to the country's agro-biodiversity by **rewarding them for their contribution** through benefit sharing and protecting the traditional right of the farmers.

- **Key Provisions**
 - » **Varieties which are open for registration** - Novel Variety, Extant Variety, Farmer's variety, essentially derived varieties.
 - » **Criterias to be satisfied for registration** - a variety should be **new, distinct, uniform, and stable**.
 - » The IPR granted is a **dual right** - one is for the variety and the other is for denomination assigned to it by the breeder.

 - » **Rights of Farmer's:**
 - Entitled to save, use, sow, re-sow, exchange or sell his farm produce.
 - But farmers can't sell the branded seed of the variety protected under the act.
 - **Farmer's right to register traditional varieties**
 - The act allows the registration of traditional or farmers' variety. Farmer can get Plant breeder rights and the act allows exclusive legal right to PBR-holding farmers.
 - Note: in case of registration of a traditional variety, it is important to involve all communities associated with its conservation. Similarly, in case of farmers' variety, it is important to recognize spousal contribution under joint ownership.
 - Exemption from Payment of fee either for registration or renewal of registration.
 - Farmers right for Reward and Recognition.
 - As per the act, a National Gene Fund is to be created to facilitate reward and recognition to eligible individual farmers and communities. This recognizes farmers who have been contributing in conservation of varietal wealth of crop plants.
 - **Farmers right of benefit sharing**
 - The act provides for equitable sharing of the benefit earned from the new variety with farming or tribal communities that had contributed varieties used as parameters. The benefit share may be reimbursed from the National Gene Fund.
 - **Farmer's right to get compensation for the loss suffered** from the registered varieties
 - **Farmer's right to receive Compensation for undisclosed use of traditional varieties**
 - If the breeder uses Farmers' variety as source material
 - **Farmer's right for the Seeds of Registered Varieties**
 - Seeds of registered varieties should be available to farmers **at affordable prices**. If this doesn't happen within three years of registration, the farmer can raise the matter with PPVFR -Authority.
 - **Protection against innocent infringement.**
 - This protection is only available for the first offence and the farmer is punishable for subsequent offences.

» **Rights of Breeders**

- Right for Production, Sale, Marketing, Distribution, Export and Import
- Penalties for infringement of Breeder's Right.

» **Rights of Researchers**

- Use of registered variety for conducting experiment, as initial source for creating new varieties.
- Free and complete access to protected materials for research use in developing new varieties of plant.
 - However, authorization of the breeder is required "whose repeated use of such variety as parental line is necessary for commercial production of such other newly developed variety".

- **UPOV and India's situation:** Other countries subscribe to the Union for the Protection of Plant Varieties (UPOV), an international agreement with several versions, which offers limited rights to farmers. India has been under constant pressure from the US to join UPOV, an inter-governmental organisation based in Geneva. Several international bodies have warned India against joining UPOV, as they feel it upholds only commercial interests. According to Gol, Indian law is in compliance with UPOV-1978.
- **Significance of the act**
 - » **Recognizes and protects the rights of farmers** in conserving, improving and making available plant genetic resources.
 - » **Enhances agri-growth** by promoting more R&D towards development of new plant varieties.
- **Problems with the law:**
 - » **Lack of proper enforcement:** Seed industry feels that there must be a mechanism to catch and punish those who illegally sell the variety.
 - Unique protection given to farmers can also act as a loophole as an aggregator may also own a small land and call herself a farmer.
 - » **Slow turnaround time for registration of varieties**

1) PEPSICO CASE AND DEC 2021 JUDGMENT

- **Background:**

- » **PEPSICO has sued three Gujarat potato farmers** for growing its proprietary varieties without authorization. The commercial court had stayed farmers from growing and selling the potatoes. But after a lot of protest, Pepsico withdrew the case in May 2019.
- » PEPSICO India holding Pvt limited has informed the court that it uses the registered variety of potatoes called **FL 2027** (of FC5 variety), which is a hybrid of **FL 1867** and **Wischip** varieties, for manufacturing of chip for its brand.
- » The company is registered breeder of the FL 2027 under the protection of Plant varieties and Farmers' Rights Act, 2001.

- **In Dec 2021**, the Protection of Plant Varieties and Farmer's Right Authority (PPV&FRA) revoked PepsiCo India's registration of its potato variety used in Lays chips.

- » In the process, the authority has indicted itself by listing a series of procedural lapses by the registrar in approving the registration despite omissions and fudging in the application submitted by PepsiCo.
- » The argument of farmer's rights and public interest was also used for revocation.
 - The judgment said that **farmers had been put to hardship** including the looming possibility of having to pay huge penalty on the purported infringement they were supposed to have been committing noting that Pepsico had claimed damages of more than Rs 1 crore each from small farmers. This **violated public interest**.
- **Significance:**
 - » After this judgement, the process of registration is expected to get more streamlined as the authority has identified several procedural flaws

43. THE SCHEDULED TRIBES AND OTHER TRADITIONAL FOREST DWELLERS (RECOGNITION OF FOREST RIGHTS) ACT, 2006

- **Background: Need of the law -> Ending the Exploitation under the Indian Forest Act, 1927**
 - Under the **Indian Forest Act, 1927** areas were often declared to be "**government forests**" without recording who lived in the areas, what lands they were using, what uses they made of the forests and so on.
 - **Consequences**
 - » **End of pre-existing traditional rights**
 - » **Eviction, Harassment, exploitation and loss of livelihood**
 - » **Destruction of forests**
 - The loss of more than 90% of India's grasslands to commercial Forest Department plantations
 - Destruction of large areas of forest for mines, dams and industrial projects
 - » **Community management system was destroyed**
- **Introduction**
 - The 2006 law concerns with rights of forest dwelling communities to land and other resources, denied to them over decades as a result of the continuance of colonial forest laws in India.
- **Main Objectives of the 2006 act**
 - i. Grant **legal recognition to the rights of forest dwelling communities**, partially correcting the injustices caused by the forest laws.
 - ii. To address the adverse living conditions of many tribal families living in forests.
 - iii. Make a beginning towards giving communities and the public a voice in forest and wildlife conservation.
- **Nodal agency** for implementing the act: The Ministry of Tribal Affairs
- The main **Provisions** can be summarized as follows
 1. **Individual Forest Rights/ Land Ownership** to land that is being farmed by tribals or forest dwellers as on 13 Dec 2005, subject to maximum of 4 hectares.
 - **Three steps in recognizing land ownership rights under the**
 - Section 6 of the act provides a transparent 3 step procedure for deciding who gets the rights

- » **First**, the gram Sabha (full village assembly, NOT gram Panchayat) makes a recommendation - i.e., who has been cultivating land for how long, which minor forest produce is collected etc.
 - » **Two stages of screening committee**
 - Gram Sabhas recommendation goes through two stages of screening committees at the Taluka and district levels.
 - The district level committee makes the final decision.
2. **Community Rights -> Resource Use Rights** - to minor forest produce (also including ownership), to grazing areas, to pastoralist routes, etc.
 3. **Forest Protection and Management Rights** - to protect forest and wildlife
 - This include right to protect, regenerate, or conserve or manage any community forest resources which they have been traditionally protecting and conserving for sustainable use.
 4. **Relief and Development Rights** - to rehabilitate in case of illegal eviction or forced displacement, and to basic amenities, subject to restrictions for forest protection.
 5. **Powers to Gram Sabha**
 - The act provides for diversion of forest land for public utility facilities managed by Government, such as schools, dispensaries, fair price shops, electricity and telecommunication lines, water tanks etc. with the recommendation of Gram Sabhas.
 6. **Rights of conversion of forest villages into revenue villages** -> Adjudicated by the Gram Sabha, Sub divisional level committee and the District level committee.

- **Significance of the Act**

- i. **Sense of Security:** Individual Forest Rights give forest dwellers a sense of security against future eviction.
- ii. **Huge Potential** to further the goals of:
 - **Grassroot democratization of forest governance -> Empowerment**
 - Communities in different parts of the country have successfully used the FRA to protect forest and their biocultural habitats as illustrated in the examples of Dongria Kondh's campaign to protect Niyamgiri hills.
 - **Sustainable Development and Conservation**
 - **Area:** In terms of area, potentially, up to 85.6 million acres or 34.6 million hectares of forests could be recognized as Community Forest Reserves (CFRs) in the country.
 - **Population:** In terms of potential beneficiaries, an estimated 200 million scheduled tribes and other traditional forest dwellers (OTFDs) in over 1,70,000 villages are the users of potential area, and could, therefore, gain collective rights over forests under the CFR provisions of the FRA.
- iii. **Alleviate poverty in forest heartlands**
 - By ensuring that benefits from forest product harvests and enterprises, and from reforestation, carbon sequestration, and provision of ecological services, go directly to the right-holding gram sabhas and their members.
 - For instance, several tribal and OTFD gram sabhas in Gadchiroli district of Maharashtra and Narmada district of Gujarat have earned tens of lakhs of rupees from the sale of bamboo and tendu leaves from their CFRs.

- iv. **Land Reform:** FRA if properly implemented can become the largest land reform in India's history
- v. **Internal Security:** Potential to deal with Left Wing Extremism

44. OTHER NATIONAL EFFORTS

1) NATIONAL MISSION ON BIODIVERSITY AND HUMAN WELL-BEING

- In 2018, the Prime Minister's Science, Technology and Innovation Advisory Council (**PM-STIAC**) in consultation with the MoEF&CC and other ministries approved an ambitious **NMBHWB**.
- A Bengaluru based Biodiversity Collaborative is working with the National Biodiversity Authority to hold consultation and prepare roadmap for the mission that will be steered by a core of the country's leading biodiversity science and conservation organizations, from public, academic, and civil society organizations.
- **The mission will:**
 - Strengthen the science of restoring, conserving, and sustainably utilizing India's natural heritage.
 - Embed biodiversity as a key consideration in all developmental programs, particularly in agriculture, ecosystem services, health, bioeconomy, and climate change mitigation.
 - Establish a citizen and policy-oriented biodiversity information system
 - Enhance capacity across all sectors for the realization of India's national biodiversity targets and UN SDGs.
- The mission will also allow India to emerge as a leader in demonstrating linkages between conservation of natural assets and societal well-being.
- **Other advantages of the mission**
 - **Increase natural assets** by millions of crores
 - **Fight climate change**
 - **Increase agri-production**
 - **Restoration activities** across India's degraded lands, which amount to almost a third of our land area.
 - Meet the commitments of **international conventions and agreements** like CBD, SDGs etc.

2) ECO-SENSITIVE ZONES (ESZS) AROUND PROTECTED AREAS

- **Introduction**
 - Eco-sensitive zones are buffer zones around protected areas (NP, WLS etc) where only regulated activities for specialized eco-system are allowed.
 - **Why?**
 - » They protected against damages caused by developmental activities and act as shock absorbers.
 - » They also act as transition zone from areas of high protection to areas involving lesser protection.
- **SC Judgment 2006**
 - » In December, 2006, the Supreme Court had ordered all states and Union territories for sending proposals to the MoEF for demarcation of ESZs.
 - » In case no ESZ proposal is sent, ESZ of 10 km shall apply around Protected Areas.

- **MoEF guidelines for creating Eco-Sensitive Zones:**
 - In 2011, MoEF came out with **new guidelines to create eco-sensitive zones**.
 - **Activities Prohibited**
 - » Commercial mining, saw mills, polluting industries, commercial use of fire wood, major hydro power projects etc.
 - » Tourism activities like flying over protected areas in an aircraft or hot air balloon, and discharge of effluents and solid waste.
 - **Activities restricted with safeguards**
 - » Felling of trees, drastic change in agriculture systems and commercial use of natural water resources, including ground water harvesting and setting up of hotels and resorts, are the activities regulated in the area.
 - **Activities Permitted**
 - » Ongoing agriculture and horticulture practices by local communities, rainwater harvesting, organic farming, adoption of green technologies, use of renewable energy resources.
 - **Width of ESZs**
 - » May vary from protected area to area
 - » As a general principle, the width could go up to 10 Kms around the protected area.
- **Controversy over Eco-Sensitive Zone for the Western Ghats**
 - In 2010, MoEFCC set up the **Western Ghat Ecology Expert Panel (WGEEP)** under the **chairmanship of Prof. Madhav Gadgil**.
 - The **Main recommendations** of WGEEP were:
 - i. **Entire Western Ghat** (1,29,037 sq km) should be designated as Ecologically Sensitive Area (ESA).
 - ii. **Three levels of Ecological Sensitivity:** Assign three levels of Ecologically Sensitivity to different regions, termed as ESZ1, ESZ2 and ESZ3.
 - iii. **No new dams based on large scale storage** be permitted in ESZ1.
 - iv. **Restrictions on Mining:**
 - Indefinite moratorium on new environmental clearances for mining in ESZ1 and ESZ2
 - Phasing out of mining in ESZ1 by 2016, and continuation of existing mining in ESZ2 under strict regulation.
 - v. **No New polluting industries**, which would include coal-based power plants, should be permitted to be established in ESZ1 and ESZ2.
 - vi. Establish a **national level Western Ghats Ecology Authority (WGEA)** for the protection of the region.
 - **The report met with resistance** from the governments of all six stakeholder states and could not be implemented. **Key Criticisms** were on the grounds of practicality, energy, and development needs of the region.
- The Delhi High Court directed the government to take action on the recommendations which led to MoEF&CC setting up another High-Level Working Group (HLWG) under the chairmanship of Dr.

Kasturirangan, to suggest an all-round and holistic approach for sustainable and equitable development while keeping in focus the preservation and conservation of ecological systems in Western Ghats.

- **HLWG made the Following main points of recommendations** which were seen as watering down of the Gadgil committee recommendations.
 - **37% of the Western Ghats as ESZ:**
 - It broadened the definition of Western Ghats to include 1,64,280 sq km. Out of the estimated 1,64,280 sq. km of the Western Ghats area, the natural landscape constitutes only 41%. The remaining area was cultural landscape where, where human settlements, agriculture and plantations existed.
 - The area identified as ecologically sensitive is about 37%, (around 60,000 sq km) i.e., about 90% of the natural landscape.
 - **Prohibitory and Regulatory regime in ESA** for those activities with maximum interventionist and destructive impact on the ecosystem.
 - Complete ban on mining, quarrying and sand mining in ESA.
 - No new thermal power projects should be allowed in ESA. Hydropower projects may be allowed but subject to conditions
 - All "Red" category industries should be strictly banned.
 - **Strengthening of existing framework of environment clearance** and setting up of state of art monitoring agency.
- **Non-implementation of Gadgil/Kasturirangan Committee recommendations and impact on Kerala Floods of Aug 2018**
 - According to experts if the recommendation of these committees would have been properly implemented the damages due to flood in Kerala would not have been too severe.

3) URBAN FOREST SCHEME (NAGAR VAN SCHEME)

- **Details**
 - The program is aimed at developing 200 Urban forests across the country in next five years.
 - » Wajre Urban Forest in Pune and Gurgaon's Aravalli Biodiversity Park, may act as a model for the scheme.
 - In this initiative there will be a renewed focus on people's participation and collaboration between forest departments, municipal bodies, NGOs, Corporates and Local Citizens.
 - These will primarily be on forest land in the City or any other vacant land offered by local urban bodies.
- **Funds:**
 - CAMPA
- **Significance of Urban forests**
 - Lungs of the cities
 - Moderates temperature
 - Reduces level of ozone, SO₂ and PM
 - Fights Climate change - removes CO₂ and supplies oxygen

- Space for nature and wildlife

- **Note:**

- The theme for World Environment Day (5th June), 2020 was '**Biodiversity**'.
- India organized WED celebrations virtually in view of the COVID-19 crisis with this year's theme with focus on **Nagar Van** (Urban Forests)

4) HERITAGE TREES

- **Why in news?**

- Maharashtra Legislative Assembly and Legislative Council i.e. both houses, cleared an amendment that protects old trees and provides them 'heritage tree tag'. (July 2021)

- **Details**

- The Maharashtra Legislative Assembly has passed an amendment to the Maharashtra (Urban Areas) Protection and Preservation of Trees Act, 1975, which allows classification of 50 year old trees as "heritage" trees with an aim to increase the forest cover.
 - » The amendment not only conserves old trees in urban areas but also tightens the rules for felling of trees for development works.
- The act also provides for the **formation of the Maharashtra State Tree Authority** and **tree authorities in local civic bodies and councils**.
 - » The tree authority is tasked with increasing the tree cover in urban areas.
 - » The permission for felling of more than 200 trees should come from the state tree authorities.
- The amendment makes it mandatory to plant trees equivalent in numbers to the age of the tree in years, in case felling of trees is allowed for development projects.
 - » The planted trees should be 6-18 feet in height and the survival of such trees should be ensured by geo-tagging.
- In case the compensatory plantation is not possible, the tree feller has to pay compensation for the economic valuation of the trees being felled.
- It also provides for census of trees every five years with the use of new technologies such as GIS etc.
- The amendment also increased the fines for illegal felling of trees from a maximum of Rs 5,000 to Rs 1 Lakh.
- **Extra: Determining the age of a tree:**
 - » The most common method for determining the age of the tree is **Dendrochronology** - or tree ring dating also called growth rings.
 - » A tree, roughly every year adds to its girth. The new growth is also called a tree ring.
 - » By counting the ring of a tree, the age of the tree can be estimated.
 - » **However**, the process is **invasive**.
 - To extract core samples, a borer is screwed into the tree and pulled out. This brings out a straw-size sample of wood. Then, the hole in the tree is sealed to prevent disease.

5) SACRED GROVES

- Introduction

- Sacred groves comprise of patches of forests or natural vegetation – from a few trees to forests of several acres – that are usually dedicated to **local folk deities** (Example – Ayyanar and Amman) or **tree spirits** (Vanadevatais).
- These spaces are **protected by local communities** because of their religious beliefs and traditional rituals that run through several generations.
- The degree of sanctity of the sacred forests varies from one grove to another.
 - In some forests even the dry foliage and fallen fruits are not touched. People believe that any kind of disturbance will offend the local deity, causing diseases, natural calamities or failure of crops.
 - For example, the Garo and the Khasi tribes of northeastern India completely prohibit any human interference in the sacred groves.
- In other groves, deadwood or dried leaves may be picked up, but the live tree or its branches are never cut.
 - For example, the Gonds of central India prohibit the cutting of a tree but allow fallen parts to be used

- Classification of sacred groves

- **Traditional Sacred Groves** – It is the place where the village deity resides, who is represented by an elementary symbol
- **Temple Groves** – Here a grove is created around a temple and conserved.
- Groves around the burial or cremation grounds.

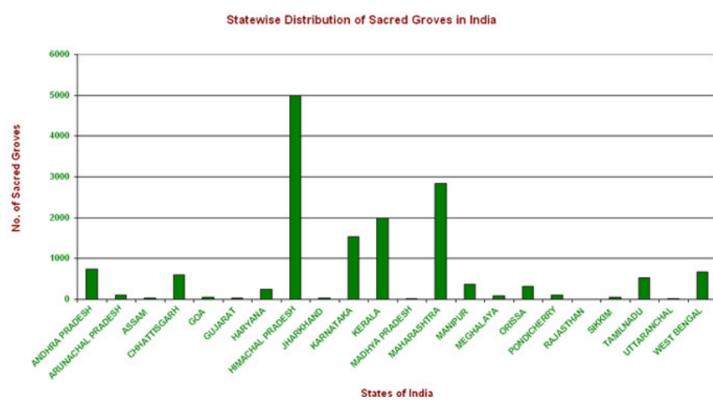
- Ecological Significance

- i. Conservation of Biodiversity
- ii. Recharge of aquifers
- iii. Soil conservation

- Distribution of Sacred Groves in India

- In India, sacred groves are found all over the country and abundantly along the western Ghats. Although, there has been no comprehensive study of sacred groves in the entire country, experts estimate that the total number of sacred groves in India could be in the range of 1,00,000 - 1,50,000.

(Source: "Cultural and Ecological Dimensions of Sacred Groves in India" by Malhotra, K.C., Gokhale, Y., and Chatterjee, S., 1998)



- Threats to Sacred Groves in India

The threats vary from one region to the other and even from one grove to the other. But the common threats identified are:

- **Disappearance of the traditional belief systems**, which were fundamental to the concept of sacred groves. These systems and their rituals are now considered mere superstition.
- Sacred groves in many parts of our country have been destroyed due to **rapid urbanization** and **developmental interventions** such as roads, railways tracks, dams including commercial forestry. Encroachment has led to the shrinkage of some of the largest groves in the country.
- Many groves are suffering due to '**Sanskritisation**' or the transformation of the primitive forms of nature worship into formal temple worship.
- **Invasion by exotic weeds** such as Eupatorium odoratum, Lantana camara and Prosopis juliflora is a serious threat to some groves.
- Pressures due to **increasing livestock** and **fuelwood collection**.

• Local Terms used for Sacred Groves in the country

Sl.No.	State	Local term for Sacred Groves	No. of documented sacred groves
1	Andhra Pradesh	Pavithravana	580
2	Arunachal Pradesh	Gumpa Forests (Sacred Groves attached to Buddhist monasteries)	101
3	Goa	Deoral, Pann	55
4	Jharkhand	Sarana	29
5	Kerala	Kavu, Sara Kavu	299
6	Maharashtra	Devral, Devrahati, Devgudi	1559
7	Manipur	Gamkhab, Mauhak (sacred bamboo reserves)	166
8	Meghalaya	Ki Law Lyngdoh, Ki Law Kyntang, Ki Law Niam	101
9	Puducherry	Kovil Kadu	108
10	Rajasthan	Orans, Kenkris, Jogmaya	255
11	Tamil Nadu	Swami shola, Kolkkadu	527
12	Uttarakhand	Deo Bhumi, Bugyal (sacred alpine meadows)	18
13	West Bengal	Garamthan, Harithan, Jahera, Sabitrihan, Santalburithan	39

45. INTERNATIONAL EFFORTS

1) MARINE PROTECTED AREAS

- **Why in news?**
 - Marine protection falls short of the 2020 target to safeguard 10% of the world's oceans
- **How much of Marine Protected Areas are there in the world?**
 - In 2010, world leaders updated an earlier pledge to establish a network of marine protected areas (MPAs) with a mandate to protect 10% of the world's oceans by 2020.
 - But, by 2020, MPAs only cover 7.66% of the ocean across the globe.
 - Most protected sites are in national waters where it's easy to implement and manage protection under the provision of a single country.

- In more remote areas of the high seas, only 1.18% of marine ecosystems have been gifted sanctuary.
 - Of this, southern Ocean account for a large portion, hosting two MPAs.
 - The South Orkney Islands Southern Shelf MPA covers 94,000 square kms, while the Ross Sea region MPA stretches across more than 2 million square kilometres, making it the largest in the world. CCAMLR is responsible for this achievement.

- MPAs in India

- MPAs in marine environment in India are primarily classified into following three categories:
 - **Category 1:** This covers National Parks and Sanctuaries and having entire areas in intertidal/subtidal or mangroves, coral reefs, creeks, seagrass beds, algal beds, estuaries, lagoons.
 - **Category 2 :** These include Islands, which have major parts in marine ecosystem and some part in terrestrial ecosystem
 - **Category 3A:** They include sandy beaches beyond the inter-tidal line but occasionally interacting with the seawater.
 - **Category 3B :** This include evergreen or semi evergreen forests of Islands.

▫ Important MPAs of India in Peninsular India

Name of MPA	State	Category	Year of establishment
Marine (Gulf of Kutch)	Gujarat	NP	1995
Bhitarkanika	Odisha	NP	1998
Gulf of Mannar Marine	TN	NP	1980
Sundarbans	WB	NP	1984

▪ Important MPAs of India in Islands of India

Name of MPA	State	Category	Year of Establishment
Campbell	A&N	NP	1992
Galathea	A&N	NP	1992
Mahatma Gandhi Marine	A&N	NP	1983
Middle Button Island	A&N	NP	1987
Mount Hariette	A&N	NP	1987
Rani Jhansi	A&N	NP	1996
Saddle Peak	A&N	NP	1987
South Button Island	A&N	NP	1987

46. MAJOR POLICIES, PROGRAMS, PROJECTS

1) NATIONAL FOREST POLICY, 1988

- **Basic Objectives of the 1988 Policy**
 - Maintenance of **environmental stability** through preservation and restoration of the ecological balance.
 - **Conservation of natural heritage** of the country.
 - **Checking soil erosion and denudation** in the catchment areas of rivers, lakes, reservoirs in the "interest of soil and water conservation, for mitigating floods and droughts and for the retardation of siltation of reservoirs
 - **Checking the extension of sand-dunes** in the desert areas of Rajasthan and along the coastal tracts
 - **Increasing substantially the forest/tree cover** in the country through massive afforestation and social forestry programmes, especially on all denuded, degraded and unproductive lands
 - **Meeting the requirements of fuel-wood, fodder, minor forest produce and small timber** of the rural and tribal populations.
 - **Increasing the productivity of forests to meet essential national needs**
 - **Encouraging efficient utilisation of forest produce** and maximising substitution of wood.
 - **Creating a massive people's movement with the involvement of women**, for achieving these objectives and to minimise pressure on existing forests
- **Key Concerns**
 - **No official definition of 'Forests'**. This had led to every state government having their own definition.
 - It doesn't cover provision for **protection of degraded land**.
- **Draft National Forest Policy, 2020**
 - **Why in news?**
 - A GoM has approved Forest Policy, 2020 and have sent it to the PMO and the Cabinet Secretariat for consideration (June 2020)
 - The new policy has been pending since 2016.
 - It is an overarching policy for forest management. This will be **third National Policy on Forests** (after 1952 and 1988).
 - While the NFP of 1952 was focused on production and revenue generation , NFP of 1988 was focused on environmental stability and maintenance of ecological balance, the **draft NFP** will focus on **water conservation** followed by **climate change mitigation** through carbon sequestration and finally to **secure livelihood**.
 - **Target of 33% of India's geographical area under forest and tree cover** and in the hills **2/3rd of area under forest and tree cover** has been continued from the previous policy.
 - **Key sticking Points**
 - Undermining the rights of traditional forest dwellers, roping in of the private players for afforestation, and rather than focusing on forest preservation, it talks about raising plantation.

2) NATIONAL WILDLIFE ACTION PLAN (NWAP), 2017-2030

- **Introduction**

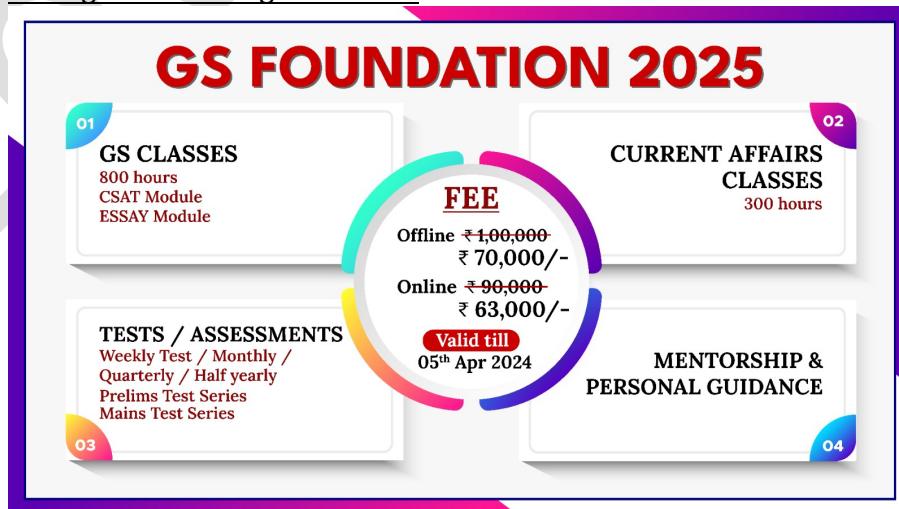
- NWAP is India's roadmap to conserving wildlife for next 15 years. This is the **third** NWAP (first in 1982 and the second in 2002)
- It was **launched Oct 2017** during the Global Wildlife Program (GWP) conference.
 - **Note:** GWP, initiated in 2015, is a World Bank led partnership of 19 countries to promote conservation and sustainable development by combating trafficking in wildlife.
- It focuses on preservation of genetic biodiversity and sustainable development.

- **Key Highlights**

- The plan adopts a "landscape approach" in conservation of all wildlife - uncultivated flora and undomesticated fauna - that has an ecological value to the ecosystem and to mankind irrespective of where they occur.
 - I.e. rather than focusing only on national parks and sanctuaries, the new strategies would be based on landscape of the region that may be limited to a reserve forest system alone.
- The plan integrates climate change into wildlife planning. This is the **first time** that India has recognized concerns relating to climate change's impact on wildlife and stressed on integrating actions that need to be taken for mitigation and adaptation into wildlife management planning process.
- The NWAP has five components, 17 themes, 103 conservation actions and 250 projects.
- **The five components are:**
 - Strengthening and Promoting the integrated management of wildlife and their habitats
 - Adaptation to climate change and promoting integrated sustainable management of aquatic biodiversity in India
 - Promoting eco-tourism, nature education and participatory management;
 - Strengthening wildlife research and monitoring of development of human resource in wildlife conservation
 - Enabling Policies and resources for conservation of wildlife in India.
- **Other thrust area in the planning**
 - Man-Animal conflict mitigation
 - Ensuring public participation in conservation
- The plan will help in mainstreaming wildlife conservation in development planning processes.
- The plan calls for increasing role of private sector in wildlife conservation. The plan lays down that the centre would ensure adequate and sustained funding including CSR funds are made available for NWAP implementation.
- The plans calls for forest rights of people living in tiger reserves and protected areas to be determined by 2020 in accordance with the forest rights act, 2006.

3) SECURE HIMALAYA PROJECT

- **About Secure Himalaya: Need of the Project**
 - Himalayan ecosystem is facing increasing degradation, fragmentation of area etc, which is further increasing due to high dependence of the local communities on the natural resources and unplanned infrastructure.
- **Details of Secure Himalaya:**
 - Launched in Oct 2017.
 - The Project **Securing Livelihoods, Conservation, Sustainable Use and Restoration of High Range Himalayan Ecosystems** (SECURE Himalaya) - is being implemented by **MoEF&CC, GoI and UNDP** with financial support of GEF.
 - It is a six year project aimed at conservation of locally and globally significant biodiversity, land and forest resources in the High Himalayan ecosystem.
 - It is part of **Global Wildlife Programme**.
 - **The key components of the project are**
 - i. Protection of **Snow Leopard and other endangered species** and their habitats
 - ii. Securing livelihood of people in the region.
 - iii. Enhancing enforcement to reduce wildlife crime.
 - iv. Strengthening community institutions
 - v. Improving knowledge, advocacy and information system for promoting landscape based conservation approaches.
 - The project is meant for **specific landscapes**. It includes Changthang (J&K), Lahaul - Pangi and Kinnaur (HP), Gangotri - Govind and Darma - Byans Valley in Pithoragarh (**Uttarakhand**) and Kanchenjunga - Upper Teesta Valley (Sikkim).
 - The project will contribute to **Global Snow Leopard and Ecosystem Protection Program (GSLEP)**, an effort to protect the species in 12 range countries, including India.
 - **Financing**
 - It received a GEF grant of \$11.5 million, and will receive \$60 million in co-financing through the Indian government.



TARGET PRELIMS 2024

BOOKLET-43; EB&CC-12

CA UPDATES

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GS FOUNDATION 2025

7 PILLARS OF THE PROGRAM

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2. BIODIVERSITY

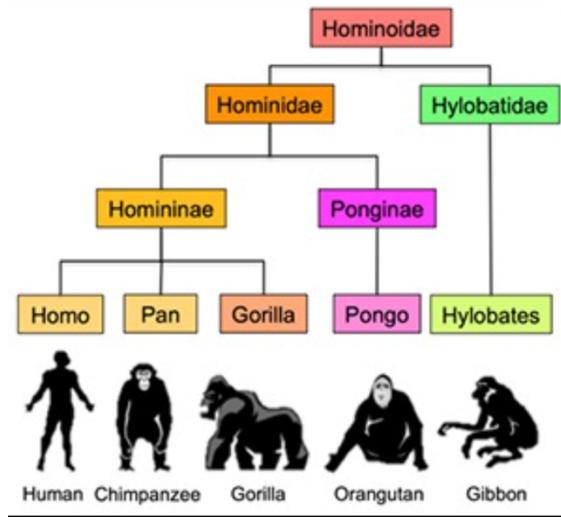
1) "MANIS MYSTERIA": NEW SPECIES OF PANGOLIN DISCOVERED IN CHINA (SEP 2023)

- A ninth species of Pangolin has been discovered through analysis of confiscated scales.
 - » **Tentative name assigned to new species:** "Manis mysteria."
- However, though the new species have been discovered, there are signs that it may be disappearing.
 - » Analysis showed genomic signature of a declining population, including low genetic diversity when compared to other pangolins. This happens because of inbreeding.
 - » **Distribution:** It remains a mystery.
 - The new species doesn't look very different from its Asian cousins, it may well have been overlooked in the wild.
- **Pangolin is amongst the most illegally traded species.**
 - » **Pangolin scales** are coveted for its use in traditional medicine, despite being made of keratin, just like fingernails.
 - » **Meat** - its meat is also considered delicacy in Asian countries.

2) GIBBONS

- Gibbons are among the fastest of all apes.
 - » Ape, (Superfamily Hominoidea), include any tailless primate of the families **Hylobatidae** (gibbons), and **Hominidae** (Chimpanzees, Bonobos, Orangutans, Gorillas, and Human Beings)
 - » Apes are distinguished from Monkeys by the complete absence of tail and the presence of appendix and by their more complex brains.
 - » **Gibbons** are referred as lesser apes.
 - » The **Gorilla, chimpanzees, bonobo, and orangutans** are called Great Apes in recognition of their comparatively large size and humanlike features.

CURRENT CLASSIFICATION SCHEME



3) HOLOCK GIBBON (CLASS: MAMMALIA; ORDER PRIMATES; FAMILY: HYLOBATIDAE)

- It is a species of gibbon found in tropical forests of southeastern Asia. It is also found in India's north-east.
- Found in India's northeast, it is one of the 20 species of gibbons found in the world and only ape found in India.
- **Estimated population** of the hoolock gibbons is 12,000.
- **Features:** Like other apes, they are intelligent, have distinct personalities, strong family bonds etc.
- They are also characterized by their vigorous vocal displays (Singing).
- **One Species, not two:**
 - **Background:** Over the decades, zoologists thought that the northeastern India housed two species of apes - The Eastern Hoolock Gibbon (Hoolock Leuconedys) found in a specific region of Arunachal Pradesh and the Western Hoolock Gibbon (Hoolock Hoolock) distributed elsewhere in the northeast.
 - **Findings of a new study:** A study led by scientists from Center for Cellular and Molecular Biology (CCMB) in 2021 proved through genetic analysis that there is only one species of apes in India. It debunked earlier research that the eastern hoolock gibbon was a separate species based on the color of its coat. The study also concluded that the two populations of the western hoolock gibbon and the assumed eastern hoolock gibbon split 1.48 million years ago.



A female in the foreground, and a male in the background

Conservation status



IUCN Status:

- **Eastern Hoolock Gibbon:** VU
- **Western Hoolock Gibbon:** EN

WPA: Schedule-1

A) THE GLOBAL GIBBON NETWORK

- In 2020, on the occasion of the International Gibbon Day (24th Oct), 20 Gibbon conservation organization came together to launch Global Gibbon Network. It included IUCN Species Survival Commission (SSC) Primate Specialist Group Section on Small Apes, International Collaboration to Conserve Gibbons and Siamang, Hainan Institute of National Parks, Eco Foundation Global etc.
- **The vision of GGN** is to safeguard and conserve a key element of Asia's natural heritage: The singing gibbons and their habitats, by promoting participatory conservation policies, legislation, and action.
- The GGN had its first meeting at Haikou in China's Hainan province from 7th - 9th July 2023.
 - The meeting highlighted several threats being faced by Hoolock gibbons in India.
 - **Felling of trees** for infra project

4) CHEETAL

IUCN Status: LC

WPA: Scheduled-II (as updated in 2022)

Distribution: Native to Indian Subcontinent (India, Nepal, Bhutan, BD, SL)

Chital have also been introduced in USA, Australia etc.

State Animal of Telangana

Notable Features: Sexual dimorphism

Note: Chital has become invasive in various parts of the world.

- » It has become invasive in Andaman and Nicobar Islands.
 - It was introduced to the A&N Islands for game hunting in the early 1990s by the British, an herbivore that multiplied unchecked for years in the absence of large predators and has become an expensive and invasive problem.
 - For e.g. on Netaji Subhash Chandra Bose Island (formerly known as Ross Island), which lies east of Port Blair and doesn't have any major residential enclaves, the 500 cheetals have depleted much of the low ground vegetation. The A&N Forest Department has been spending Rs 15-20 lakh per month since the past few months to feed on the islands.
- » W.e.f 2nd Aug 2022, the EU added the Chital to the invasive list of alien species and banned its import in EU.
- » It has also become invasive on many Hawaiian Islands.



Stag



Doe

5) ELEPHANT CORRIDORS

- **Why in news?**
 - **Report: Elephant Corridors of India, 2023** by Wildlife Institute of India (WII), Project Elephant (GoI), and MoEF&CC.
- **Background:**
 - Elephant Corridor is a strip of land that facilitates the movement of elephant between two or more viable habitat patches.
 - The GoI **Elephant Task Force Report, 2010** (also known as the Gajah Report), listed 88 corridors across the country.

- India has not only identified elephant corridors, but some of the critical corridors have also been restored by the efforts of forest departments of states, MoEF&CC and NGOs. Some of these restored Critical corridors include:

- Kaniyanpura - Moyar Corridor in Bandipur landscape of Karnataka
- Chilla - Motichur Corridor in the Rajaji landscape of Uttarakhand
- Thiruneli - Kudarakote corridor in the Wayanad landscape of Kerala
- Segur elephant corridor in the Mudumalai landscape of TN
- Kuldiha - Hadgarh corridor in the Simlipal landscape of Odisha
- Edayarahalli - Doddasampige corridor in MM Hills and BR Hills landscape of Karnataka
- Mudahalli - Talavadi corridor in the BR Hills Karnataka

- **Key Highlights of the 2023 Report:**

- A total of 150 elephant corridors were reported from 15 elephant range states across the four elephant bearing regions of India.
 - » WB with 26 elephant corridors has the highest number (17%) of corridors in the country.
 - » **Landscapes (Elephant bearing region) wise data:**
 - 52 corridors in the East Central Region (nearly 35%).
 - 48 corridors in the North-eastern region (nearly 32%)
 - 32 corridors in the Southern region (21%). It has to be noted that Southern region harbors the highest elephant population in the country.
 - 18 corridors in the northern region (12%). Northern region has the smallest elephant population in the country.
 - » **84% (within state boundaries);** 13% (n=19) are interstate corridors. There were also 6 transnational corridors between India and Nepal.
- Of the 88 corridors that were listed in the Gajah report, 74 were found to be presently active with respect to elephant use.
 - » **Classification:** Elephant Corridors were classified as "active" if it was being effectively used by elephants as reported by forest departments in ground survey. It was classified as "impaired" if the elephant use was perceived to be virtually non-existent.

- **Way Forward:**

- Continuous monitoring: Delineate boundaries of the corridors and include them in respective working plans and management plans.

A) DULUNG-SUBANSIRI ELEPHANT CORRIDOR (MARCH 2024)

- The Wildlife Division of the MoEF&CC has recently directed the forest departments of Arunachal Pradesh and Assam to prepare a proposal to notify the Dulung-Subansiri elephant corridor - downstream of the 2000 MW Lower Subansiri Hydroelectricity Project.
 - The corridor is functional and of vital importance in the larger landscape for elephants.
 - It facilitates east-west movement of elephants across the Subansiri river.

- An expert committee of NBWL, which was inspecting the compliance of conditions imposed by Arunachal Pradesh government, as part of the clearance of the hydroelectric project, had recommended the notification of the elephant corridor in May 2023.
- The proposal to demarcate elephant corridor will be presented during the next meeting of the National Board of Wildlife, which is the apex government body on wildlife conservation and regulation of development projects in wildlife areas.
- Notification of the elephant corridor will involve physically marking the relevant areas used by Elephants on the ground as well as potentially notifying parts of the corridor as either a WLS or a conservation reserve.
 - If the corridor is notified a protected area, it will provide legal sanctity to it.

NATIONAL BOARD OF WILDLIFE

- A statutory body constituted through **WPA, 1972**.
- It is an advisory body that helps centre for policy decisions.
- Chaired by PM, vice chairman - Minister of Environment
- Functions
 - Advises centre on policy decisions.
 - Review all wildlife related issues, approve projects in and around national parks and sanctuaries.
 - Boundaries of NP or WLS can't be changed without permission of NBW

B) ABOUT THE 2000 MW LOWER SUBANSIRI HYDRO-PROJECT

- It is being executed by the National Hydroelectric Power Corporation (NHPC), has been in the works since 2003 and is yet to be commissioned.
- It is located in the Kamle and Dhemaji districts of Arunachal Pradesh and Assam, respectively, and is being constructed on the Subansiri River, a tributary of the Brahmaputra River
- A report from Wildlife Institute of India (WII) has pointed out that hydropeaking for power generation from the project will pose a threat of sweeping away elephants, especially calves, due to flash floods.
 - Hydropeaking refers to regulating the flow of water released from a dam to generate power, depending on demands.

6) CAPTIVE ELEPHANT (TRANSFER AND TRANSPORT) RULES, 2024

- **Background:** Under the WPA, 1972, Elephant has been kept in Schedule-1. A Schedule-1 species can't be captured and traded.
 - **Section 12** of the act allows schedule-1 animals to be translocated for 'special purposes' such as education and scientific research. They can be translocated for population management of

wildlife without harming any wild animal and collection for specimens for recognized zoos/museums.

- **Captive Elephants** because of their historical role in forest management, timber transport, presence in estates of erstwhile royal families and in temple precincts for religious purpose can be owned and therefore come under a special category. However, **strict rules guide the transfer of such elephants.**
- **Section 40(2)** of the WPA, 1972, prohibits the acquisition, possession, and transfer of a captive elephant without the written permission of the Chief Wildlife Warden of the State.
- Until 2021, the provisions explicitly said that such transactions ought not to be of a 'Commercial nature'.
- The 2021 amendment, however, allowed the transfer of elephants for 'religious or any other purposes'. This broad reason was criticized by civil society and even the Standing Committee of Parliament. But it was passed as a law.
- What do the "Captive Elephant (Transfer and Transport) Rules, 2024 say?
 - New relaxations under which captive elephants can change owners or be transferred?
 - i. Situation when an owner is no longer in a position to maintain the elephant or when a State's Chief Wildlife Warden "deems it fit and proper" to transfer the elephant in circumstances which calls for better upkeep of the elephant.
 - » Other pre-requisites for transfers within states: An elephant's health has to be ratified by a veterinarian, and the Deputy Conservator of Forests has to establish that the animal's current habitat and prospective habitats are suitable. The **Chief Wildlife Warden** on receipt of such documents may choose to reject or approve such transfer.
 - » If the transfer is taking place outside state, similar conditions apply.
 - ii. Before a transfer is affected, the "genetic profile" of the elephant has to be registered with the MoEF&CC.
 - iii. Permission from both originating and recipient state is required.
 - » Earlier rules required that an elephant being transferred would need permissions from Chief Wildlife Wardens of every state that the elephant passes through in the process of being ferried by road.
 - » Now, the permission only from originating and receiving states are required.
 - iv. Conditions to be fulfilled during transfer:
 - » The elephant must be accompanied by a mahout and an elephant assistant.
 - » A health certificate from veterinary doctor confirming fitness for transport.
 - » Proper feeding and water arrangement must be made during transport
 - » Sedative and Tranquilizers could be used to control temperamental elephants.

CHIEF WILDLIFE WARDEN (CWW)

The Chief Wildlife Warden (CWLW) is the statutory authority, under the Wildlife Protection Act, who heads the Wildlife Wing of the Forest Department and exercises complete administrative control over Protected Areas (PAs) within a state. Every PA is typically classified as a Wildlife Division and is headed by a Deputy Conservator of Forests (DCF).

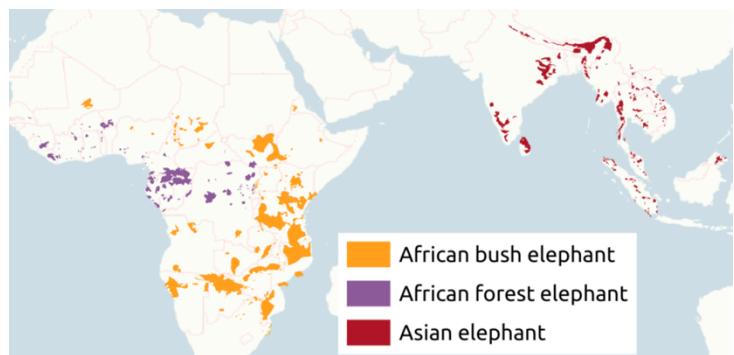
7) DNA PROFILING OF 270 CAPTIVE ELEPHANTS COMPLETED: GOI (MARCH 2023)

- In Aug 2022, while announcing the 30-year celebration of '**Project Elephant**', officials said that the DNA Profiling of elephants, which would act as the 'Aadhaar Card of captive elephants', was started. It was done for 'Gaj Soochna' mobile application for forest officials.
 - The process is being carried out in collaboration with Wildlife Institute of India.
- As of March 2023, DNA Profiling for 270 of the 2675 captive elephants in the country has been completed.
 - With the app, forest officers can identify each elephant and track it and therefore its transfer - which often takes place in case of captive elephants.
- **After the elephant profiling**, focus will be shifted to elephant care. With unique information about elephants, it will be possible to provide better medical care for them.
- **Note:** Unlike Project Tiger, the Project Elephant looks at the Welfare and Health of Captive Elephants too.

8) BOTSWANA'S ELEPHANT PROBLEM

A) AFRICAN ELEPHANTS

- African elephants are the largest animals walking the earth. Their herd wander through 37 countries. They have large ears which allow them to radiate excess heat.
 - » There are two species of African Elephants.
 - i. The Savanna (or bush) elephant
 - ii. The Forest Elephant
 - » **Savanna elephant** are larger than the forest elephants and their tusk curve outwards. They are the largest species of elephants and the biggest terrestrial animal on earth.
 - IUCN: EN
 - » **Forest** elephants are uniquely adapted to the dense forest habitat of Congo basin. They are smaller and darker; their tusks are straighter and point downwards. There are also differences in the size and the shape of the skull and skeleton between the two species.
 - IUCN: CR



B) PROBLEM OF INCREASING ELEPHANT POPULATION IN BOTSWANA

- Why in news?
 - » The President of Botswana has threatened to send 20,000 elephants to Germany in a dispute over conservation (April 2024)
- Elephant Problem in Botswana:

Botswana has the world's highest number of elephant population roughly 1.3 lakh). This is around 33% of the world's elephant.

Why does Botswana has such large population?

- **Political Stability , and small human population** has led to the country remaining safe haven for elephants. For instance, when conflict led mass poaching in Namibia and Angola began, elephants (known to be intelligent species) stopped crossing the Chobe river, preferring to stay in the safer Botswana instead.
- **Strict Conservation Policies in Botswana:** For e.g. during peak poaching period of 2013, Botswana announced a "shoot-to-kill" policy targeting suspected poachers.

So elephant population which was 10,000 in 1960s has increased to 1.3 lakh today. Around 40% of Botswana land is inhabited by Elephants.



How large population of elephants is creating problems?

- Spike in human-animal conflict: it had become a menace for country's rural communities, regularly damaging homes, damaging crops, drinking water shortage, and trampling people and cattle to death.
- **Biodiversity loss:** Elephant tear down trees for fodder and consume large amounts of water.

- What is Botswana doing to keep the population under check?
 - » **It is giving elephants to neighbouring countries** (In 2023, it gave 8,000 elephants to Angola, and in 2022 gave 500 elephants to Mozambique).
 - » It has also lifted ban on trophy hunting in 2019. Botswana argues that it not only controls elephant population but also boosts local economy with hunters from other countries, paying as much as \$50,000 for each elephant killed.
- **Concerns:** Western countries and environmental activists have questioned the above arguments as not true or negligible.
- **Botswana Germany Issue:**
 - » Early in 2024, Germany's environment ministry suggested there should be stricter limit on importing trophies from hunting animals.
 - » **Botswana is unhappy with it.** They feel that this will impoverish people in Botswana and will also hamper efforts to control population in the country. Germany is one of the largest importers of hunting trophies in the EU.

9) ATTENBOROUGH ECHIDNA REDISCOVERED IN INDONESIA (NOV 2023)

A) ECHIDNAS (SPINY ANTEATERS)

- It is a member of **monotremes** - an egg laying group that separated from the rest of the mammal's tree of life about 200 million years ago.

- **Habitat / Distribution:** Australia and New Guinea

- In Echidnas eggs are carried in a pouch on the female's belly until the young hatches, at which point the barely developed young must find a mammary gland and latch onto it for nourishment.

- Echidnas are nocturnal and shy. This makes it difficult to find them.

- Echidnas also curl into a ball and deter predators with its spines.

- **Note:** There are 4 species of Echidnas known:

- » The short beaked Echidna (*Tachyglossus aculeatus*)
 - IUCN: LC
 - Only member of the genus *Tachyglossus*).
- » Sir David's long beaked echidna (*Zaglossus attenboroughi*)
 - IUCN: CR
 - Till its sighting recently, it was not seen since 1961.
- » Eastern Long Beaked Echidna (*Zaglossus bartoni*)
 - IUCN: VU
- » Western Long Beaked Echidna (*Zaglossus bruijnii*)
 - IUCN: CR

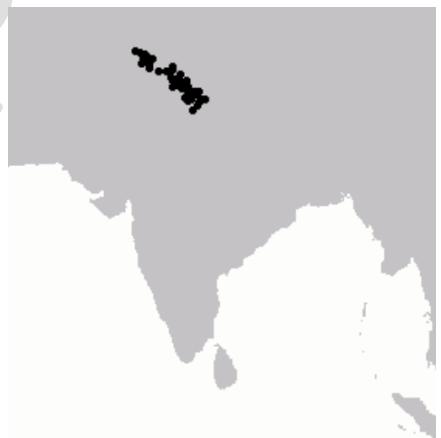
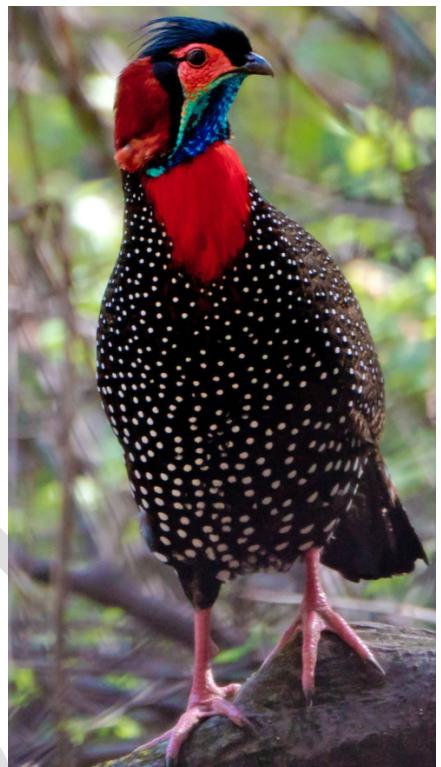


B) ELUSIVE ATTENBOROUGH ECHIDNAS REDISCOVERED IN INDONESIA (NOV 2023)

- The *Zaglossus attenboroughi*, a kind of long-beaked echidna named for famed British naturalist David Attenborough, had last been seen in 1961.
- It has never been recorded outside the extremely remote Cyclops Mountains of Indonesia's Papua region. The rediscovery has happened here only.

10) WESTERN TRAGOPAN (TRAGOPAN MELANOCEPHALUS)

- It is a medium sized pheasant found along the range of Himalayas from northwestern parts of Pakistan to Kashmir, Himachal and Uttarakhand in India.
- Like other pheasants, the species shows sexual dimorphism.
 - **Male** appears mostly dark with prominent white dots all over.
 - **Female** is brownish Grey in color with paler underparts and is finely streaked with white.
- **IUCN: VU**
- **State Bird of Himachal Pradesh.**
- **Threats:** Habitat loss, hunting, and other anthropogenic factors.
- **Captive Breeding:**
 - Because of efforts by government of Himachal Pradesh, there has been steady growth in population of the bird in captivity in the State's Sarahan Pheasantry, the conservation breeding centre. The population was 2 in 2002 and has increased to 47 individuals in 2023.
- **Next Challenge** is of re-introduction in wild.
 - In 2019, four families (Four males, four females) and a few chicks were released in two phases, one in 2020 and the other in 2021 in the Daranghati WLS in the vicinity. While most of them perished, one had not perished on records. It's a fair success as per the international scientific standards.



11) HOUSE SPARROW (PASSER DOMESTICUS) (GOURIYA IN HINDI)

The House sparrow is a bird of the sparrow family Passeridae, found in most parts of the world.

- It is native to most of Europe, the Mediterranean basin, and a large part of Asia.
- It's intentional or accidental introductions to many regions, including parts of Australasia, Africa, and the Americas, make it the most widely distributed wild bird.

Habitation: It is strongly associated with human habitation and can live in urban and rural settings.



- It feeds on the seeds of grains and weeds but is an opportunistic eater and commonly eats insects and many other foods.
- In Sanskrit it is called Chataka. But there is one other Sanskrit name called Grihabalibhuj, since it captures the nature of a house sparrow. It is a bird that feeds on offerings strewn around the house.

IUCN status: LC

- But IUCN has remarked that the population is showing declining trend.

State Bird of Delhi and Bihar

Unique Features:

- **Anting:** Birds rub insects (usually ants) on their bodies to get relief from parasites. This behaviour is known as anting. The body fluids of the ants are thought to repel parasites.

World Sparrow Day: 20th March

It is a joint initiative by the India-based **Nature Forever Society** in collaboration with the France-based **Eco-Sys Action Foundation** and other national and international organizations across the world. Since 2009, we have been observing World Sparrow Day on March 20 every year.

Note: Nature forever society was formed with a vision to involve citizens from all walks of life, diverse backgrounds and different parts of the country and the world.

Why the sparrow population decreasing in Urban Areas:

- **Not enough food and nesting sites:**
 - » **Shrinking Green Space** - Not enough food and nesting sites
 - » **Modern Urban Architecture:** For e.g. in the past, houses had ventilators (Roshandaan) and invariably sparrows or pigeons will build nest in the ventilators. Age of air conditioners have eradicated ventilators.
 - » **Vanishing Home Gardens** - which used to be a food source for sparrows.
- **Increased pesticide use:** It has reduced insects on which sparrows depended.

Goraiya Gram: It means a house of sparrow and this village for sparrows have been set up in Garhi Mandu forest, one of the four city forests in Delhi.

12) DODO (EFFORTS TOWARDS DE-EXTINCTION)

About Dodo Bird: Dodo is an extinct bird which was endemic to island of Mauritius.

- It had evolved into a **flightless bird** because of lot of food resources available on ground and absence of predators.
- Though the dodo has historically been portrayed as being fat and clumsy, it is now thought to have been well-adapted for its ecosystem.
- It used **gizzard stones** - they swallowed stones and retained them in their guts to grind away at stubborn elements in their diet.
- But Dutch Colonists first landed in Mauritius in 1598. Dodos disappeared around 80 years later. It was because it was hunted for meat and other animals such as Dogs, cats, rats etc also wreaked havoc on the defenseless dodos and their eggs.
- **The closest relative of Dodo was the also extinct and flightless Rodrigues solitaire.**



Dodo skeleton cast (left) and model based on modern research (right), at [Oxford University Museum of Natural History](#)

- The closest living relative of Dodo is the Nicobar Pigeon.

A) EFFORTS TOWARDS DE-EXTINCTION

- An ambitious project which is a collaboration between genetic engineering company Colossal Biosciences and the Mauritian Wildlife Foundation - promises to not just bring the dodo back to life, but also re-introduce it in its once native habitat in Mauritius.
- **How?**
 - » Team of scientists at Colossal have sequenced the entire genome of the dodo using DNA extracted from a skull in the collection of the Natural History Museum of Denmark.
 - This is now being compared to genome of Rodrigues Solitaire to understand the unique features of Dodo.
 - Colossal has also sequenced the gene of the Nicobar pigeon, the dodo's closest extant relative, and found its primordial germ cells (PGCs). PGCs are basically the embryonic precursors of a species' sperm and egg.
 - The Nicobar Pigeon's PGC will now be edited to express the physical traits of dodo, with the insight gathered from the comparison of the genomes of all three birds.
 - » These edited PGCs will then be inserted into the embryos of a sterile chicken and rooster, who will act as 'interspecies surrogates'. In theory when the chicken and rooster reproduce, they will give birth to a dodo offspring.
- Re-introduction will be another huge challenge: Because Mauritius of past doesn't exist anymore.

13) PENGUINS (DOMAIN: EUKARYOTA; KINGDOM: ANIMALIA; PHYLUM: CHORDATA; CLASS: AVES; ORDER: SPHENISCIFORMES; FAMILY: SPHENISCIDAE)

Penguin are species of flightless marine birds.

Distribution:

They live primarily in southern hemisphere.

The majority of species live not in Antarctica but rather between latitudes 45 degree and 60-degree S, where they breed on islands.

A few penguins also inhabit temperature regions, and one, the Galapagos penguin, live at the Equator.

Population: The total population of some species, such as emperor penguins are estimated in the hundreds of thousands, but most species of smaller penguins certainly run into millions.

Key threats:

Climate Change and rising ocean temperature

Locomotion

and

Orientation:

Penguins are adapted for



rapid locomotion in water, in which the wings, or flippers, are used for propulsion; i.e. the birds fly underwater. When moving at high speed, they frequently leave the water in leaps that carry them a metre or more through the air; It is during this time they breathe.

On land, penguins are much more awkward, even amusing, as they rock from side to side as they walk. Despite their short legs, they can run with surprising speed.

On snow or ice, many penguins "toboggan", sliding on the belly as they propel themselves with the feet and flippers.

14) EMPEROR PENGUIN

Emperor Penguin (*Aptenodytes forsteri*)

It is the largest, tallest and heaviest of all living penguins.

Distribution: It is endemic to Antarctica.

Features: Like other penguins, it is flightless, with streamlined body, and wings stiffened and flattened into flippers for a marine habitat.

Food: Fish, crustaceans such as krills, and cephalopods, such as squids.

Special Feature: it is the only penguin that breeds during the Antarctic winter. Emperor penguin trek 50-120 km over the ice to breeding colonies which can contain upto several thousand individuals. Females lay a single egg in May/June that is incubated solely by the males, but parents share the chick rearing duties.

IUCN: NT

Negative Impact of Climate Change: Antarctica's melting sea ice killed thousands of emperor penguins chicks.

- In late 2022, four out of five emperor penguin colonies located in Antarctica's Bellingshausen region experienced total breeding failure due to sea ice loss.
- Upto 10,000 emperor penguin chicks across four colonies may have died.
- **Why?**
 - Emperor penguins hatch their eggs and raise their chicks on the ice that forms around the continent each Antarctic winter and melts in the summer month.
 - If the sea ice breaks up under them, the young chicks will drown or freeze to death.
 - The sea ice disappeared before the start of the emperor Chick's fledging period, during which they develop their waterproof adult wings and learn to swim.

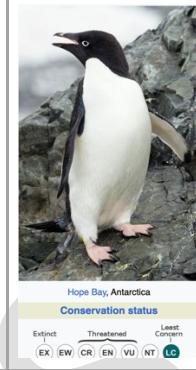


15) ADELIE PENGUIN

Adelie penguin (*Pygoscelis adeliae*) is a species of penguin common along the entire coast of the Antarctic continent. It is the only place it is found.

In March 2024, a team of researchers found 532 dead Adelie penguin, with thousands more thought to have died.

Reasons: The researchers suspect the deadly H5N1 bird flu virus killed the penguins, the field test were inconclusive. Samples have been sent to labs for more details.



16) GALAPAGOS PENGUIN

Galapagos Penguin (*Spheniscus mendiculus*): It is the most northerly of all penguin species. It inhabit the western part of the Galapagos Islands; Some organisms may occasionally venture to other islands of archipelago.

It is among the smallest of all penguins species.

Physical Features: It is a species of penguin characterized by the presence of narrow C-shaped band of white feathers, that extends beyond from the eye to the chin on each side of the head and a single band of black feathers that cuts across the large region of white feathers on the breast.



17) FISH: GHOL (BLACK SPOTTED CROAKER) (SCIENTIFIC NAME: PROTONIBEA DICANTHUS)

- It is not only considered a delicacy but is valued for its medicinal properties in many countries. **Ghol fish bladder** is among Gujarat's high value exports.
- It is a large fish, and a single fish can weigh as much as 25 kg.
- It is also known as Sea Gold for its high market value. It is also known as fisherman's lottery. As 1 kg of the bladder can fetch upto Rs 25,000 kg.
- **Distribution:** Widely distributed in the Indo-Pacific region from the Persian Gulf to the Pacific Ocean.
- **IUCN:** NT
- **State Fish of Gujarat:** In 2023, the state of Gujarat announced Ghol as their state fish during the Global Fisheries Conference in Ahmedabad.
 - Boost attempts to conserve and create awareness about the fish.

18) FISH OTOLITHS (SEA GEM)

- **Why in news?**
 - Fish Otolith ornaments make market debut (March 2024)
- **What is Fish Otolith?**
 - Fish otoliths are biomineralized ear stones. They help fish hear and provide it a sense of balance.

- They are important in fish studies as they have species shapes and grow throughout their life.
- Counting the annual growth rings on the otoliths is a common technique in estimating the age of the fish.
- They were known to Romans and Egyptians as Lucky stones and continues to be used in countries like Brazil.

Ornaments made of Otoliths now in market:

- This the first-time ornaments from fish otoliths are being produced and sold in and organized and sustainable manner.
- It has been made possible due to efforts of enthusiastic fisherwomen in Vizhinjam (Kerala), trained by scientists from Central Marine Fisheries Research Institutions (CMFRI).
 - The ornament has been crafted by fisherwomen under SHG Sea Gems Mahila Sahrudam Group. It recently went on display at Kerala Arts and Crafts Village showroom Kovalam, Thiruvananthapuram.



3. POLLUTION

1) SOLAR WASTE: REPORT

- Introduction:**
 - Solar waste** refers to waste generated during the manufacturing of solar modules and waste from the field (project lifetime)
 - E-Waste Management Rules, 2022** includes solar waste in the definition of E-waste.
- Current Situation of India:** Report: "Enabling a circular Economy in India's Solar Industry - Assessing the Solar Waste Quantum"
 - The analysis was done by MNRE and Council on Energy, Environment and Water (CEEW), a climate think tank in March 2024
 - Generation of solar waste:** 100 Kilotons in FY22-23. It is expected to reach 600 kt by 2030 (this report is referring to end of life waste)
 - The current solar capacity of India was 66.7 GW as of March 2023 which is expected to go to 293 GW by 2030.
 - Therefore, management of solar waste has to be given very high priority.
 - 5 States** - Rajasthan, Gujarat, Karnataka, TN, and Andhra Pradesh - will be responsible for around 67% of the waste produced.
 - Critical Minerals:** Discarded modules also contain critical minerals such as Silicon, Copper, tellurium, and Cadmium. These minerals have been classified as critical minerals for the country's economic development and national security.

- **Key Recommendations of the Report:**

- » **Maintain a comprehensive database; Promote Recycling; Shift towards high-value recycling:**
 - Conventional recycling involves mechanical process like crushing, sieving, and shearing of the waste. This method is able to recycle glass, aluminium, and copper, more valuable materials like silver and silicon can't be recovered through this method.
 - High value recycling involves mechanical, thermal and chemical processes, to recycle the module. It is also able to recycle silver and silicon.

2) THE SC SET ASIDE A NOTIFICATION ISSUED BY THE MOEF&CC IN 2020 THAT EXEMPTED EXTRACTION OF ORDINARY EARTH FOR LINEAR PROJECTS, SUCH AS ROADS AND RAILWAY CONSTRUCTION, FROM OBTAINING ENVIRONMENTAL CLEARANCE (EC) (MARCH 2024)

- **Background:**

- » In Sep 2006, MoEF&CC notified activities that would require prior EC.
- » In Jan 2016, another notification was issued which exempted certain category of projects from this requirement.
- » In March 2020, third notification added "Extraction or sourcing or borrowing of ordinary earth for the linear projects such as roads, pipelines etc." to the list of exempted activities.

- **Why the exemption?**

- » The general purpose of the exemption was to conform to the amendments made to the Mines and Minerals (Development and Regulation) Act, 1957 in March 2020, allowing new lessees to continue mining for two years with the statutory clearance and license issued to their predecessors.
- » The Centre also argued before the NGT that the exemption was necessary "for the aid of general public", and would help "the Kumhars (potters), farmers, gram panchayats, vajaras, oads of Gujarat".
- » Government also said that grant of exemption was a policy matter that didn't warrant judicial interference.

- **Challenge to the Exemption:**

- » The exemption was challenged before the NGT on the ground that allowing the extraction of earth indiscriminately was arbitrary and violative of Article 14 of the Constitution of India.
- » The petitioner also argued that the exemption violated the Supreme Court verdict in **Deepak Kumar versus the State of Haryana (2012)** which required for prior EC in the leases.
- » Ministry had also "circumvented the legal procedure of inviting public objections before issuing the 2020 notification by wrongly exercising its powers to do away with such requirements "under the garb of 'public interest' during the COVID-19 national lockdown.

- **NGT in Oct 2020**, asked government to "revisit" the notification within three months and held that **the ministry should strike a balance and instead of being blanket exemption**, it needs to be hedged by appropriate safeguards.

- Center sat on NGT order until the matter went to SC. After SC concluded the hearing and reserved the judgement, the MoEF&CC notified that exemption in question would be subject to the compliance of SOP and environmental safeguards issued in this regard from time to time.
- Supreme Court Verdict:
 - "Completely unguided and blanket exemption" was arbitrary and violative of Article 14 because the 2020 notification didn't even define linear projects, or specify the quantum and extraction area. This defeats the purpose of EP Act.
 - The court held that the Ministry offered no justification for concluding "that in the public interest, the requirement of public notice should be dispensed with" at any stage - neither in the notification itself or in its submissions to the NGT and SC.
 - Even the Aug 2023 notification failed to elaborate on the concept of linear projects, specify the authority responsible for environmental safeguards, restrictions on the quantum of extraction etc.
 - The court also said that it failed to understand the undue haste shown by Central government in issuing the impugned notification which was issued two days after the nationwide lockdowns was imposed.
- Past cases where these kinds of exemptions have been brought under Judicial Scrutiny:
 - In July 2021, through a notification Ministry sought to perpetuate an amnesty window opened for just six months in March 2017 to clear projects under the "violation category" and issued ex-post facto approval to more than 100 projects, until the Supreme court stayed it in Jan 2024.
 - In March 2024, the High Court of Kerala quashed a 2014 notification that exempted institutions and industrial sheds with build-up areas of more than 20,000 sq m from obtaining EC

4. CLIMATE CHANGE AND ASSOCIATED ISSUES

1) INITIATIVES TO TAKE AHEAD THE 'LIFE' – LIFESTYLE FOR ENVIRONMENT

- To take ahead LiFE movement announced by the Hon'ble PM in 2021, MoEF&CC has introduced two pioneering initiatives that indicates the country's proactive approach to climate change, sustainability, and promotion of eco-conscious practices.
- Both the programs Green Credit Program (GCP) and The Ecomark Scheme were notified in Oct 2023.

A) GREEN CREDIT PROGRAM (GCP)

- The program is a domestic voluntary market mechanism which incentivize environmental actions across diverse sectors and by different stakeholders like individuals, communities, ULBs, private sector etc.
 - Under environmental actions, 8 activities have been identified. It includes : Afforestation, Water Conservation; Sustainable Agriculture, Waste management, air pollution reduction, mangrove conservation and restoration; Ecomark (a government scheme to identify environment friendly products) and sustainable building and infrastructure.

- The environmental actions will earn Green credits and these green credits will be tradable and those earning them will be able to put these credits up for sale on a proposed domestic market platform.
- In its initial phase, the GCP focuses on two key activities: Water Conservation and Afforestation.
- **Institutional Framework:**
 - The GCP's governance framework is supported by inter-ministerial Steering Committee.
 - The Indian Council for Forestry Research and Education (ICFRE) serves as the GCP administrator, responsible for program implementation, management, monitoring and operation.
 - The Green Credit Registry and trading platform, being developed by ICFRE along with experts, would facilitate the registration and thereafter, buying and selling of Green Credits.
- **How to obtain Green Credit:**
 - **Registration of the Activity:** To obtain Green Credits, Individuals and entities must register their activities through the central government's dedicated app/website www.moefcc-gcp.in.
 - **Verification:** The administrator will verify the activity through a designated agency, with self verification for small projects.
 - **Granting of Certificate:** After completion of the verification, the administrator will grant Green Credit Certificate which will be tradable on the green credit platform.
- **How is Green Credit Initiative different from Carbon Credit Initiative:**
 - **Carbon Credit** can be claimed by reducing carbon footprint, whereas Green Credit has a much wider scope and can be claimed by various types of environment friendly activities.
 - While carbon market (carbon credit) is more focused at industry and corporations, green credit program can benefit individuals and communities.
- **How will Green Credit work in case of afforestation:**
 - Under the initiative, registered and approved entities can pay to finance afforestation in specific tracts of degraded forest, and wasteland. The actual afforestation will be carried by the forest department. Two years after planting - and following an evaluation by ICFRE - each planted tree could be worth one 'green credit'.
 - **How credits can be used?**
 - » These credits can be bought to meet obligations under Corporate Social Responsibility (CSR) and Environmental, Social, and Governance (ESG). It can also be used to meet compensatory afforestation requirements under the Forest (Conservation) Act.
 - This green credit could be used by companies which have diverted forest land and non-forest purposes and razed thousands of trees to offset some of their obligations under India's compensatory afforestation laws.
 - **Weeks** after the Union Environment Ministry announced the rules for its Green Credit Program (GCP), ten states have identified parcels of degraded forests land that will be made available for individuals, groups, public and private sector units to earn - and potentially trade - green credits.

- **Concerns:**
 - **Linking Green Credits to Compensatory afforestation** activities is even trickier as the program in essence facilitates the creation of land banks that could be easily diverted to commercial entities **and contribute to even greater level of diversion of forest land.**

B) THE ECOMARK SCHEME

- The Scheme replaces the previous notification and provides accreditation and labelling for household and consumer products that meet specific environment criteria while maintaining quality standards as per Indian norms.
 - Products accredited under the scheme will adhere to specific environment criteria, ensuring minimal environment impact.
- It will build consumer awareness; and encourage eco-conscious choices.
- It will also motivate manufacturers to shift towards environment friendly products.
- The scheme also seeks to ensure accurate labelling and prevent misleading information about the products.
- **Administrator:** The CPCB administers the eco-mark scheme in partnership with Bureau of Indian Standards (BIS), which is the national body for standards and certification.

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TARGET PRELIMS 2024

BOOKLET-44; ECONOMY-9

INDUSTRY

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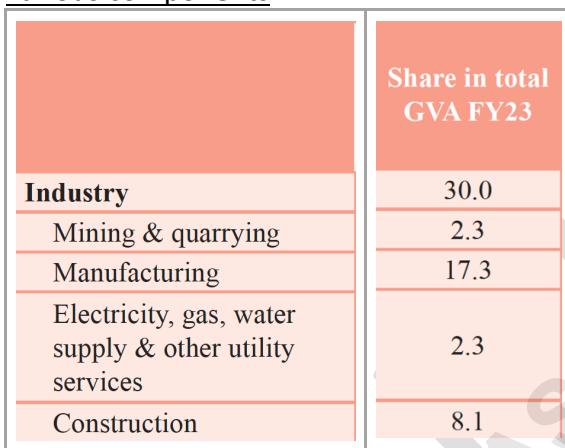
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2. 3 SECTORS OF ECONOMY

Year	Agriculture	Industry	Services
1947	55%	15%	30%
2022-23:	17%	29%	54

3. INDUSTRY

- Industrial sectors consist of manufacturing; construction; Electricity; Gas; water supply & utility; Mining & Quarrying.
- **Share of various components:**



- Industry holds a prominent position in India's economy, accounting for **31% of GDP**, on average, during FY12 and FY21 and employing over 12.1 crore people.
 - o The sector is also significant because of a number of direct and indirect linkages:
 - **Reducing reliance on imports**
 - **Multiplier effect:** Industrial growth has multiplier effect, which translates into employment growth.
 - Industries such as textile and construction have high employment elasticities.
 - Industrial sector also spurs growth in services sector such as banking, insurance, logistics etc.

1) IIP

- **Definition:**
 - o The **IIP** is a composite indicator that measures changes in the volume of production of a basket of industrial products over a period of time, with respect to chosen base year.
 - o The IIP is computed and published by the **Central Statistics Organization (CSO)** on a monthly basis, six weeks after the reference month ends.
- **Description**

- It classifies industry into Manufacturing, Mining and Electricity Sector and measures growth in production in each industry.
 - In addition, use based classification of basic goods, intermediate goods and capital goods is also available. This helps in predicting GDP growth as industry is one of the major contributors to growth.
 - The weight of the 3 categories of sectors are as follows:
 - **Manufacturing** has a higher 77.6%.
 - **Mining (14.4%)**
 - **Electricity (8%)**
 - The weight of various categories under **user-based classification includes:**
 - Primary Goods (34%)
 - Capital Goods (8.2%)
 - Intermediate Goods (17.2%)
 - Infrastructure/construction goods (12.3%)
 - Consumer durables (12.8%)
 - Consumer non-durables (15.3%)
- **Base Year:** 2011-12
- **Purpose:**
- **Policy decisions.**
 - **Crucial input for compilation of GVA** of the manufacturing sector
 - Used by financial intermediaries, policy analysts and private companies for various analytical purposes.
- **Why changes in the IIP calculation methods need to happen regularly?**
- To capture the changes in the structure and composition of the industry over time due to technical changes, economic reforms, changes in pattern of demand and supply.
- **Current Situation**
- For the month of Feb 2024, the Quick Estimates of IIP with base 2011-12 stands at 147.2.

2) ANNUAL SURVEY OF INDUSTRIES (ASI)

- It is the most important source of Industrial statistics of the registered manufacturing sector of the economy.
 - It covers all factories registered under Sections 2(m)(i) and 2(m)(ii) of the Factories Act, 1948, where the manufacturing process is defined under section 2(k) of the said act.
 - It covers all factories employing 10 or more workers using power and those employing 20 or more workers without using power.
 - It also covers Bidi and Cigar manufacturing establishments registered under the Bidi and Cigar Workers (Conditions of Employment) Act, 1966.
 - All Electricity undertakings engaged in generation, transmission, and distribution of electricity, not registered with Central Electricity Authority (CEA) are also covered under ASI.

- Units with 100 or more employees registered in the Business Register of Establishments (BRE) prepared and maintained by the State Governments as and when such lists are shared by the respective State governments.
 - **Industries excluded:** Defence establishments, oil storage and distribution depots, departmental units of railway workshops, RTC workshops, Govt Mints, sanitary, water supply, gas and storage etc., are excluded from the purview of the survey.
- The survey is conducted under the Collection of Statistics Act, 2008 as amended in 2017 and Rules framed there under in 2011.
- It is conducted by **CSO Industrial Statistics (IS) wing** and is released by MoSPI.
- It ensures timely dissemination of statistical information about dynamics of manufacturing sector.
- The data is given with a lag of two years.
- **Note:** For other categories of factories/establishments, which are not covered under the ASI, the information is collected through the unorganized sector surveys conducted by NSSO every 5 years.
- **MoSPI** has released the results of ASI for FY21 and FY22 (Feb 2024)
 - The results show resilience shown by the Indian Manufacturing Sector and tells the unique turn-around story of Indian Manufacturing sector after the COVID-19 crisis.
 - **Employment:** Marginal fall in 2020-21; It was more than compensated in 2021-22 with total estimated employment in the sector showing a robust growth of 7.0% (Y-o-Y).
 - In fact, the estimated number of persons engaged in the sector in 2021-22 has exceeded the pre-pandemic level (i.e. 2018-19) by more than 9.35 lakh.
 - **States:**
 - In terms of GVA, Maharashtra is ranked-1 in FY22 and Gujarat is ranked-2 in FY22. These states are followed by Tamil Nadu, Karnataka and Uttar Pradesh.

3) IIP VS ASI

- **IIP is monthly indicator whereas ASI is a long-term industrial statistics.** It is used to track the health of the industrial activity in the economy over a longer period.
- The index is compiled out of a much large sample of the industries compared to IIP.

4) PURCHASING MANAGER'S INDEX (PMI)

- **What is Manufacturing PMI?**
 - An indicator of the economic health of the manufacturing sector. It predicts the level of industrial production in advance.
 - It is based on five major indicators.
 1. New orders
 2. Inventory levels (stocks of items purchased)
 3. Backlog of work
 4. Suppliers' delivery times
 5. Employment levels

- The **purpose** of the PMI is to provide information about current business condition to company decision makers, analysts and purchasing managers.
- How is info collected?
 - Monthly surveys sent to purchasing executives at approximately 400 manufacturers.
- What does the indicator mean?
 - PMI > 50: Expansion of manufacturing compared to previous month.
 - PMI = 50: No change
 - PMI < 50: Contraction of manufacturing compared to previous month.
- **Famous Manufacturing PMI's of India**
 - S&P Global's Manufacturing PMI
- **Beginning:** It was started by the US-based Institute of Supply Management in 1948. Over the years it has become one of the most closely watched indicators of business activity across the world

4. INDUSTRY-CORE SECTOR

1) THE COMBINED INDEX OF EIGHT CORE INDUSTRIES (ICI)

- The ICI measures the collective and individual performance of production in select eight core industries.
 - These eight industries comprise 40.27% of the weight of items included in the IIP.
 - It is compiled and released by Office of Economic Advisor, DIPP, Ministry of Commerce and Industry.
 - » **Base Year: 2011-12.**
 - » **Weights of different sectors:** Coal (10.33%), Crude Oil Production (8.98%), Natural Gas (6.88%), **Refinery Products (28.04%)**, Fertilizers (2.63%), **Steel (17.92%)**, Cement (5.37%) and **Electricity (19.85%)**.
 - ICI for a reference month is released with a time lag of 1 month, a fortnight prior to release.
- **Updates:**
 - ICI increased by 6.7% (provisional) in Feb 2024 as compared to the Index of Feb 2023.

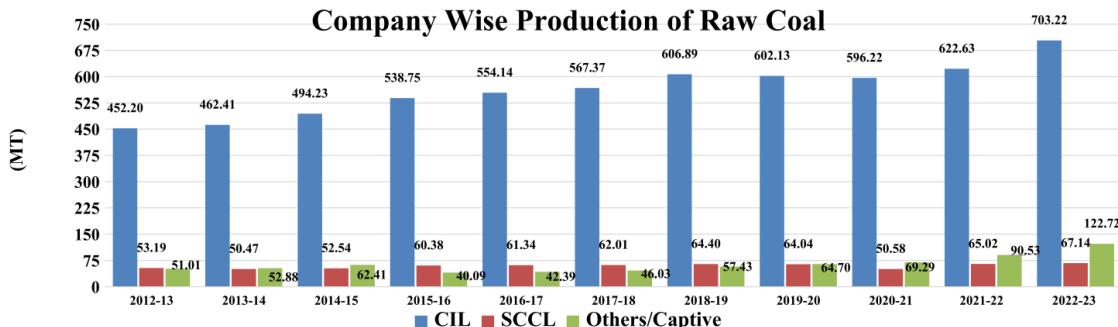
2) COAL INDUSTRY

- **Coal** is the most important and abundant fossil fuel in India. It accounts for 55% of the country's energy need.
- **India will continue to rely on coal for foreseeable future:**
 - » **Surging power demand in India:** As per the latest World Energy Outlook published by International Energy Agency (IEA), India will witness the largest energy demand growth of any country or region in the world over the next 30 years.
 - » **Renewable** only contributes to 22% of energy being produced in the country. Fossil fuels (mainly coal) still provide for 75% of India's power supply.
 - **Issue of intermittency** in the renewable sector.
- **Coal power dependency is also growing globally:**

- » For e.g. as per a report by US-based think-tank, Global Energy Monitoring, - coal fired powerplant capacity grew 2% last year, the highest annual increase since 2016.

A) COAL PRODUCTION IN INDIA

- In recent years, India's coal production is on increasing trend (except 2020-21)



Year	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Total Production (Million tonnes)	609.18	639.23	657.87	675.40	728.72	730.87	716.08	778.20	893.08

- The All-India Production of Coal during 2022-23 was **893.19 MT** with a positive growth of 14.77%.
 - » Coal India Limited (CIL) produces around 78% of coal in India.
 - » Singareni Collieries Company Limited (SCCL) around. 8% of coal production in the country.
 - » Captive and others are responsible for more than 14% of the production.

B) COAL IMPORT

- As per the present import policy, coal can be freely imported (under Open General License) by the consumers themselves considering their needs based on their commercial considerations.
- **Coking Coal** is being imported by Steel sector mainly to bridge the gap between requirement and indigenous availability and to improve the quality.
 - » Note: Coking Coal (also known as metallurgical coal) is a grade of coal that can be used to produce good-quality coke. Coke is an essential fuel and reactant in the blast furnace process for primary steelmaking.
- Other sectors like Power Sector, cement, etc. and coal traders are importing non-coking coal.

Coal	2019-20	2020-21	2021-22	2022-23	2023-24*
Coking Coal	51.83	51.20	57.16	56.05	48.29
Non-Coking Coal	196.70	164.05	151.77	181.62	172.20
Total Coal Import	248.53	215.25	208.93	237.67	221.19
Coke	2.88	2.46	2.48	3.63	3.21

*Import upto Jan, 2024 (Source:-DGCI&S)

NEW US SANCTIONS ON MOSCOW AND IMPACT ON INDIA'S IMPORT OF COAL FROM RUSSIA (FEB 2024)

- Russia was historically a minor exporter of fuel to India. But this changed after western sanctions against Moscow over its war in Ukraine.
- **New US Sanctions** are more likely than previous ones to cut Indian imports of thermal coal from Russia because they specifically cite top exporters SUEK (Russia's largest coal producer and exporter) and Mechel. It also includes Russia's payment system, financial institutions and energy production.
 - **Indian conglomerates** JSW Group, Vedanta and consortium Arcelor Mittal Nippon Steel India were among the biggest importers of Russian thermal coal in the last six months.

C) MINISTRY OF COAL AND COAL PSUS

- MoC has the overall responsibility of determining policies and strategies in respect of exploration and development of coal and lignite reserves, sanctioning of important projects of high value and for deciding all related issues.
- **Three PSUs** come under the Ministry.
 - a. **Coal India Limited (CIL)**
 - » A 'Maha Ratna' company under the Ministry of Coal, with headquarter at Kolkata, WB.
 - » It is the single largest coal producing company in the world and one of the largest corporate employers with a manpower of 3,46,638.
 - » In **FY24**, Coal India Limited (CIL) has surpassed its annual supply target of 610 MT to the thermal power sector, achieving 610.8 MT till 27th March 2024.
 - It's coal supply to the sector rose by 29.3 million tonnes in absolute volume terms compared to the corresponding period last fiscal.
 - b. **Neyveli Lignite Corporation Limited (NLC)**
 - » A 'Navratna' with registered office at Chennai and corporate office in Neyveli in TN.
 - c. **Singareni Collieries Company Limited (SCCL)** which is a joint sector undertaking of Government of Telangana and Government of India with an equity capital ratio of 51:49.

D) COAL CONTROLLER ORGANIZATION (CCO)

- It is a subordinate office of the Ministry of Coal, having its headquarter at Kolkata and field offices in Dhanbad, Ranchi, Bilaspur, Nagpur etc.
- It collects and maintains coal production data of all private and public sector coal mines in the country. The info is collected on a monthly basis.
- **History:**
 - » Office of Coal Controller (earlier Coal Commissioner) was established in 1916. It is one of the oldest offices in Indian coal sector.
 - The mains aim was to have government control over coal production to adequately meet the coal requirements during World War-1.
- **Functions and Responsibilities:**
 - » Inspection of collieries to ensure the correctness of the class, grade or size of coal.

- » To issue directives for the purpose of declaration and maintenance of grades of coal of a seam mined in a colliery.
- » To act as the appellate authority in case of dispute between consumers and owner arising out of declaration of grade and size of coal.
- » To regulate disposal of stock of coal or the expected output of coal in the colliery.
- » Quality surveillance with respect to maintenance of grade, loading of coal in wagons/ trucks according to laid down procedures regarding grades and sizes.
- » To grant opening / re-opening permission of coal mine, seam or a section of seam or to subdivide a mine.
- » Assessment and collection of excise duty levied on all raw coal raised and dispatched.
- » Submission of monthly coal data to different ministries of central and state governments, national and international organisations

E) COAL DEPOSITS IN INDIA (FROM INDIA YEAR BOOK)

- Coal Reserves (308.80 billion tonnes) of coal reserves have been estimated by Geological Survey of India. The reserves have been found mainly in Jharkhand, Odisha, Chhattisgarh, West Bengal, Madhya Pradesh, Telangana and Maharashtra.
- Lignite Reserves (44.59 billion tonnes) have been estimated by GSI. The major deposits are located in Tamil Nadu, followed by Rajasthan, Gujarat, Kerala, West Bengal, Jammu & Kashmir and UT of Puducherry.

F) TYPES OF COAL:

- The degree of change undergone by a coal as it matures from peat to anthracite is known as coalification. Coalification has an important bearing on coal's physical and chemical properties and is referred to as rank of the coal. Ranking is determined by the degree of transformation of the original plant material to carbon. There are four main categories of coal which differ in heating value, carbon content, Sulfur levels, and moisture contents. The ranks of coals, from those with the least carbon to those with the most carbon, are lignite, sub-bituminous, bituminous and anthracite.
 - Peat is a layer of vegetable material directly underlying the growing zone of coal forming environment. The vegetable material shows very little alteration and contains roots of living plants.
 - » Uses
 - Peat is widely used as domestic fuel in rural parts of Scotland and Ireland.
 - Lignite or Brown Coal, (lowest carbon content of 25-30%). It is the youngest coal type geologically, makes up the largest portion of the world's coal reserves. It is brown and can be soft and fibrous, containing discernible plant material. However, lignite has very high moisture and ash content and low energy content.
 - » Uses
 - It is used almost exclusively for electric power generation.
 - Jet a compact form of lignite, is sometimes polished and has been used as an ornamental stone since the upper Paleolithic.
 - Sub-bituminous Coal (35-45% carbon) is a dull black coal with a slightly higher heat value than lignite. Despite its low heat value, it has lower sulfur content and is clean to burn.
 - » Uses:
 - It is used primarily as fuel for steam electric power generation

- Important source for light aromatic hydrocarbons for the chemical synthesis industry.
- **Bituminous Coal or soft coal (45-86% carbon)** : Older than subbituminous coal, dense sedimentary rock, usually black, but sometimes dark brown.
 - » **Uses**
 - Primarily as fuel in steam electric power generation
 - Substantial quantities used for heat and power applications in manufacturing and to make **coke**.
- **Anthracite (86-98% carbon)**, highest rank of coal, is a harder, glossy black coal. Low in volatile matters which can form tars, oils and gasses when heated. Only a small percentage of the overall market.
 - » **Uses**
 - Primarily for residential and commercial space heating
- **Graphite (100% technically)**, technically the highest rank coal, difficult to ignite and is not commonly used a fuel.
 - » **Uses**
 - It is mostly used as pencils.
 - When powdered, also used as Lubricant.

3) OPENING UP OF COMMERCIAL COAL MINING

- **Background**
 - » **Nationalization of Coal Mines, 1973**
 - Coal Mines (Nationalization) Act, 1973 nationalized all the coal mines in India.
 - **Why?**
 - Adequate investment needs in the coal mining sector were not fulfilled by the private sector.
 - Unscientific mining practices adopted by some private miners and poor working conditions of labour in some of the private coal mines became matters of concern for the government.
 - So, since 1970s, **Coal India** had the monopoly over mining and selling of coal in India. It accounted for 80% of the country's coal supply. Another public sector company is Singareni Collieries, a venture of Coal India and the Telangana (earlier Andhra) government.
 - The rest of the requirement is met through **import** and **production from captive mines by private players**.
 - These coal mines were allocated on recommendation basis (not auction) only for their specific use (also called Captive Mining)

- **In Sep 2014, Supreme Court cancelled 214 coal block allocations since 1993.**
 - » The 4 allocation which were not cancelled included government run blocks on non-Joint-venture basis.
 - » **The Coal Mines (Special Provisions) Act, 2015** passed in March 2015, contained provisions enabling government to allocate coal mines through auction. This thus theoretically opened coal mining sector in theory to private sector.

- **In Feb 2018, Cabinet approved bidding process for Commercial Coal Mining: Key features:**
 - » Ascending forward auction on an online platform where the bid parameters will be the price offer in rupees per tonne, which will be paid to the state government on the actual production of coal.
 - No share for centre from commercial mining.
 - » **No restriction on sale and/or utilization** of the coal from mine.
 - » **No cap on price and type** of coal.
- **100% FDI allowed in Coal mining through automatic route in commercial coal production (Aug 2019)**
- **Government unveils auction process for Coal Mines (June 2020)**
 - » This marks the full opening of Commercial coal mining for the private sector through auction and ends seven decades of restrictions.
 - Commercial Coal Mining Auctions are completely different from the earlier regime of restricted sectors, use and price. Now there is no such restrictions.
- **Terms and conditions** of the auction are also **very liberal**.
 - » New companies (without prior experience) in coal mining can participate.
 - » Reduced upfront amount.
 - » Adjustment of upfront amount against royalty
 - » Liberal efficiency parameters.
 - » 100% FDI through automatic route allowed.
 - » Reasonable financial terms and revenue sharing model based on National Coal Index

4) NATIONAL COAL INDEX (NCI)

- **National Coal Index (NCI):**
 - » The NCI is a price index which reflects the change of price level of coal on a particular month relative to the fixed base year. The base year for the NCI is FY 2017-18.
 - » It has been created by combining the prices of coal from all the sales channels - Notified prices, Auction Prices and Import Prices.
 - » The index is meant to encompass all transaction of raw coal in Indian market. This includes coking and non-coking coal of various grades transacted in the regulated (power and fertilizer) and unregulated sector.
 - **Note:** Washed coal and coal products are not included.
 - » It was first rolled out in June 2020.
 - » It consists of **five subindices**: three for non-coking coal and two for coking coal.
 - The three subindices for non-coking coal are combined to produce index for Non Coking coal and the two sub-indices for Coking coal are combined to arrive at the Index of Coking coal.
 - **Thus, Indices are separate for coking and non-coking coal.**
 - » The NCI is released every month.
- **The concept and design of the index** as well as the Representative Prices have been developed by the Indian Statistical Institute, Kolkata.

- **Purpose**

- » Ministry of Coal has started **commercial auction of coal on revenue share basis**. The amount of revenue share per ton of coal produced from auctioned blocks would be arrived by using the NCI by means of defined formula.
- » Thus, NCI will truly reflect the market price.

5) OTHER RECENT REFORMS/INITIATIVES IN COAL SECTOR

i. **Scheme for Harnessing and Allocating (Coal/Koyla) Transparently in India (SHAKTI) Policy:**

- Launched in May 2017
- **Need:**
 - Before SHAKTI, coal supply to thermal power plants (TPPs) were done according to New Coal Distribution Policy (NCDP), 2007. CIL had provided Letter of Assurance (LOAs) for around 1,08,000 MW capacity by 2010 and after that no new LOAs were issued due to prevailing scarcity scenario.
 - In 2013, CCEA's decision directed CIL to sign Fuel Supply Agreement (FSA) with TPPs of around 78,000 MW.
 - So, the remaining 30,000 MW plants were lacking fuel supply agreement and thus awaiting fuel supply.
- **Aim:** Promoting transparency and competition in the allocation of coal mines. It is applicable to all coal-based power plants in the country.
- **Key Provisions of the Policy**
 - **Right to fuel produced by Coal India/SCCL** for thermal capacities in the private sector which are equipped with long term PPAs.
 - The policy prescribes direct linkage allocation to public-sector plants and reverse auction for supply of coal linkages to private players.
 - **Coal linkages is awarded to designated state-owned power distribution companies (DISCOMS).**
 - State or central power generation companies would be assigned linkages via allocation.
 - The firms (independent power producers (IPPs)) with PPAs based on domestic coal will participate in the auction and will bid for discount on existing tariff. This is expected to result in a win-win situation of IPPs having a long-term supply security of coal from a source of their choice while consumer will benefit from a lower tariff.
 - Firms without PPAs shall be bidding for linkage over the notified price of the coal company (i.e. they will bid for fuel linkages with CIL's notified price serving as the reserve).
- By FY2023, 209.614 million tonnes coal linkages have been booked/ allocated under different provisions of SHAKTI Policy.

ii. **New sub-sector under the Policy for Auction of coal linkages of Non-Regulated Sector (NRS):-** A new Sub-sector 'Production of Syn-Gas leading to coal gasification' has been created in 2022 under the NRS linkage auctions in order to encourage coal gasification technology so that new consumers requiring

coal for gasification are incentivized. This will also mitigate the adverse impacts of the conventional use of coal on the environment.

- iii. **Single window for e-auction of coal:** - Government has recently approved a new mechanism for e-auction of coal by the coal companies. The erstwhile sectoral e-auction windows of Coal India Limited has been done away with and henceforth, all the non-linkage coal of the coal companies would be sold through one e-auction window of Coal India Limited / Singaren Collieries Company Limited. This single e-auction window will cater to all the sectors like power & nonregulated sector included traders. Therefore, coal of any particular grade would be sold in the market to all consumers at one rate (**one nation – one coal grade- one rate**).
- It will remove market distortions. It will increase operational efficiencies and lead to an increase in domestic coal demand.
- iv. **Amendment to NCDP:** To promote optimum utilization of coal resources in the national interest, enabling provisions have been made by way of amendment to the New Coal Distribution Policy (NCDP), 2007, in order to allow the coal produced from Closed / Abandoned / Discontinued mines of CIL / SCCL to be sold through a transparent and objective manner as per the guidelines issued by Ministry of Coal from time to time.
- v. **Coal linkages for gasification plants of the coal companies:** CIL / SCCL have been allowed to provide long term allotment of coal to their own gasification plants at prices as may be decided by the coal company. This move will encourage coal gasification technology in the country and will help in early establishment of this new use of coal.
- vi. **Mission Coking Coal:**
- **Understanding Coking Coal:** Metallurgical coal or Coking coal is a grade of coal that can be used to produce good quality coke. It is an essential fuel and reactant in the blast furnace process of steel making. The demand for coking coal is coupled with demand for steel.
 - **Domestic Coking Coal** is high ash coal (mostly between 18% - 49%) and is not suitable for direct use in blast furnace. Therefore, Coking coal is washed to reduce the ash percentage and is blended with imported coking coal (<9% ash) before utilization in blast furnace.
 - **Imports:** About 50 MT coking coal is imported by the country on an annual basis and the value of coking coal imported in FY2020-21 was Rs 45435 crores.
- **Inter-ministerial committee** including stakeholders from industry to strategize augmentation of coking coal production in India submitted its recommendations. Based on this, Ministry of Coal has set up Mission Coking coal to evolve a roadmap for increasing production and utilization of domestic coking coal.

5. CRUDE OIL AND PRODUCTS

1) PRODUCTION

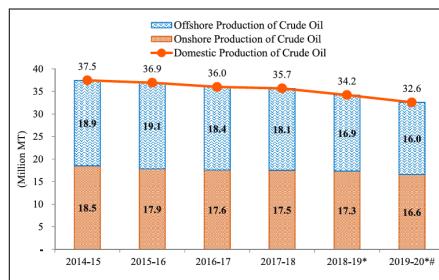
- **India's total Crude oil Production** (on-shore and off-shore production) was **29.18 million metric tonnes (MMT)** in FY22-23.

- India's oil production is one of the lowest among the major economies of the world and has been declining over a period of time.

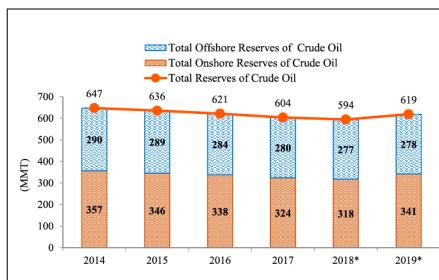
» It has seen a continuous decline since 2014.

- Why? -> Natural decline and ageing and matured fields and no major discoveries.
- » Proven reserves have decreased concurrently since 2014, with the steeper fall in onshore reserves. This fall has seen a reversal in 2019.

(a) Production of Crude Oil



(b) Reserves of Crude Oil



Source: Ministry of Petroleum and Natural Gas and Economic Survey calculations.

2) IMPORTS

- India is the **third largest oil importer and consumer**, shipping in about **85% of its crude needs** and **relies heavily** on the middle east.
- » **India's total import in FY23 was 140 million tonnes.**

Spot Cargoes vs Term Cargoes:

» India purchases crude oil from the Middle East through term contracts, and with Russia through the spot market.

- **Term Contracts** are finalized on a yearly basis, and this is done with National oil Companies (NoCs), while the balance is covered by spot tenders.

- **Advantages of Term Contract:** Stability in price and supply

- **Advantage of Spot market:**

- **Flexible purchases** to meet varying seasonal/market demand and to meet operational exigencies.
- **Competitive purchase opportunities** -> if price drops in the market
- **Explore new crude oil grades** from diverse geographies.
 - There are many grades where term contracts are not available.

» India imported 49.6 million tonnes from the spot market (35.13% of imports) and 91.6 million tonnes using term cargoes (64.87%).

- Since 2018, India has increased its dependency on spot contract.

Diversification of Crude Oil Sources:

» Oil PSUs have started importing crude oil from the US, Canada, Russia, Australia, Brazil, Guyana, Norway, Egypt, Ghana, Congo, Equatorial Guinea, Libya, Nigeria, etc. and have diversified its crude supply.

Oil Imports from Russia:

- » In the first half of FY24, the share of Russian oil in India's overall import rose to 40%, consolidating Moscow's position as the top supplier as refiners curbed purchase from middle east.
- » Though, the imports from Russia have started decreasing in the 2nd half of FY24.
 - In Jan 2024, India's Russian import of oil fell to a 12-month low.
- India's imported 21.4 million tonnes crude oil in Jan 2024 - the highest in last 20 months (since April 2022)
 - » **Reasons:** Increasing domestic consumption and rising export demand for export products.
 - » In Jan 2024, India also received first cargo of Venezuelan oil after a gap of three years, as the US eased sanctions on the south American producer.

3) VARIOUS CRUDE OIL BENCHMARKS

- **Intro: Various characteristics of Crude**
 - There are different types of Crude oil - the thick, unprocessed liquid that drillers extract below the earth - and some are more desirable than others.
 - » For instance, it's easier for refiners to make gasoline and diesel fuel out of low-sulfur, or "sweet" crude that oil with high sulfur concentration.
 - » Low-density, or "light" crude is generally favorable to the high density variety for the same reasons.
 - » Where the oil comes from also makes a difference - transport cost
- **The main benchmarks**
 - There are dozens of different oil benchmarks, with each one **representing crude oil from a particular part of globe**. However, the price of most of them are pegged to one of the three primary benchmarks.
 - i. **Brent Blend**
 - Two-third of the all crude contracts around the world reference Brent Blend making it most widely used oil marker of all
 - These days, "Brent" actually refers to oil from four different fields in the North Sea: Brent, Forties, Oseberg and Ekofisk.
 - Crude oil from this region is light and sweet, making it ideal for refining of diesel fuel, gasoline and other high demand product.
 - Also because supply is waterborne, it is easy to transport to distant locations.
 - ii. **West Texas Intermediate**
 - WTI refers to oils extracted from the wells in the US and sent via the pipeline to Cushing, Oklahoma. The fact that supplies are land locked is one of the drawbacks - its relatively expensive to ship.
 - The product itself is sweet and light, making gasoline refining very easy, in particular.
 - It continues to be the main benchmark for oil consumed in US.
 - iii. **Dubai/Oman**

- The middle eastern crude is a useful reference for oil of a slightly lower grade than WTI or Brent.
- A "basket" product consisting of crude from Dubai, Oman or Abu Dhabi, it's somewhat heavier and has higher sulfur content, putting it in the sour category.
- Dubai/Oman is the main reference for Persian Gulf oil delivered to the Asian market.



- Russian Oils:

- Urals

- Russia produces several types of crude oil, but its main export blend is Urals, which is a medium sour crude. Other grades include Siberian Light, Sokol, Sakhalin Blend, Arctic Oil, and Novy Port.

4) STRATEGIC CRUDE OIL RESERVE PROGRAMME

- Background

- » The erstwhile Planning Commission in its Integrated Energy Policy, 2006, identified supply market and technical risks as major threats to India's energy security and recommended to "maintain a reserve equivalent to 90 days of oil imports for strategic-cum-buffer- stock purposes".

- Need of strategic petroleum reserve

- » Potential Supply crisis -> West Asia is very volatile, tension between major powers etc.
 - » Price Fluctuations -> A situation like 1970s is very harmful for economies.
 - » Exchange rate fluctuations

- Crude Oil Storage facilities

- » These are underground rock caverns. The rock must be strong enough for the cavern to be stable. A wide range of rock types are suitable, such as igneous (granite, diorite), metamorphic (gneiss, schists) and even sedimentary rocks (sandstones, limestone, chalk, shale)

- » Why underground caverns

- Safety from hazard of leakage.
 - Lower capital cost and lower operating cost compared to conventional tanks
 - Inherent safety over the above ground storage systems

- Safety from natural calamities and various forms of sabotage.
- **Locations**
 - » Mostly coastally located - as imports are easy and suitable refinery capabilities.
- **Strategic reserves in India**
 - » State owned Special Purpose Vehicle (SPV), India Strategic Petroleum Reserve Limited (ISPR) has established Strategic Petroleum Reserve (SPR) facilities with total capacity of 5.33 million Metric Tonnes (or 39 million barrels) at **3 locations** under Phase-1.
 - **Vishakhapatnam** (1.33 MMT)
 - **Mangalore** (1.5 MT)
 - **Padur** (Uduppi district, Karnataka) (2.5 MT)
 - Taking advantage of low crude oil prices in April/May 2020, the Strategic petroleum reserves were filled to full capacity. This led to national saving of around Rs 5,000 crores.
 - » **In 2021**, government has approved the establishment of two additional commercial-cum-strategic facilities with total storage capacity of **6.5 MMT** at Chandikhol and Padur on PPP Model.
 - **Chandikhol** (Odisha) (4 MMT)
 - **Padur** (2.5 MMT).
 - » **In 2024**, ISPR has invited bids for constructing 2.5 million tonnes of underground storage at Padur in Karnataka.
 - Bids are due on 22nd April 2024 and tender is to be awarded by 27th June 2024.
 - » **The entire facility will be owned by Gol.**
 - The Concessionaire shall transfer the SPR with Single Mooring Point (SPM), onshore and offshore pipeline to the Gol, at the end of the 60 years of concession period.
 - Gol will also have the first right to take the oil in case of the Oil Shortage Event.
- **For how many days can India be served by these strategic reserves:**
 - » As per the consumption pattern of 2019-20, the **total capacity in first phase** (5.33 MMT) is estimated to provide for about **9.5 days of crude oil requirement**.
 - » Further, the **oil marketing companies** have a storage capacity of **64.5 days** requirements.
 - » The **Phase-2 reserves** with a total capacity of **6.5 MMT** will be able to serve 12 days of India's requirement.
- **Updates: India hold back \$600 million strategic oil reserve top-up: (Jan 2024)**
 - » It has been done due to market volatility and the prospect of further decline in prices.
 - » Government has decided to lease out around 1 million tonnes of vacant strategic crude oil storage capacity to Indian and International Companies, instead of spending government money on filling up the available capacity in the caverns.

6. MINING SECTOR

1) THE MINES AND MINERALS (DEVELOPMENT AND REGULATION) AMENDMENT ACT, 2023

- Amends the 1957 act.
- The act specifies the condition for getting mining and prospecting license.
- **Other Recent Amendments:**
 - » It was comprehensive amended in 2015 to bring several reforms in the mineral sector, notably, mandating method of auction for grant of mineral concessions to bring transparency in allocation of mineral resources; for establishing District Mineral Fund (DMF) for the welfare of the people and areas affected by mining; Establishment of National Mineral Exploration Trust (NMET) to give thrust to exploration and for ensuring stringent penalty for illegal mining.
 - » The act was further amended in 2016 and 2020 to address emergent issues.
- It was again amended in 2021, to bring further reforms in the sector, such as, removing the distinction between captive and merchant mines, transfer of statutory clearances to ensure continuity in mining operations even with changes of lessee, removing the restrictions on transfer of mineral concessions, lapsing of rights of non-auctioned concession holders which have not resulted in mining leases to ensure that concessions to private sector are only granted through auctions etc.
- **Key changes by 2023 Amendment:**
 - » **Reconnaissance to include sub-surface activities:**
 - **Before amendment** the act defined reconnaissance operations as operations undertaken for preliminary prospecting and includes (i) aerial surveys (ii) geophysical surveys, and (iii) geochemical surveys. It also includes geological mapping. But it prohibited pitting, trenching, drilling, and subsurface excavation as part of reconnaissance.
 - **The amendment** allows these prohibited activities.
 - » **Introduction of a new type of mineral concession called Exploration License (EL) for Specified Minerals:**
 - **Before amendment**, the act provided for a reconnaissance permit, a prospecting license, a mining lease, and a composite license for prospecting and mining.
 - **Amendment** introduces an exploration license, which will authorise either reconnaissance or prospecting, or both activities for specified minerals.
 - The exploration license can be issued for 29 minerals specified in 7th schedule.
 - These include gold, silver, copper, cobalt, nickel, lead, potash, and rock phosphate.
 - These also include six minerals out of 12 which were earlier classified as atomic minerals under the Act:
 - (i) Beryl and other Beryllium mineral, (ii) Lithium, (iii) niobium, (iv) titanium, (v) tantalum, and (vi) zirconium
 - **Note:** The amendment has omitted 6 minerals from the list of 12 atomic minerals specified in Part-B of the First Schedule of the Act:

- These six minerals have various application in renewable energy sector, space sector, electronic sector and are **critical in net-zero emission commitment of India.**
 - **Impact:** Removal of these minerals from the list of atomic minerals will open up the exploration and mining of these minerals to private sector.
 - **Note:** Unlike other minerals, the prospecting and mining of atomic minerals is reserved for government entities under the act.

- **Central Government, through rules,** will prescribe the details such as manner of auction, term, conditions, bidding parameters etc. The **state government**, through competitive bidding will grant the license.

- **Validity of exploration license** will be **5 years** (extendable by 2 years by application to state government (after completion of 3 years, but before the expiry of license)).

- **Maximum Area in which activity can be conducted:**
 - Under the act, a prospecting license allows activities in **area upto 25 sq km**; a single reconnaissance permit allows activities in area upto 5,000 sq kms.
 - **Amendment** allows activities under a single exploration license in area upto 1,000 sq km.

- **Submission of geological reports regarding findings** within three months of the completion of the operations or expiry of the exploration license is a must.

- **Incentive for exploration licensee:** If the resource are proven by exploration, the state government must conduct an auction for mining lease within six months of the submission of the report by the exploration licensee. The licensee will receive a share in the auction value of the mining lease for the minerals prospected by them. The shares will be prescribed by the central government.
 - If auction doesn't happen in six months, the **state government will pay to exploration licensee an amount prescribed by the central government.**

- **Significance:**
 - » The proposed EL would facilitate, encourage, and incentivize private sector participation in all spheres of mineral exploration for critical and deep-seated minerals. This will lead to introduction of new technology, finance, and expertise in exploitation for deep seated and critical minerals.

- **Central government has been empowered to exclusively auction some critical and strategic minerals:**
 - » Under the act, auction of concession is undertaken by the state governments, except in certain specified cases.
 - » The amendment empower the central government, to exclusively auction mining leases and composite license for certain critical minerals viz., molybdenum, rhenium, tungsten, cadmium, indium, gallium, graphite, vanadium, tellurium, selenium, nickel, cobalt, tin, platinum group of elements, minerals of "rare earth" group (not containing

Uranium and Thorium); **fertilizer minerals** such as potash, glauconite and phosphate (without uranium) and minerals being removed from the list of atomic minerals.

» **Why?**

- It will increase the pace of auction and early production of minerals which have become indispensable for new-technologies such as space, electronics, IT, energy transition, food security, etc.
- » **Note:** Even though the auction will be conducted by Central Government, the mining lease or composite license for these minerals to the successful bidders will be granted by the State Government only and the auction premium and other statutory payments shall continue to be received by the State governments.

- **Significance of the Amendment:**

- » Attract FDI and other investment in Mining sector.
- » Encourage new junior mining companies in the sector.
- » Promote exploration and mining of critical minerals.

2) CRITICAL MINERALS

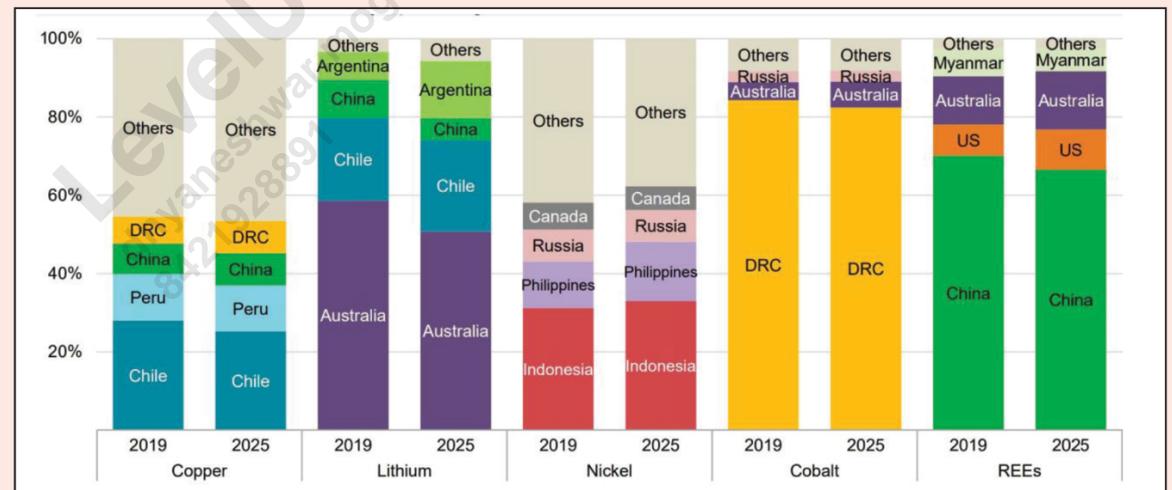
- **Why in news?**

- » Report: Critical Minerals for India: By Ministry of Mines (June 2023)

- **Critical Minerals** are those minerals that are essential for economic development and national security.

- » Scarcity of these minerals or concentration in few countries may create supply chain vulnerabilities.
 - In fact, the demand for critical minerals is set to increase with renewable energy transition, the supply chain is very concentrated and unevenly distributed.

Figure VII.11: Concentration of production of selected minerals in 2019 and 2025



Source: International Energy Agency Report on 'The Role of Critical Minerals in Clean Energy Transitions'

- **Critical Minerals** are essential for advancement of many sectors, including high-tech electronics, telecommunication, transport and defence. They are also vital for global transition to clean energy.

» For e.g.:

- Lithium, nickel, cobalt, manganese, and graphite are crucial to battery performance, longevity and energy density.
- REEs are essential for permanent magnets that are vital for wind turbines and EV motors.
- Electricity networks need a huge amount of copper and aluminium, with copper being a cornerstone for all electricity-related technologies.

- Which are the minerals which are considered critical?

- » The Ministry of Mines have formed a committee in 2022 to identify the minerals critical for India. Based on three stage assessment process and also considering important parameters such as reserve position in the country, production, import dependency, use for future technology/clean energy, requirement of fertilizer minerals in an agrarian economy the committee has identified a set of 30 critical minerals: These are:
- Antimony, Beryllium, Bismuth, Cobalt, Copper, Gallium, Germanium, Graphite, Hafnium, Indium, Lithium, Molybdenum, Niobium, Nickel, PGE, Phosphorous, Potash, REE, Rhenium, Silicon, Strontium, Tantalum, Tellurium, Tin, Titanium, Tungsten, Vanadium, Zirconium, Selenium and Cadmium.
 - **Note:** Platinum Group Elements (PGE) consist of Platinum (Pt), Palladium (Pd), Rhodium (Rh), Ruthenium (Ru), Osmium (Os) and Iridium.
 - **Note:** Of these 30 critical minerals, 24 are included in the list of critical and strategic mineral in Part D of Schedule-1 of MMDR Act.
- » The committee also recommends creation of a Centre of Excellence for Critical Minerals (CECM) in the Ministry of Mines which will periodically update the list of critical minerals for India and notify the critical mineral strategy from time to time and will execute a range of functions for the development of an effective value chain of critical minerals in the country.

A) OTHER STEPS TAKEN TO PROMOTE THE PRODUCTION AND AVAILABILITY OF CRITICAL MINERALS IN THE COUNTRY:

- » The Ministry of Mines have created a joint venture company - Khanij Bidesh India Ltd (KABIL) with the equity contribution from three Central Sector Enterprises namely, National Aluminium Company Ltd, Hindustan Copper Ltd, and Mineral Exploration and Consultancy Ltd with the objective to ensure consistent supply of critical and strategic minerals to Indian domestic market.
- KABIL is also mandated to identify and acquire overseas mineral assets of critical and strategic nature, such as Lithium, Cobalt etc.
 - It has already initiated engagement with several state-owned organizations of the shortlisted source countries, through Ministry of External Affairs and the Indian Embassies in Countries like Argentina and Australia to acquire mineral assets overseas primarily the critical and strategic minerals.
- » The 2023 Amendment to MMDR Act, 1957 has also streamlined the auctioning process of critical and strategic minerals.

- 24 Critical and Strategic Minerals have been inserted in part D of the Schedule-1 of the MMDR Act, 1957.
 - Central government has been empowered to auction the critical and strategic mineral blocks.
- » **Ministry of Mines** under its '**Science and Technology Program**' provides **grants for Promotion and Research and Innovation in Start-Ups and MSMEs** in Mining, Minerals Processing, Metallurgy and Recycling Sector (S&T-PRISM).
- One of the thrust areas of S&T-PRISM includes focus on extraction of strategic and critical minerals and elemental level.
- » The Ministry is also actively involved in Mineral Security Partnership (MSP) and other multilateral/bilateral partnerships with various countries to secure the critical mineral demand of India.

A) MINERAL SECURITY PARTNERSHIP

- The MSP is a collaboration of 14 countries and the EU to catalyze public and private investments in responsible critical minerals supply chains globally.
 - » It aims to accelerate the development of critical energy sector in a diverse and sustainable manner. It will be working with host government and industry to facilitate targeted financial and diplomatic support for strategic projects along the value chain.
 - » It seeks to ensure that critical minerals are produced, processed, and recycled by catalysing investments from governments and private sector across the full value chain.
 - » **Members:** India became the 14th member in June 2014. Other members include USA, Canada, UK, France, Germany, Italy, Norway, Sweden, Finland, Estonia, Japan, Republic of Korea, Australia, and the European Union (represented by European Commission).

B) SUPPLY CHAIN RESILIENCE INITIATIVE

- It was unveiled by India, Japan and Australia in 2021 to strengthen economic ties and to reduce dependency on countries like China for critical imports. It is aimed at addressing vulnerabilities in the global supply chain which were exposed by the COVID-19.
- **Goals:**
 - » Build a more resilient, stable, and inclusive supply chain network in the Indo-Pacific region.
 - » Promoting diversification of trade and investment among the three countries
 - » Use technology (especially digital technology) to enhance the supply chain efficiency.

3) RARE EARTH METALS

- Rare earth elements are a **group of 17 chemical elements** that occur together in the periodic table (see image)

- The group consists of **Yttrium (39)** and **15 Lanthanide (57-71)** elements

» Lanthanide elements include.

- Lanthanum, Cerium, Praseodymium, Neodymium, Promethium, Samarium, **Europium**, Gadolinium, Terbium, Dysprosium, holmium, Erbium, Thulium, Ytterbium, and Lutetium.

» **Scandium** is found in most rare earth element deposits and is sometimes classified as rare earth element. International Union of Pure and Applied Chemistry (IUPAC) includes scandium in their rare earth element definition.

Rare Earth Elements																	He					
H	Li	Be	Na	Mg	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe					
Cs	Ba	La-Lu	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn					
Fr	Ra	Ac-Lr	Rf	Db	Sg	Bh	Hs	Mt														
Lanthanides																	Lu					
Actinides																						
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb									
Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr								

- They are all metals and have many similar properties which often cause them to be found together in geological deposits.

- **Uses of Rare Earth Metals, why the demand has increased in last few decades, why is it expected to increase further?**

» They are used in **electronic devices** (e.g. computer memory, DVDs, rechargeable batteries, cell phones, catalytic converters, magnets, fluorescent lightings etc.)

- Explosion in demand in last 30 years => Telecommunication revolution.
- E.g. **Neodymium** is a critical component of permanent magnets and has the ability to carry material 1,300 times its own weight.
- E.g. **Europium** is necessary for **LED bulbs** and **Color television screens**.
- E.g. **Samarium** is used in optical lasers.

» **Batteries of electric and hybrid electric batteries.**

- Concern for climate change, energy independence => will further increase the demand

» Rare earths are also used as **Catalysts, Phosphors, and Polishing compounds**.

- These are used for air pollution control, illuminated screens on electronic devices, and the polishing of optical quality glass.
 - All these products are expected to rise in demands.

» **Emerging Medical Technologies:** Several rare earth metals are used in these.

» **Critical Defense uses.**

- Rare earth metals are key ingredients for **making the very hard alloys used in armored vehicles and projectiles**.
- **Defense Electronic**

- Night vision goggles, precision guided weapons, communication equipment, GPS equipment, batteries and other defense electronics.
 - Substitutes are not as effective and diminishes the superiority of military
- So, it is clear that Sunrise technologies currently being developed are rare earth intensive.
- **Rare???**
 - Despite being named rare, the metals are plentiful in earth's crust. However, these metals are very difficult to mine because it is unusual to find them in concentrations high enough for economic extraction. Because of geochemical properties these metals are typically dispersed.
- **Production and Trade**
 - Before 1965 - very little demand; supply from placer deposits in India and Brazil; in 1950s South Africa leading supplier, US also producing.
 - First Explosion of Demand - Color television - Europium essential element to produce color.
 - US became leading producer from Mountain pass mine California.
 - China - began to produce notable amount in 1980s and became leading producer in 1990s and early 2000s.
 - **Why was China able to become world leader in Rare Earth Metals?**
 - Long term view and consistent support from government
 - Mineral Availability
 - Weak Environmental laws
 - Cheap Production -> Closure of mines in other parts of the world
 - Huge Demands in China as China is the world leader in consumer electronics.
 - Until a few years ago, China controlled 90% of the supply of rare earths. The danger of this fact was illustrated most starkly in 2010 and 2011, when China imposed extreme export restrictions. The entire world was left scurrying to fend for Rare Earth Supplies. It led to more than 700% jump in global prices, crippling downstream industries dependent on rare earths worldwide.
 - Now, after aggressive production by the US, Australia and Canada, **China's share is down to 60%**. But still, China's control over global market remains a pain point for all involved.
 - Further, COVID-19 disruptions and tensions with China have demonstrated major supply side insecurities which India may face.
 - A group of Western countries are cooperating to develop alternatives to China through '**China plus one**' strategy.
- **India and Rare Earth Metals:**
 - India's rapidly growing economy currently has two massive input deficiencies which threaten its stability - Oil, and rare earths. India is almost 100% import dependent for most rare earths.
 - Interestingly though, India has great potential for domestic production as it possesses 4th highest reserves of rare earths in the world (after China, Russia and Vietnam).
- **Why India produces very small quantity of REMs**
 - a. In India, they are classified as atomic minerals. Why?

- Because some of these elements occur in the earth's surface along with thorium and uranium which are radioactive minerals. Thorium is prevalent in the same beach sands where other rare earth minerals also occur.
 - Thus, mining for rare earth in India is reserved for government companies of which there are only two in India: Indian Rare Earths Ltd (IREL) (owned by GoI) and Kerala Minerals and Metals Ltd (owned by Kerala Government). And their production capacities and technologies are limited which is why India is import dependent.
 - Beach sand mining was banned in 2016 in an attempt to conserve strategic minerals including rare earth and thorium.
- b. **Expertise mismatch:** Present policies separate the rare earth ecosystem from other R&D ecosystems like electronics and metallurgy.
- c. **Incentive Mismatch:** For IREL, most of the income come from the production and marketing of other minerals contained in beach sands - ilmenite, sillimanite, and zircon. With access to beach sand with easily recoverable other minerals, IREL has little incentive to refocus on globally competitive rare earth extracting and processing.
- d. **Fragmented, siloed, and severely inefficient research system**
- e. **Lack of proper linkages between miners and manufacturers**
- f. **License-Permit Raj:** Even after 1991 Economic reforms, some sectors like agriculture and mining continue to be highly regulated.
 - For e.g. in 2019, the central government amended the atomic Minerals Concessions rules, 2016, whereby threshold values for a range of minerals were drastically reduced. This decision effectively nationalized beach sand and forced several private players out.

7. NEXT BOOKLET

- 1) TEXTILE SECTOR**
- 2) ELECTRONICS SECTOR/ SEMICONDUCTOR SECTOR**
- 3) E-VEHICLE SECTOR**
- 4) MSME SECTOR**
- 5) VARIOUS SCHEMES LIKE PLI SCHEME**
- 6) SERVICE SECTOR**

TARGET PRELIMS 2024

BOOKLET-45; ECONOMY-10

INDUSTRY-2

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2. INDUSTRY

1) MINING (CONTINUATION FROM PREVIOUS BOOKLET)

A) NATIONAL MINERAL EXPLORATION POLICY, 2016

- The primary aims of the policy is to accelerate the exploration activity in the country through enhanced participation of the private sector.
- **Why is such policy needed?**
 - To uncover full mineral potential of the country and thus to put the mineral resources of the country to best use.
- **NMEP has following main features.**
 1. Auctioning of identified exploration block to private sector on revenue share basis.
 - Provisions for attracting private investment in exploration through attractive revenue sharing model.
 2. If the explorer agencies do not discover any auctionable resource, their exploration expenditure will be reimbursed on normative cost basis.
 3. Government will carry out a National Aerogeophysical Program for acquiring state-of-art baseline data for targeting concealed mineral deposits.
 4. A National Geoscientific Data Repository is proposed to be set up to collate all baseline and mineral exploration information generated by various central and state government agencies and also mineral concession holders and to maintain these on geospatial database.
 5. National Central for Mineral Targeting: It is proposed to be set up as a not-for-profit autonomous institution to address the mineral exploration challenges of the country.
 6. Special initiative to probe deep/seated concealed minerals.

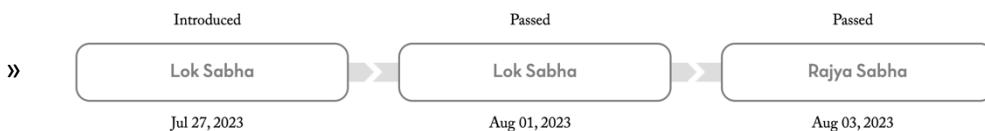
B) NATIONAL GEOSCIENCE DATA REPOSITORY (DEC 2023)

- **Why in news?**
 - » Union Minister Prahil Joshi launched National Geoscience Data Repository Portal (NGDRP) (Dec 2023)
- **Ministry of Mines**
- **NGDR** has been created, as a part of the National Mineral Exploration Policy, 2016, **hosting all baseline and exploration related geoscientific data in a single GIS platform**, to expedite, enhance and facilitate the exploration coverage of the country.
 - » The survey is spearheaded by Geological Survey of India (**GSI**) and Bhaskaracharya Institute of Space Application and Geoinformatics (**BISAG-N**).
 - » It will make available all geological, geochemical, geophysical, and mineral exploration data in public domain on a digital geospatial platform. This will include baseline geoscience data and all mineral exploration information generated by various central and state government agencies and mineral concession holders.
 - » It represents a significant leap forward in democratizing critical geoscience data, empowering stakeholders across industries and academia with unprecedented access to valuable resources.
- **How to access the portal?**

» <https://geodataindia.gov.in.>

C) OFFSHORE AREAS MINERAL (DEVELOPMENT AND REGULATION) AMENDMENT ACT, 2023

- Why in news?



- **About the Offshore Areas Mineral (Development and Regulation) Act 2002 (OAMDRA, 2022)**
 - » The act regulates mining in maritime zones of India.
 - » It categorizes offshore mining-related activities into:
 - (i) Reconnaissance, which involve a preliminary survey to locate mineral resources.
 - (ii) Exploration, which includes exploring, proving, or locating mineral deposits, and
 - (iii) Production, the commercial activity of the extraction of minerals.
 - » The act came into force in 2010.
 - » However, no mining activity has been undertaken in the offshore areas till date. Therefore, central government has brought some changes which are focused on improving the ease of doing business.
- **Key Highlights of the amendment:**
 - » **Introduction of Composite License:**
 - The act provides for a reconnaissance permit, exploration license and a production lease.
 - **The amendment** introduces a composite license for granting rights for exploration as well as for production. Under the composite license, the licensee will be required to complete exploration within three years.
 - The maximum area of exploration under a composite license will be 30 minutes latitude and 30 minutes longitude. The maximum area for undertaking production under a single composite license will be 15 minutes latitude and 15 minutes longitude.
- **Extension in the validity of concession:**
 - » The act provides that concession lease be granted for a period of 30 years and can be further renewed for upto 20 years.
 - » The amendment, provides that the production lease, as well as production lease under a composite license, will be valid for 50 years.
- **Competitive bidding for production lease and composite lease:**
 - » The act provides for grant of concession through administrative allocation.
 - » The amendment, mandates competitive bidding, for a production lease and a composite license to private entities.
- **Government Joint Ventures allowed to mine in reserved areas:**
 - » The act allows the government to reserve offshore areas that are not held under any operating right.
 - » The amendment allows composite license or production license to the government or government company. Joint ventures of government companies will also be eligible, subject to certain conditions. These conditions are:

- i. Partner must be selected through competitive process.
 - ii. Government company owns at least 74% of the paid up capital.
- **Mining of atomic minerals only by Government:**
 - » The amendment, says that in case of atomic minerals, exploration, production and composite licenses will be granted only to the government or government companies.
 - » **Note: What are atomic minerals?**
 - They are defined under MMDRA, 1957 and includes:
 - Rare Earth Minerals containing Uranium and Thorium
 - Pitchblende and Uranium Ores
 - Uriniferous allanite, monazite and other thorium ores.
 - **Reduction in Standard Area Blocks:**
 - » The Act, the size of one block for offshore mining is five minutes latitude by five minutes longitude.
 - » The amendment, reduces this to one minute latitude and one minute longitude. It also limits the maximum area one entity can acquire under all concessions to 45 minutes latitude by 45 minutes longitude.
 - **Offshore Areas Mineral Trust (OAMT) set up:**
 - » The amendment creates OAMT. The concession holder will be required to pay an amount to the Trust in addition to any royalty.
 - » The fund can be used for specified purposes including (i) exploration in offshore areas (ii) research and studies about the mitigation of adverse effects of offshore mining on the ecology, and (iii) Relief upon the occurrence of a disaster.
 - **Increase in fines** for violating the law.
 - **Note:** Royalty, Auction Premium and other revenues from the production of minerals from offshore areas shall accrue to the Government of India.

D) DRAFT RULES FOR OFFSHORE MINERAL BLOCKS AUCTION FOR PUBLIC CONSULTATION (DEC 2023)

- In order to implement the provisions of the amended act, the Ministry of mines have framed two draft rules i.e.,
 - (i) Offshore Areas Mineral Auction Rules
 - It provides for ascending forward online electronic auction.
 - (ii) Offshore Areas Existence of Mineral Resource Rules
 - This draft rule provides norms for exploration of various types of minerals and deposits.

2) SPECIAL ECONOMIC ZONES (SEZS)

- **Background**
 - » The Indian Government had long used export processing zones (EPZs) to promote exports. In fact, Asia's first EPZ was established in 1965 at Kandla, Gujarat state.
 - » **SEZ policy in India first came into inception on April 1, 2000.**
 - Prime Objective was to enhance the foreign investment and provide an internationally competitive and hassle-free environment for exports. The idea was to promote exports from the country and realizing the need that level playing field must be made available to the domestic enterprises and manufacturers to be competitive globally.

- Special Economic zones denote geographical areas which enjoy special privileges as compared with non-SEZ area in the country.
 - SEZs in India functioned from 1st Nov 2000 to 9th Feb 2006 under the provisions of Foreign Trade Policy and Fiscal incentives were made effective through provisions of different laws.
- **SEZ Act, 2005 and SEZ Rules 2006:** To ensure stable SEZ policy, the Special Economic Zones (SEZs) Act, 2005 was passed by Parliament in 2005.
- » It envisages key role for the state governments in Export Promotion and Creation of related infrastructure.
 - » A Single Window SEZ approval mechanism has been provided through a 19-member inter-ministerial SEZ Board of Approval (BoA).

How a SEZ is set up? (Just note the process for Prelims)

The developer submits the proposal for establishment of SEZ to the concerned state Government. The state government has to forward the proposal with its recommendations within 45 days from the date of receipt of the proposal to the Board of Approval.

The applicant also has the option to submit the proposal directly to the Board of Approval.

Board of approval has been constituted by the Central government in exercise of powers conferred under the SEZ act. The decision is taken by Board of approval by consensus. It has 19 members and is headed by the chairperson (secretary, Department of Commerce).

- » SEZ Rules came into effect in 2006. It provided for drastic simplification of procedures and for single window clearance on matters relating to Central as well as State governments.

- **Key features of the SEZ Scheme:**

- » A designated duty-free enclave to be treated as a territory outside the customs territory of India for the purpose of authorized operations in SEZ.
- » No License required for import.
- » Both manufacturing or service activities are allowed
- » The Unit shall achieve positive net Foreign Exchange to be calculated cumulatively for a period of five years from the commencement of production.
- » Domestic sales subject to full customs duty and import policy in force.
- » SEZ units will have freedom of sub-contracting.
- » No routine examination of customs authorities of export/import cargo.
- » SEZ developers/ Co-developers and Units enjoy tax benefits as prescribed by SEZs Act, 2005.
 - For e.g. 100% income tax exemption on export income from SEZ units for the first five years; Exemption from GST and levies imposed by state government (supplies to SEZs are zero rated under IGST Act, 2017, meaning they are not taxed).
- » Single Window Clearance for all state and federal government approvals.

- **Primary Objectives:**

- Economic growth; export promotion; increase investments (both from domestic and foreign sources); employment; improvement in infrastructure.

- **Notable SEZs in India:**
 - » **Nodia** (Uttar Pradesh); **Falta** (West Bengal state); **Vishakhapatnam** (Andhra Pradesh); **Chennai** (TN); **Cochin** (Kerala); **Santa Cruz** (Maharashtra), **Indore** (Madhya Pradesh), **Kandla & Surat** (Gujarat).
- **Numbers:**
 - » As of Jan 2023, 425 SEZs are approved in the country of which 270 are operational.

A) SEZ (FIFTH AMENDMENT) RULES, 2023

- The amendment is specifically tailored for IT enterprises and IT Enabled Services (ITES) SEZs. This amendment introduces a ground-breaking concept - non-processing areas, geared towards fostering enhanced development.
- **Sub-leasing non-processing areas (Section 11B):** Developers now have the liberty to request demarcation of non-processing area within IT/ITES SEZs.
 - These areas can harbor businesses engaged in IT or ITES services, abiding by conditions set by the Board of Approval.
 - Guidelines mandated that non-processing areas must encompass complete floors, fortified with access control mechanism. These surplus areas can be sublet to other tenants that fit the criteria of an SEZ based business.
- **Navigating Limits of Non-Processing areas:** Businesses within non-processing areas face restrictions, barring them from enjoying rights or facilities navigable to SEZ units.

3) PRODUCTION LINKED INCENTIVE SCHEME (PLI SCHEME)

- Keeping in view India's vision of becoming 'Atmanirbhar', **Production Linked Incentive (PLI) Schemes** for 14 key sectors have been announced with an outlay of **Rs 1.97 lakh crore (over US\$ 26 billion)**.
 - » The purpose of the PLI Schemes is to:
 - i. Attract investments in key sectors and cutting-edge technology.
 - ii. Ensure efficiency and bring economies of scale in the manufacturing sector.
 - iii. Make Indian companies and manufacturing globally competitive.
 - » They focus on enhancing India's manufacturing capabilities and Exports. It has the potential of significantly increasing production, employment and economic growth.
- **When was it launched?**
 - » It was initially launched in March 2020 and focused on three industries. It was later extended to 14 sectors.
- **PLI scheme** for 14 sectors have been notified by concerned ministries/departments after due approval. These schemes are in various stages of implementation.
 - » **The sectors are:** (i) Mobile Manufacturing and Specified Electronic Components, (ii) Critical Key Starting Materials/Drug Intermediaries & Active Pharmaceutical Ingredients, (iii) Manufacturing of Medical Devices (iv) Automobiles and Auto Components, (v) Pharmaceuticals Drugs, (vi) Specialty Steel, (vii) Telecom & Networking Products, (viii) Electronic/Technology Products, (ix) White Goods (ACs and LEDs), (x) Food Products, (xi) Textile Products: MMF segment and

technical textiles, (xii) High efficiency solar PV modules, (xiii) Advanced Chemistry Cell (ACC) Battery, and (xiv) Drones and Drone Components.

- The scheme is also expected to have a **cascading effect on the country's MSME sector**. The anchor units that will be built in every sector are likely to set up a new supplier/vendor base in the entire value chain.
 - » As of Jan 2024, **176 MSMEs** have been direct beneficiaries in sectors such as Bulk drugs, medical devices, pharma, telecom, white goods, food processing, textiles and Drones.
- **Progress:**
 - » As of Jan 2024, **746 applications** have been approved in **14 sectors** with expected investment of **Rs 3 lakh crores**.
 - » **176 MSMEs** are also PLI beneficiaries.

A) PLI SCHEME 2.0 FOR IT HARDWARE

- **Background:**
 - » In Feb 2021, the government approved the PLI scheme for IT hardware, covering the production of laptops, tablets, all in one PCs, and serves with an outlay of Rs 7,350 crores.
 - » However, industry players requested government to increase the outlay.
- In May 2023, the Union Cabinet approved the **PLI Scheme 2.0 for IT hardware** with a **budgetary allocation of Rs 17,000 crores**. The **tenure of the program** is **six years**.
- The scheme covers **laptops, tablets, all in one PCs, servers, and ultra-small factor devices**.
- **Ministry:** Ministry of Electronics and Information Technology (MeitY)

4) TEXTILE AND APPAREL SECTOR

- **Significance:**
 - » **Employment** Textile sector and apparel sector directly employs more than 5 crore of the population and is the **2nd largest employer** after Agriculture sector in the country.
 - » **GVA:** 10% of **India's industrial GVA**.
 - » **Export Earnings:** \$40 billion in FY23.
 - » **Inclusive Growth:** Textile mills give opportunity to weaker sections including women.
- **Key Initiatives:**

A) PM MITRA (PM MEGA INTEGRATED TEXTILE REGION AND APPAREL)

- **Details of the Scheme:**
 - » Announced in the Budget 2023
 - » **Ministry of Textiles**
 - » Government has approved setting up of **seven PM MITRA Parks** in **Greenfield/Brownfield** sites with world class infrastructure.
 - » The parks will not only **reduce logistics costs** and **improve competitiveness of Indian textiles** but also boost employment generation, attract domestic investment and FDI, and position India firmly in the global textile market.
 - » Government expects the parks to attract investments worth **Rs 70,000 crores**, generate jobs for **20 lakh people**, and can **create integral value chain for the products**.

- The government has finalized 7 states viz. Tamil Nadu (Virudhnagar), Telangana (Warangal), Gujarat (Navsari), Karnataka (Kalaburagi), Madhya Pradesh (Dhar), Uttar Pradesh (Lucknow) and Maharashtra (Amravati) for setting up PM Mitra Parks.
- **Ministry:** Ministry of Textiles

B) PLI SCHEME FOR TEXTILES

- Approved outlay of Rs 10,683 crores (over five years starting from Jan 2022) to promote investment and increase the production of Man-Made Fibre (MMF) Apparel, MMF Fabrics and Products of Technical Textile.
- This will enable the textile sector to achieve size and scale, enhancing export competitiveness.

C) SAMARTH (SCHEME FOR CAPACITY BUILDING IN TEXTILE SECTOR)

- **Details about SAMARTH:**
 - » It is a flagship skill development initiative of Ministry of Textiles.
 - » Launched in 2017, it aims to provide demand-driven, placement-oriented skilling programs to incentivize and supplement the efforts of the industry in creating jobs in the organized textile and related sectors.
 - » It was formulated under the broad skilling policy framework adopted by M/o Skill Development & Entrepreneurship (MSDE).
 - » It has provisions for skilling in Apparel & Garmenting segments both at the entry level as well as upskilling/reskilling of existing workers.
 - » It also caters to the upskilling/reskilling requirement of traditional sectors such as handloom, handicraft, silk and Jute.
- **Progress:**
 - » As of July 2023, the Ministry of Textiles has partnered with 157 Industries/Industry associations, 16 central/state government agencies and 3 sectoral organizations of the Ministry undertaking the training program SAMARTH.
 - » Out of the skilling target of 4.72 lakh beneficiaries allocated so far, 1.88 lakh beneficiaries have been provided training.
 - » More than 85% of the beneficiaries trained so far under the schemes are women. More than 70% of the beneficiaries trained in organized sector course have been provided placement.

D) VIRAASAT

- By Ministry of Textile
- VIRAASAT-Celebrating Handloom Home Décor (20th Jan 2023 - 30th Jan 2023)
- VIRAASAT - Celebrating handloom Sari Exhibition (two phases: 16th Dec - 30th Dec , and 3rd Dec to 17th Dec)
 - » This exhibition was held at handloom haat, Janpath, New Delhi.

5) TECHNICAL TEXTILE

- Technical textiles are textile materials and products used for their technical performance and functional properties.
 - Technical textiles include textiles for automotive applications, medical textiles (e.g. implants), geotextiles (reinforcement of embankments), agrotextiles (textiles for crop protection), and protective clothing (e.g. heat and radiation protection for fire fighter clothing, molten metal protection for welders, stab protection for bulletproof vests, and spacesuits).

A) NATIONAL TECHNICAL TEXTILE MISSION

- The National Technical Textile Mission (NTTM) is a scheme launched by the Government of India to promote technical textiles and boost the manufacturing of such textiles in the country. Here are some key highlights of the mission:
 - i. **Objectives:** Increase the use of technical textiles in various sectors such as healthcare, agriculture, transportation, and construction among others. It also seeks to promote innovation, research and development, and create job opportunities in the technical textile sector.
 - ii. **Budget:** The mission has a total budget of Rs. 1480 crore, which will be implemented over a period of four years (2020-2024).
 - The mission has been extended till 2026.
 - iii. **Focus Areas:** The mission focuses on four key areas, namely, research and development, promotion and market development, export promotion, and skill development.
 - iv. **Implementation:** The mission is implemented by the Ministry of Textiles in collaboration with other stakeholders, including industry associations, research organizations, and academic institutions.
- **Helping Startups in the field of Technical Textile:**
 - A portal for start-ups in technical textiles segment to submit applications for support under the Mission will be launched soon.
- **Standardization:** the Bureau of Indian Standards (BIS) has developed 600 quality standards for technical textile products and Quality Control Orders (QCO) have been issued for various TT products.

6) ELECTRONICS SECTOR/ SEMICONDUCTOR SECTOR

- **Need for promoting electronics manufacturing in the country.**
 - » There is a need to improve the electronics manufacturing within the country as this sector holds tremendous potential in terms of significant employment generation, ability to transform socio-economic identity of citizens, contribution in the upliftment of the economy, value addition, forex savings etc.
- **Current Situation and Targets:**
 - » India has also seen an improvement in manufacturing and export of electronics over the last five years. Electronic goods were among the top five commodity groups exhibiting positive export growth in Nov 2022, with the exports in this segment growing YoY by 55.1%.

- » As of **FY20**, the domestic electronics industry is valued at US\$ 118 billion.
- » **Government of India** targets to reach US\$ 300 billion worth of electronics manufacturing by FY26 and exports worth US \$120 billion.

- **Most Important Products:**

- » Mobile phones, consumer electronics, industrial electronics
 - In Mobile phones, India has become the second highest mobile phone manufacturer globally, with the production of handsets going up from six crore units in FY15 to 31 crore units in FY22. These numbers are further expected to increase as more international players set up their base in India.

Government initiative to promote the sector:

A) NATIONAL POLICY ON ELECTRONICS, 2019 (NPE, 2019):

The vision of the policy is to position India as a global hub for Electronics System Design and Manufacturing (ESDM) by encouraging and driving capabilities in the country for developing core components, including chipsets, and creating and enabling environment for industry to compete globally.

B) PLI SCHEME FOR LARGE SCALE ELECTRONICS MANUFACTURING

- It is an initiative under MEITY.
- The scheme aims to attract large investments in the mobile phone manufacturing and specified electronic components, including assembly, testing, marking and packaging (ATMP) units.
- Under this 4% to 6% incentive is being provided on incremental sales of goods manufactured in India. These incentives will be offered for a period of five years subsequent to base year (FY 2019- 20). The applicant companies will be required to meet minimum thresholds of investment and production. The scheme has an outlay of USD 5.5 billion.
- For e.g.: In Dec 2022, Empowered Committee headed by CEO, NITI Aayog, approved incentives for two companies – one a domestic and other global – for mobile Manufacturing under PLI scheme for LSEM:
 - » **Foxconn India** (a Taiwanese company) to receive incentives under mobile manufacturing for the period 1st Aug 2021 to 31st March 2022 based on its incremental investments and sales figures.
 - » **M/s Padget Electronics Pvt. Ltd**, a domestic company, has been approved by the Empowered Committee to receive incentives under mobile manufacturing.

C) SCHEME FOR PROMOTION OF MANUFACTURING OF ELECTRONICS COMPONENT AND SEMICONDUCTORS (SPECS):

Notified in 2020, it provides financial incentive of upto 25% on capital expenditure for the identified list of electronics goods.

D) MODIFIED ELECTRONICS MANUFACTURING CLUSTERS (EMCS 2.0) SCHEME:

Notified in April 2020. It provides support for creation of world class infrastructure along with common facilities and amenities, including **Ready Build Factory** (RBF) sheds/ Plug and Play Facilities etc.

E) MODIFIED SCHEME FOR SEMICONDUCTORS AND DISPLAY FAB ECOSYSTEMS:

- **Ministry:** MEITY
- In furtherance of the vision of Atmanirbhar Bharat and positioning India as the global hub for ESDM, a comprehensive program for the development of semiconductors and display manufacturing ecosystem in India was approved by GoI with an outlay of Rs 76,000 crore in Sep 2022.
- The program provides active incentive support to companies / consortia that are engaged in Silicon Semiconductor Fabs, Display Fabs, Compound Semiconductors/ Silicon Photonics/ Sensors (including MEMS) Fabs/ Discrete Semiconductor Fabs etc.
- **Following Schemes** are offered by the Scheme:
 - i. **Semiconductor Fabs and Display Fabs:** Offers fiscal support of 50% of the project cost on pari-passu basis to applicant who are eligible and have technology and capacity.
 - ii. **Compound Semiconductors/ Silicon Photonics / Sensors (including MEMS) Fabs and Semiconductor ATMP/ OSAT Units:** Fiscal support of 50% of the capital expenditure on pari-passu basis to applicant who are found eligible.
 - iii. **Semiconductor Design Companies:** The Design Linked Incentive (DLI) shall extend product design linked incentive of upto 50% of eligible expenditure; and product deployment linked incentive of 6% - 4% on net sales for five years.
 - C-DAC (Centre for Development of Advanced Computing), a scientific society operating under MeitY, will serve as the nodal agency for implementation of the DLI scheme.
 - iv. **Semiconductor Laboratory (SCL):** MEITY will take requisite steps for modernization and commercialization of semi-conductor Laboratory (SCL), Mohali. MeiTy will explore the possibility of joint venture of SCL with a commercial fab partner to modernize the brownfield fab facility.
 - v. **India Semi-Conductor Mission:** In order to drive the long-term strategies for developing a sustainable semiconductor and display ecosystem, a specialized and independent "**ISM**" has been set up. It will be led by global experts in semi-conductor and display industry.
- **Note:** In the older scheme, there were different rate of incentives for different areas and thus was making it difficult to go for integrated development of various different parts

F) 100% FDI

As per the existing FDI Policy, FDI up-to 100% under the automatic route is permitted for electronics manufacturing.

7) E-VEHICLE SECTOR

- **Why we need to promote electric vehicles in India?**
 - i. **Energy Security**
 - ii. **Transition to renewable**
 - iii. Dealing with **air pollution and Noise Pollution** in big cities
 - iv. Reducing Greenhouse gas emission -> Achieve Paris Targets on Climate Change
 - v. **Competitive Domestic Manufacturing Ecosystem: Technology Development and Make in India**

- vi. Making Transportation less expensive:
- vii. Power sector growth
- viii. EVs can act as storage for Solar Energy

- **Schemes / Programs / Policies / Other steps to promote EV in India**

1. Subsidy, Tax Incentives and PLI

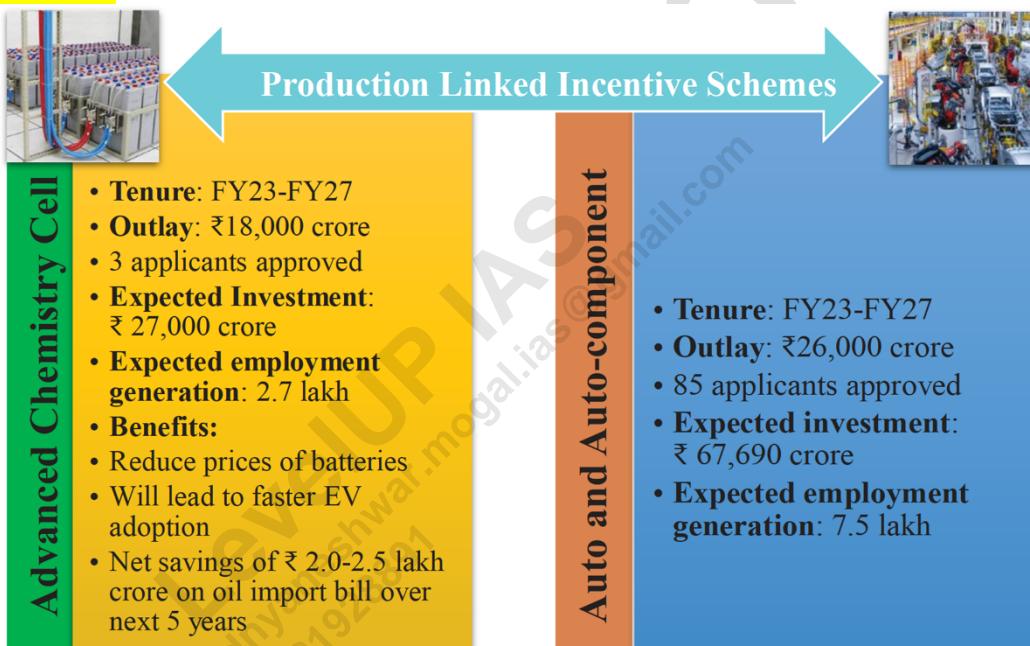
- a. FAME (Faster Adoption and Manufacturing of Electric (& Hybrid) Vehicles):

- It is the key subsidy scheme for electric vehicles through which government incentivizes buyers to purchase e-vehicles.
- Phase-1 had started in 2015 and Phase-2 has been running since 2019.
- Under phase-2 companies may offer a discount of upto 40% on the cost of locally manufactured vehicles and claim it as a subsidy from government.

- b. Tax Incentives:

- GST on Electric Vehicles is on the lower bracket of 5% as against 28% for conventional vehicles.
- Budget 2019-20: Tax Subsidies for EVs: Additional income tax deduction of Rs 1.5 Lakh on the interest paid on the loans taken to purchase electric vehicles before 31st March 2023.

- c. PLI Schemes:



Source: Ministry of Heavy Industries

- In April 2023, government released SOP for the PLI scheme for the automobile and auto component industry.

2. EV Policies of Select States and Uts:

- A number of state/UT governments have formulated policies for the successful implementation of the national EV mission and FAME scheme.
 - For e.g., Delhi targets that 25% of all new vehicles registration should be EVs by 2024.

3. National E-Mobility Program of Ministry of Power (Launched in March 2018)

- Aggregate demand by procuring electric vehicles in Bulk to get economies of scale

4. **National Mission on Transformative Mobility and Battery Storage** (approved by cabinet in March 2019)
 - The mission recommends and drive the strategies for transformative mobility and PMPs for EVs, EV components, and Batteries.
 - The mission will ensure holistic and comprehensive growth of the battery manufacturing industry in India.

7. **E-Amrit Portal:** It is a web portal on electric vehicles and provide one stop solution for all information related to EVs - bursting myths around the adoption, details about policies/ subsidies etc.
 - The portal has been developed and hosted by NITI Aayog under a collaborative knowledge exchange program with UK government and as part of the UK-India Joint Roadmap 2030, signed by the Prime Ministers of the two countries.

- **Key challenges of India's EV Sector:**
 1. **Battery Cost**
 2. **Low Lithium Reserves in India:**
 3. **Limited availability of Charging Infrastructure and long time for EV Charging**
 4. **Policy Conundrums:** Provisions of Electricity Act, 2003 is restrictive in nature and hinder setting up of charging stations - it is important to bring reforms here to promote ease of doing business.

8) MSME SECTOR

- MSMEs are considered **pillar of economic growth/ engine of growth** in both developed and developing countries of the world. They have played a prominent role in the economic development of India too.
- There are more than 6.34 crore MSMEs in India and around 50% of them are situated in rural areas.
- The revision of the **definitions of MSMEs** brought in w.e.f. 1st July 2020 as part of the AtmaNirbhar Bharat Package introduced a composite criterion of investment and annual turnover - and identical limits for manufacturing and service sector.

Micro	Investment [in Plant and Machinery or Equipment] <u>doesn't exceed Rs 1 crore</u> and <u>turnover doesn't exceed Rs 5 crore</u> .
Small	Investment <u>doesn't exceed Rs 10 crore</u> and <u>turnover doesn't exceed Rs 50 crore</u>
Medium	Investment <u>doesn't exceed Rs 50 crore</u> and <u>turnover doesn't exceed Rs 250 crore</u> .

- **Note:** In the older definition, only investment criteria was used and separate parameters were there for Manufacturing sector and service sector.

- **Significance of the above change:**
 - The change in definition will facilitate expansion and growth of these enterprises.
 - The resulting economies of scale can enhance productivity without MSMEs losing out on several government incentives including market support, export promotion, preferential procurement in the public sector, and incentives through various government initiatives (MSE-CDP, PMEGP, SFURTI).

- This change will also align MSMEs with GST regime and would prove to be a good tool to assess the contribution of the MSMEs to GDP. It will also avoid unnecessary inspections and enable authorities to verify claims of businesses using GST network sales data
 - Same criteria for both manufacturing and Service SME will simplify the classification.
- **Importance of MSME Sector:**
 - **Economic:**
 - Share of MSME in the country's GVA is approx. **33.08 percent** (current price, 2019-20 (as per ESI 2021-22)).
 - It employs around **11 crore people** in India.
 - High Labor to capital ratio
 - It provides maximum opportunities for self-employment and wage employment outside the agri-sector.
 - Manufacturing -> 40% of the total manufacturing output.
 - Exports: Around **50%** of the total manufacturing exports
 - **Curtailing Regional Disparity**
 - Geographical distribution of MSME's are more even.
- **Government Initiatives and Programs for MSME Sector:**
 1. **Initiatives under Atmanirbhar Bharat Abhiyan**
 - Emergency Credit Liquidity Guarantee Scheme (ECLGS) (extended till March 2023)
 - New Definition of MSMEs
 - Rs 20,000 crore of subordinate debt to stressed MSMEs.
 3. **Raising and Accelerating MSME Performance Scheme (RAMP) in July 2022:**
 - **Ministry:** Ministry of MSME
 - It is a World Bank supported Central Sector Scheme. It is aimed at strengthening institutions and governance at the Centre and State, improving Centre-State linkages and partnership and improving access of MSMEs to market and credit, technology upgradation and addressing issues of delayed payments and greening of MSMEs.
 - **Duration:** it will be implemented over a period of five years.
 - **Outlay:** The total outlay of the scheme is Rs 6,062.45 crores or USD 808 million, out of which Rs 3750 crore or USD 500 million would be a loan from the World Bank and the remaining Rs 2312.45 crore or USD 308 Million would be funded by GoI.
 4. **MSME Cluster development program of Ministry of MSME**
 - MSME is running two cluster development programs.
 - i. Micro and Small Enterprises - Cluster Development Program (MSE-CDP)
 - ii. Scheme for upgradation of rural and traditional industries (**SFURTI**)

- **Advantages of such cluster programs**
 - Quicker dissemination of info allows easy sharing of knowledge and best practices
 - Better cost effectiveness due to distribution of common cost
 - Focuses on holistic development covering infra, common facility, testing, technology, & skill upgradation, marketing and export promotion.
 - Weaves the fabric of networking, cooperation and togetherness in the industry

5. Other Past steps for Easy Credit Availability

- Interest Subvention Scheme for MSME Sector**
 - The scheme was launched in 2018 and provides a 2% interest subvention to GST Registered MSME sector.
- MUDRA** initiative focuses on collateral free loans of upto Rs 10 lakh for non-farm sector.
- MSME sector brought **under PSL** by RBI from July 2016. From 2018, foreign banks also have to follow the PSL norms.
 - Banks should **advance 7.5% of their loans to MSME** under PSL guidelines.

6. Steps to increase production by MSME and demand of MSME products

- Reservation of items to be manufactured by MSME sector** -> provided in the Industries (development and regulation) Act, 1951.
- Purchase Preference Policy:** All CPSUs/Central Government Departments are required to procure **25%** of their annual procurement from MSMEs (including 4% from MSEs owned by SC/ST and 3% from MSEs owned by women entrepreneurs) and there is a sub-target of 20% for procurement of MSMEs owned by SC/STs under the Procurement Policy launched in 2012.
 - **MSME SAMBANDH Portal** - To monitor the implementation of the public procurement from MSEs by Central PSUs.
- Price Preference Policy:** For selected items a price preference of 15% premium over the lowest quotation of the large scale unit is provided to MSME.
- Benefits in tendering:** MSMEs are provided benefits such as exemption from payment of security deposit etc.
- Marketing Assistance Scheme:** Provides assistance to MSMEs for the following activities: Organization of exhibitions abroad, co-sponsoring of exhibitions organized by other organizations, organizing buyer seller meets etc.

7. Other Initiatives to Increase Ease of Doing Business for MSMEs

- Udyam Registration (UR) Portal** (became operational in July 2020)
 - It provides faceless, fully online, paperless, and transparent MSME registration process fully integrated with Income Tax and GSTIN system. It is also integrated with government e-market place to make end to end MSME registration paperless.
 - In 2021, government has included Retail and wholesale trade as MSMEs. They are allowed to be registered on Udyam registration portal. But the benefits to them is restricted to PSL only.
- MSME SAMADHAN PORTAL**

- It was set up under the Micro, Small and Medium Enterprise Development (MSMED) Act to monitor the outstanding dues to the MSME sector.
 - MSMEs can directly register their cases relating to delayed payments by Central ministries/departments/CPSEs/Statements governments.
- iii. **TReDS (Trade Receivable Discounting System) Platform** for facilitating the discounting of trade receivable of MSMEs through multiple financiers.
 - TReDS is an institutional mechanism for financing of trade receivables of MSMEs from corporate buyers through two or more financiers.
 - There are 3 direct participants involved in the activities of TReDS viz.
 - MSME Sellers
 - Corporate Buyers
 - Financiers
 - TReDS provides a platform to bring these participants together for facilitating, uploading, accepting, discounting, trading and settlement of the invoices / bills of MSMEs.
- iv. **The CHAMPIONS portal (www.champion.gov.in):**
 - It is a grievance redressal portal for MSMEs launched by Ministry of MSME in June 2020.
 - It is an ICT based technology system for making the smaller units big by helping and handholding them. A network of control rooms is created in a Hub & Spoke Model where hub is situated in the Ministry of MSME.
 - The portal continues to improve through initiatives such as localization of the portal in 11 regional languages and introduction of chatbot.
- v. **GST Composition Scheme** (turnover limit 1.5 crore (75 lakh in case of NE States)
- vi. **Budget 2020-21: Easing Compliance burden.**
 - In order to reduce the compliance burden on small retailers, traders and the MSME sector, the auditing threshold has been raised by 5-times from INR 1 Cr in turnover to INR 5 Cr. This would be applicable only to those **MSMEs that transact less than 5% in cash.**
- viii. **Zero Defect Zero Effect (ZED) Scheme** to rate and handhold MSMEs to delivery top quality products using clean technology.
- ix. **Pre-Packaged Insolvency Resolution**

9) AGRICULTURE UPDATE FOR MSME SECTOR

A) PRADHAN MANTRI MATSYA KISAN SAMRIDHI SAH – YOJANA (PM MKSSY)

- PM-MKSSY is a central sector sub scheme under Pradhan Mantri Matsya Sampada for Formalization of Fishery Sector and supporting fisheries MSMES.
- It was approved by cabinet in Feb 2024.
- **Expenditure Involved:**
 - » The estimated outlay is Rs 6,000 crores consisting of 50% i.e. Rs 3,000 crore public finance including the World Bank and the AFD external financing, and rest 50% i.e. Rs 3,000 crore being the anticipated investment from the beneficiaries/private leverage.
- **Duration:**
 - » The scheme will be implemented for 4 years from FY 2023-24 to FY 2026-27 across all the states and Uts.
- **Intended Beneficiaries:**
 - » Fishers, Fish (Aquaculture) Farmers, Fish workers, Fish Vendors or such other person directly engaged in fisheries value chain.
 - » Micro and Small enterprises in the form of Proprietary Firms, Partnership Firms and Companies registered in India, Societies, Limited Liability Partnerships (LLPs), Cooperatives, Federations, Village Level Organizations like Self Help Groups (SHGs), Fish Farmers Producer Organizations (FFPOs) and Startups engaged in fisheries and aquaculture value chains.
 - » FFPOs also include Farmers Producer Organizations (FPOs).
 - » Any other beneficiaries that may be included by the Department of Fisheries, GoI as targeted beneficiaries.
- **Implementation Strategy:** The sub-scheme has following main components:
 - i. **Component 1-A: Formalization of fisheries sector and facilitating access of fisheries microenterprises to Government of India programs for working capital financing.**
 - » A National Fisheries Digital Platform (NDFP) will be created and all the stakeholders (fish producers, vendors, processors, MSME in fishery sector) will be mobilized to register on it.
 - It will serve multiple functions including disbursement of financial incentives.
 - It is also proposed to undertake activities such as training and extension support, improving financial literacy, facilitating project preparation etc.
 - ii. **Component 1-B: Facilitating adoption of aquaculture insurance:**
 - The scheme will facilitate creation of appropriate insurance product and to cover at least 1 lakh hectare of aquaculture farms during the project period to provide the scale of operation.
 - One time incentive to the willing famers against purchase of insurance with farm size of 4 hectares of water spread area or less. This incentive will be at the rate of 40% of the premium subject to a limit of Rs 25,000 per hectare (i.e. maximum incentive of Rs 1 lakh)
 - For more intensive form of aquaculture other than farms such as cage-culture, Recirculatory Aquaculture System (RAS), bio-floc, raceways, etc. the incentive payable is 40% of the premium. Maximum incentive payable is Rs 1 lakh and the maximum unit size eligible will be 1800 m³.

- The benefit will be provided as 'onetime incentive' and will be provided for aquaculture insurance purchased for one crop only i.e. one crop cycle.
- SC/ST/Women beneficiaries will be provided an additional incentive @10% of the incentive payable for General categories.

iii. **Component 2: Supporting microenterprises to improve fisheries sector value chain efficiencies:**

- Through a system of performance grants with associated analytics and awareness campaign.
- The scale of performance grant and the criteria for providing performance grants are indicated below:
 - The performance Grant for a Microenterprise shall not exceed 25% of the total investment or Rs.35 lakhs, whichever is lower, for General Category and 35% of total investment or Rs.45 lakhs, whichever is lower, for SC, ST and Women owned microenterprises.
 - Performance Grant for Village Level Organizations and Federations of SHGs, FFPOs and Cooperatives shall not exceed 35% of total investment or Rs.200 lakhs, whichever is lower.
 - The total investment for the purpose above shall consist of expenditure incurred on capital investments made on new plant and machinery, equipment including technical civil/electrical works and associated infrastructure, transport and distribution infrastructure, energy efficient devices including Renewal Energy devices, technology interventions, such other interventions leading to improvement in value chain efficiency; and salary bills for additional jobs created in the year of application made under the scheme.

iv. **Component 3: Adoption and expansion of fish and fishery product safety and quality assurance systems:**

- This component proposes to incentivize fisheries micro and small enterprises to adopt safety and quality assurance systems in marketing of fish and fishery products through provision of performance grants against a set of measurable parameters.

v. **Component 4: Project management, monitoring and reporting:**

- Under this component, it is proposed to set up Project Management Units (PMUs) to manage, implement, monitor and evaluate project activities.

10) PHARMACEUTICAL INDUSTRY

A) CURRENT SITUATION

- Indian Pharmaceutical industry is an important player in global pharma sector.
- **Market Size in India:** India's domestic pharmaceutical market is estimated at US\$ 41 billion in 2021 and is likely to grow to US\$ 65 billion by 2024 and is further expected to reach US\$ 130 billion by 2030.
- **India** is ranked 3rd worldwide in the production of pharma products by volume and 14th by value.

- India is also the largest provider of generic medicines globally, occupying a 20% share in global supply by volume, and is leading vaccine manufacturer globally with a market share of 60%.

B) PLI SCHEME TO BOOST MANUFACTURING CAPACITY IN PHARMA SECTOR

Critical KSMs/DIs/APIs	Medical Devices	Pharmaceuticals
<ul style="list-style-type: none"> • Tenure: FY21 to FY30 • Outlay: ₹6,940 crore • Progress: Until Dec 2022, 51 applicants approved with committed investment of ₹4,138.4 crore. • Employment: Estimated employment generation from 51 projects is 10,598 persons. • Financial incentive: NA 	<ul style="list-style-type: none"> • Tenure: FY21 to FY28 • Outlay: ₹3,420 crore • Progress: Until Dec 2022, 21 applicants approved with committed investment of Rs 1,058.97 crore. • Employment: Estimated employment generation from 21 projects of around 6,411 persons. • Financial incentive: The financial incentive at the rate of 5 per cent on incremental sales of medical devices for 5 years. 	<ul style="list-style-type: none"> • Tenure: FY21 to FY29 • Outlay: ₹15,000 crore • Progress: Until June 2022, 55 applicants approved with actual investment of Rs 18,669 crore. • Employment: Estimated employment generation from 55 projects : 20,000 direct and 80,000 indirect jobs. • Financial Incentive: on incremental sales under various categories at varying rate over the years ranging from 10 per cent to 3 per cent.

Source: Department of Pharmaceuticals

KSMs: Key Starting Materials

DIs: Drug Intermediaries

APIs: Active Pharmaceutical Ingredients (APIs)

C) NATIONAL MEDICAL DEVICES POLICY, 2023

- Approved by Cabinet in April 2023
- **Ministry:** Ministry of Chemical and Fertilizer
- **Salient Features:**
 - » **Vision:** Accelerated growth path with a patient-centric approach and to emerge as the global leader in the manufacturing and innovation of medical devices by achieving 10-12% share in the expanding global market over the next 25 years.
 - Policy is expected to help the Medical Devices Sector grow from present \$11 Bn to \$50 Bn by 2030.
 - » **Mission:** Policy lays down a roadmap for accelerated growth of the medical devices sector to achieve the following missions viz, Access & Universality, Affordability, Quality, Patient Centred

& Quality Care, Preventive & Promotive Health, Security, Research and Innovation and Skilled manpower.

» **Strategies to Promote Medical Device Sector:** These strategies will cover six broad areas of policy intervention.

- **Regulatory Streamlining:** In order to enhance ease of doing research and business and further to balance patient safety with product innovation measures such as creation of a **Single Window Clearance System' for Licensing of Medical Devices** co-opting all the stakeholder departments / organizations such as AERB, MeitY, DAHD, etc, enhancing the Role of Indian Standards like BIS and designing a coherent pricing regulation, will be followed.
- **Enabling Infrastructure:** The establishment and strengthening of large medical device parks, clusters equipped with world class common infrastructure facilities in proximity to economic zones with requisite logistics connectivity as envisioned under the **National Industrial Corridor Program** and the proposed National Logistics Policy 2021 under the ambit of PM Gati Shakti, would be pursued with the State Governments and Industry for better convergence and backward integration with medical device Industry
- **Facilitating R&D and Innovation:** The policy envisages to promote Research & Development in India and complement the Department's proposed National Policy on R&D and Innovation in the Pharma- MedTech Sector in India. It also aims at establishing Centres of Excellence in academic and research institutions, innovation hubs, 'plug and play' infrastructures and support to start-ups.
- **Attracting Investments in the Sector:** Along with recent schemes and interventions like Make in India, Ayushman Bharat program, Heal-in-India, Start-up mission, the policy encourages private investments, series of funding from Venture Capitalists, and also Public-Private Partnership (PPP).
- **Human Resources Development:** In order to have a steady supply of skilled work force across the value chain such as scientists, regulators, health experts, managers, technicians, etc., the policy envisages:
 - Leveraging the available resources in Ministry of Skill Development and Entrepreneurship
 - Supporting dedicated multidisciplinary courses for medical devices in existing institutions to ensure availability of skilled manpower for futuristic medical technologies, high-end manufacturing and research, to produce future ready MedTech human resources and to meet the evolving needs of the Sector.
 - Developing partnerships with foreign academic/industry organizations to develop medical technologies in order to be in equal pace with the world market.
- **Brand Positioning and Awareness Creation:** The policy envisages the creation of a dedicated Export Promotion Council for the sector which will be an enabler to deal with various market access issues.

D) STRENGTHENING OF PHARMACEUTICAL INDUSTRY (SPI) SCHEME

- Launched in March 2022 with a total outlay of Rs 500 crores for five years from FY22 to FY26 with multiple objectives:

- » **First**, it aims to strengthen the existing infrastructure facilities by providing financial assistance to pharma clusters to create common facilities.
- » **Second**, it upgrades the production facilities of MSMEs to meet national and international regulatory standards by providing interest subvention or capital subsidy on their capital loans.
- » Third, it also promotes knowledge and awareness about the pharmaceutical and medical devices industry by undertaking studies, building databases, and bringing industry leaders, academia and policymakers together to share their knowledge and experience.

GS FOUNDATION 2025



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TARGET PRELIMS 2024

BOOKLET-46; ECONOMY-11

INFRASTRUCTURE-1

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2. MAJOR INITIATIVES IN INFRASTRUCTURE SECTOR

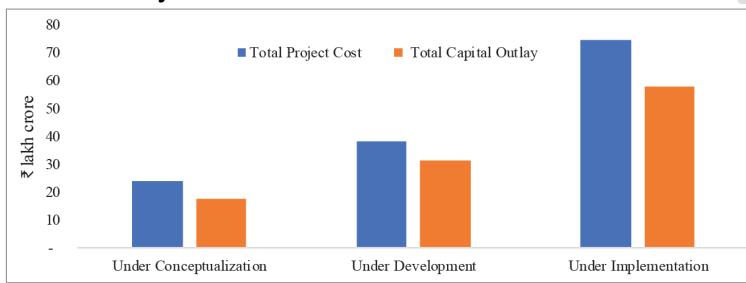
1) NATIONAL INFRASTRUCTURE PIPELINE (NIP) 2020-2025

- In 2019, Ministry of Finance estimated that to achieve a GDP of \$5 trillion by 2024-25, India needed to spend about \$1.5 trillion (Rs 111 lakh crore) over these years in infrastructure. Keeping this in mind, government has launched National Infrastructure Pipeline (2020-25) with projected infrastructure investment of around Rs 111 lakh crores. It also envisages to improve project preparation and attract investment, both domestic and foreign in infrastructure.

- **Progress So Far:**

- » The NIP currently has 9,288 projects with a total investment of more than Rs 108 lakh crore under different stages of implementation.

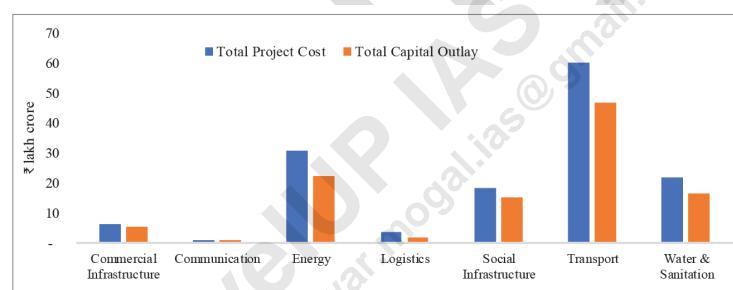
- » **Status of Projects under NIP**



Source: Department of Economic Affairs.

Note: Data as of 13 January 2023

- **Transportation Sector Dominates the NIP**



Source: Department of Economic Affairs.

Note: Data as of 13 January 2023

- **Jointly funded by Central Government, State Government and Private Sector:**

- **Some steps to improve the implementation of NIP:**

- **Invest India Grid (IIG):**

- NIP is hosted on the Invest India Grid (IIG) platform and provides opportunities for states/UT and ministries to collate all major infrastructure projects at a single location. It is thus a centralized portal to track and review project progress across all economic and social infrastructure sub-sectors. It also provides the project sponsoring authorities to showcase investment opportunities to national and international investors.

- **Project Monitoring Group (PMG)**

- It is an institutional mechanism put in place by the government for resolution of issues related to large-scale projects. It is also involved in fast tracking of approvals/ clearances for projects with an anticipated investment of Rs 500 crore and above. Now it has been proposed to integrate NIP and PMG portals. PMG portal will pick up data, as per requirements (project cost of Rs 500 crore

or more), from the NIP database. This will save substantial time and effort by Ministries and States/UTs and ease monitoring of large-scale projects.

2) NATIONAL MONETIZATION PIPELINE

- **Background**
 - » **Asset Monetization** is one of the key recommendations of National Infrastructure Pipeline (2020-25). Consequently, National Monetization Pipeline was announced in 2021. It focuses on the principle of 'asset creation through monetization' and thus taps private sector investment for new infrastructure creation.
- **Details:**
 - » Asset monetization entails a limited period license/lease of a brownfield underutilized asset owned by government or a public agency, to a private sector entity for an upfront or periodic consideration.
 - **The private sector entity** is expected to operate and maintain the asset based on the terms of the contract/concession, generating returns through higher operating efficiencies and enhanced user experience.
 - **Public authority**, which receives the fund, will invest it in new infrastructure or deploy it for other public purposes.
 - » A robust asset pipeline has been prepared to provide a comprehensive view to investors and developers of the investment avenues in infrastructure.
 - It includes selection of de-risked and brownfield assets with stable revenue generation profile (or long rights) which will make for an attractive investment option.
 - » Total indicative value of NMP for core assets of the Central Government has been estimated at Rs 6.0 lakh crore over 4-year period (FY22 - 25) (5.4% of the total infrastructure investment envisaged under NIP)
- **National Land Monetization Corporation (NLMC)**: Cabinet approved the setting up of the NLMC to monetize surplus land and building assets of CPSEs and other agencies linked to government (March 2022)
- **Progress so far: ESI 2022-23:**
 - Against the monetization target of 0.9 lakh crore in FY22, Rs 0.97 lakh crore have been achieved during the period under roads, power, coal and mines.
 - NMP's 2nd year target, i.e. FY23 target is ₹ 1.6 lakh crore (27% of the overall NMP target).

3) PM GATISHAKTI NATIONAL MASTER PLAN

- **Need of PM GatiShakti:**
 - There are many infrastructure projects like roadways, railways, airways, waterways, internet connectivity (optical fiber), Gas Pipelines etc. These projects come under different ministries, leading to lack of coordination in planning and implementation of these projects. This leads to duplication of work, delays, financial loss, increase in cost etc., which eventually puts more burden on the public exchequer and impacts the quality of services reaching people.
 - E.g. 1: Newly built roads being dug by water departments to lay pipelines.
 - E.g. 2: Newly built fertilizer factory not working properly as the gas supply infrastructure isn't available.

- E.g. 3: Separate tunnel for roadways and railways
- Details
 - PM GatiShakti is aimed at breaking departmental silos and bring more holistic and integrated planning and execution of projects with a view to address the issue of Multi-Modal connectivity and last mile connectivity.
 - This will help in bringing down the logistic cost and will translate into enormous financial gains to consumers, farmers, youth as well as those engaged in businesses.
- The PM GatiShakti National Master Plan entails creation of a common umbrella platform with all infrastructure projects pertaining to various ministries/ departments incorporated within a comprehensive database for efficient planning and implementation on a real-time basis.
 - The projects pertaining to seven engines (roads, railways, airports, ports, mass transport, waterways, and logistic infrastructure) in the NIP have been aligned with PM GatiShakti framework.
 - In order to facilitate integrated planning and coordinated implementation, a GIS based and data driven decision support called PM GatiShakti National Master Plan has been introduced.
 - The portal will also allow various government departments to track, in real time and at one centralized place, the progress of various projects. This will enable various government departments to synchronize their efforts into a multi-modal network.
 - The portal will also highlight all the clearances any new project would need, based on its location - and allow stakeholders to apply for these clearances from the relevant authority directly on the portal.
- Six Pillars of PM Gati Shakti
 - PM Gati Shakti is based on six pillars: Comprehensiveness, Prioritization, Optimization, Synchronization, Analytics and Dynamic.
- How were inter-ministerial issues resolved earlier?
 - At regular meetings of infrastructure related ministries.
 - PM PRAGATI (Pro-Active Governance and Timely Implementation) portal also helped in resolution of several issues even prior to inter-ministerial meetings.
 - How would GatiShakti portal help?
 - It will reduce the human intervention required as ministries will be in constant touch, and projects will be reviewed by the project monitoring group in real time.
- Who has built the portal?
 - The Bhaskaracharya Institute for Space Applications and Geoinformatics (BISAG-N).

4) NATIONAL INVESTMENT AND INFRASTRUCTURE FUND (NIIF)

- Introduction
 - » NIIF was proposed in Union Budget 2015 and was set up by GoI in Dec 2015 with a corpus of Rs 40,000 crore to provide long term capital for infrastructure projects.
- Objectives
 - » To maximize economic impact through infrastructure development in viable projects both greenfield and brownfield, including stalled projects, mainly in the core infra sector.
- Structure

- » NIIF has been structured as a Fund of funds and set up as Category II Alternate Investment Fund (AIF) under SEBI.
- » **Gol has 49% stake** in NIIF with rest being held by marquee foreign domestic investors such as Abu Dhabi Investment Authority (ADIA), Temasek and HDFC group. This helps NIIF to be seen with characters of both sovereign fund as well as private fund (and is sometimes referred as India's quasi sovereign wealth fund).
- » The government invested Rs. 20,000 crores into it from Budget while the remaining 20,000 crores are expected to come from private investors (including foreign).
- » **Fund of funds** means that there would be multiple alternative investment funds underneath the main fund.
 - **How much does it manage presently?**
 - NIIF manages about \$5 billion of capital commitments across four funds, each with a distinct investment strategy.
 - **NIIF Master Fund:** It focuses on infrastructure and operating assets. It is the largest infrastructure fund in India, with commitment of over US\$1.8 billion. It has the largest size of US\$2.1 billion.
 - **NIIF Private Market Fund:** It invests in funds managed by third-party managers in infrastructure and associated sectors.
 - **NIIF Strategic Opportunities Fund:** It invests and develops large-scale businesses and greenfield projects that are of strategic importance to the country. It has a target size of \$3 billion.
 - **India-Japan Fund:** It is NIIF's first bilateral fund and invests in environmental preservation in India. It also seeks to enable opportunities for collaboration between Indian and Japanese companies in India.

- Governance

- » NIIF has been set up as a Trust registered under the Indian Trust Act. The activities of NIIF will be overseen by a Governing Council, which will be headed by Finance Minister.

- Functions of NIIF

- » NIIF would raise funds from investors and markets and would invest the same in companies, institutions and infrastructure projects.
- » It will also provide advisory services.

- Sources of Funds

- » The sources of funds of NIIF are as follows.

- **Government Budgetary Funds** to each AIF set up under NIIF, these funds will be provided every year as required.
- **Private investors.** The funds will solicit equity participation from strategic anchor partners. It is also expected to attract overseas investors, PSUs, domestic pension, provident funds and NSSF (National Small Savings fund) also.

A) ALTERNATE INVESTMENT FUND (AIF)

- Alternative Investment Funds are a class of investment entities that are not covered under the usual SEBI regulatory framework for investment institutions.
 - AIF refers to any privately pooled investment fund (trust, company or LLP) which are not presently covered by any regulation of RBI, SEBI, IRDA and PFRDA. They may be foreign or Indian.
- They include private equities, Venture Capital Funds, Hedge Funds, Commodity Funds, Debt Funds, infrastructure funds etc. They are generally owned by big corporate houses or wealthy individuals.
- This classification is done for the purpose of regulation.
- **SEBI in 2012 had notified guidelines for AIFs** as funds established or incorporated in India for pooling in of capital from Indian or foreign investors for investing as per a pre-decided policy.
- **SEBI guidelines have classified AIF in three categories:**
 1. **Category1:** AIFs which can produce positive spillovers in the economy and for that get incentives from government, SEBI or other regulators. They include social venture funds, Infra funds, Venture capital funds including angel investors, SME funds etc.
 2. **Category2:** For these funds no specific incentives or concessions are given by the government or any regulator. These includes private equity funds, debt funds, Funds of Funds and such other funds.
 3. **Category 3** AIFs are institutions like hedge funds that trade with a view to make short term returns. They employ diverse or complex trading strategies and do leverage including investment in listed or unlisted companies.

5) INFRASTRUCTURE INVESTMENTS TRUST (INVITS)

- InvITs are mutual funds like institutions that enable investment into the infrastructure sector by pooling small sums of money from multitude of individual investors for directly investing in infrastructure so as to return a portion of the income (after deducting expenditures) to unit holders of InvITs, who pooled the money.
- They are designed to attract low-cost, long-term capital in infrastructure sector and reduce pressure on the banking system.
- **Structure of InvITs in India**
 - » InvITs are set up as a trust and registered with SEBI.
 - » **Regulation**
 - InvITs are regulated in India by **SEBI**.
 - SEBI notified **SEBI (Infrastructure Investment Trusts) Regulations, 2014**, providing for regulation and registration of InvITs in India with an objective of facilitating investment in Infrastructure sector.
 - InvITs can invest in infrastructure projects, either directly or through a special purpose vehicle (SPV). In case of a PPP project, such investments can only be through SPV.
 - As per the present regulations, InvIT unit's minimum size is Rs 10 Lakh and thus are suitable only for High net worth individuals, institutional and non-institutional investors like pension funds, FPI, MF, banks and insurance firms.

- InvITs are listed on exchanges just like stocks - through IPO
- Taxes
 - Capital Gain Tax
- India's First InvIT issue was done by road developer IRB Infrastructure in May 2017 which garnered Rs 5,035 crore through IPO.

3. PUBLIC PRIVATE PARTNERSHIP (PPP)

- **Introduction:**
 - In 1997, the report of the **Rakesh Mohan Committee (RMC)** concluded that India's problem was that of poor infrastructure holding back development. It also highlighted the importance of bringing in the private sector into most areas of infrastructure in the country.
- **Public Private Partnership (PPP)** is a collaborative arrangement between government and private sector to jointly plan, mobilize resources, develop, and/or operate infrastructure projects.
- **Significance of Public Private Partnerships:**
 - **Mobilization of Resources:** For e.g. in the BOT (Toll/ Annuity) model of road construction, private player invests the entire initial money for the construction of the road project).
 - **Getting Private Sector expertise and Innovation:** E.g. in the EPC model, private sector engineers and construct the entire road.
 - **Risk Sharing**
 - **Increased Efficiency and Reduced cost of the project**
 - **Increased Transparency and Accountability**
 - **Better Infrastructure**
- But, the success of PPPs lies in the robustness of institutional structure, financial support, and use and availability of standardized documents, such as Model Requests for Qualifications (RFQ), Model Request for Proposal (RFP) and Model Concession Agreement (MCAs).
- Government of India has taken several measures:
 - Government of India has streamlined the appraisal and approval mechanism for Central Sector PPP projects to ensure speedy appraisal of projects, eliminate delays, and have uniformity in appraisal mechanisms.
 - » Procedure for approval of PPP projects was finalized in 2005 and in 2006, the Public Private Partnership Appraisal Committee (PPPAC) for the appraisal of was notified in 2006. It has cleared 79 projects with a total cost of Rs 2,27,268 crore from FY15 to FY23.
 - **Viability Gap Funding (VGF) Scheme, 2006**
 - » It provides financial assistance to financially unviable but socially/economically desirable PPP projects.
 - » **Economic Sector Projects** may get upto 40% of Capex as VGF grant.
 - » **Social Sector Projects** include higher provisions of VGF grant. It may get upto 80% of CAPEX and upto 50% of the Operating Expenditure (OPEX).

- **India Infrastructure Project Development Fund (IIPDF) Scheme** notified in Nov 2022
 - » The scheme aims to develop quality PPP projects by providing necessary funding support to project sponsoring authorities, both in the central and the state governments, for creating a shelf of bankable and viable PPP projects by on-boarding transaction advisors.
 - » It has an outlay of Rs 150 crores for a period of 3 years from FY23 to FY25.
 - » Under the scheme a maximum amount of Rs 5 crores for a single proposal, inclusive of any tax implications, can be funded which can include cost of consultants/transaction advisors of a PPP project.
 - » By: Department of Economic Affairs (DEA), Ministry of Finance, GoI

- **Several types of PPP Models** are used in India in different sectors:
 - » **EPC Model (Engineering, Procurement, and Construction)**: In this model, the cost of project is completely borne by government. Private sector with its expertise is responsible for engineering, procuring raw material and constructing the project. Ownership remains with government.
 - » **Built Operate and Transfer (BOT)** model involves private player entity designing, financing, constructing, operating, and maintaining an infra projects for a specific period. After the specified period, the ownership is transferred back to government. This model has been used in sectors like Roadways, Ports, Airports and Power Generation. It can be of two types - BOT (Toll) & BOT (Annuity).
 - » **Hybrid Annuity Model (HAM)**: It is a mix of EPC and BOT (Annuity) model.
 - » **Build Own Operate (BOO)**: The private sector entity builds and owns the asset, and then operates it for a specified period of time.
 - Government has agreed to "buy" the goods and services delivered by the project on mutually acceptable terms and circumstances.
 - » **Build Own Operate Transfer (BOOT)**:
 - It is a model of PPP in which a private company is granted a concession to finance, build, own, and operate a project for a specified period of time. At the end of the concession period, the project is transferred back to government.
 - E.g. of project under BOOT model, Delhi Mumbai Expressway, The Mumbai Metro, the Bangalore International airport etc.
 - It involves a private sector entity being responsible for the complete lifecycle of the project, including design, financing, construction, operation, and maintenance. However, here private sector entity retains ownership of the project even after the concession period.
 - » **Build Own Lease Transfer (BOLT)**: It is a PPP model in which a private company is granted a concession to finance, build, own and lease a project to the government for the specified period of time. At the end of the concession period, the project is transferred back to government. Some notable BLT projects in India are, the Delhi-Gurgaon Expressway and the Mumbai-Pune Expressway.
 - » **Design Build Finance and Operate (DBFO)**: It allows a private sector to design, build, finance, and operate a project for a specified period of time. This public sector client retains the ownership of the project, but the private sector contractor is responsible for all aspects of its delivery.

- E.g. Delhi Metro: Project was awarded to a consortium of private companies, which designed, built, financed, and operated the metro for a period of 30 years. At the end of the concession period, the metro will be transferred back to government.
 - » **Lease Developed Operate (LDO) Model:** Private company is granted a concession to finance, develop, and operate a project for a specified period of time. The government sector retains the ownership, but the private sector is responsible for all aspects of its delivery. At the end of the concession period, government may choose to operate the project itself, or it may contract with another private company to operate the project.
 - » **Rehabilitate-Operate-Transfer (ROT) Model:** Under this model, government allows private promoters to rehabilitate and operate a facility during a concession period. After the concession period, the project is transferred back to government / local bodies.
- **Recommendations of Vijay Kelkar Committee:**
- » Vijay Kelkar Committee on "Revisiting & Revitalizing the PPP model of infrastructure Development" was set up in the Union Budget of FY15-16. It recommended:
 - The Need of PPP contract to be more focused on service delivery.
 - The need to identify, balance and allocate risks amongst the different stakeholders.
 - Viability Gap Funding for unviable social and economic projects
 - Careful monitoring of performance as well as managing the risk.

4. LOGISTIC SECTOR

- Logistics, including transportation, inventory management, warehousing, material handling & packaging, and integration of information, is related to management of flow of goods between the point of origin and the point of consumption.
- **LOGISTIC PERFORMANCE OF INDIA:**
 - » As per the Logistics Performance Index, 2023 released by World Bank, India is ranked 38/139 countries in terms of the logistics performance.
 - » Logistics Cost in India have been in the range of 14-18% of the GDP against the global benchmark of 8%.
 - » Thus, logistic sector can play a crucial role in promoting the competitiveness of our industries. Besides it will also play a role in job creation and enhancing India's GDP.

1) NATIONAL LOGISTIC POLICY, 2022

- The vision of NLP is " to develop a technologically enabled, integrated, cost-efficient, resilient, sustainable and trusted logistics ecosystem in the country for accelerated and inclusive growth."
- **The Targets** for achieving the vision of NLP are to
 - reduce the cost of logistics in India to be comparable to global benchmarks by 2030.
 - improve the Logistics Performance Index ranking - endeavour is to be among the top 25 countries by 2030, and
 - create a data driven decision support mechanism for an efficient logistics ecosystem.

- The Policy has **four key features (four key pillars)**: Integration of Digital System (IDS); Unified Logistics Interface Platform (ULIP); Ease of Logistics (ELOG); and System Improvement Group (SIG);
 - **Under IDS, 30 different systems of seven departments are integrated** - including data from the road transport, railways, customs, aviation and commerce departments.
 - **ULIP would bring all digital services related to the transportation sector into a single platform.**
 - **Ease of Logistics (E-Logs)** is a new digital platform which has been started for industry associations to resolve issues by reaching out to the government.
 - **Systematic Improvement Group (SIG)** has been created along with the **Network Planning Group (NPG)** to improve coordination across government ministries and between the state and central governments.
- The policy will be implemented through CLAP (Comprehensive Logistics Action Plan), which proposes the following interventions:
 - **Integrating digital logistics systems** to develop a system of unified logistic interface.
 - **Sectoral Plan For Efficient Logistics**
 - **Facilitating the development of logistics Park**
 - **EXIM logistics**
 - **Logistics manpower skill development and capacity building**
 - **Service Improvement Program**
 - **Standardizations of physical assets and benchmarking service quality standards**
 - **Engagement with different Indian states**

2) MULTIMODAL LOGISTICS PARKS

- **What is Multi-Modal Logistic Park (MMLP):**
 - MMLPs have been conceptualized to enable seamless intermodal freight movement and offer multiple functionalities such as freight aggregation, and distribution. Storage, warehousing solutions, value-added services like custom clearances and IT services will be provided.
 - The parks will enable the switch from a point-to-point to a hub-and-spoke model in the logistic parks, eventually bringing down logistics costs by at least half and enabling more efficient movement of new generation vehicles.
- **Details about Multi-Modal Logistic Park (MMLPs):**
 - MoRTH&H is developing 35 MMLPs under Bharatmala Phase-1.
 - Of these 6 MMLPs are undertaken by MoRTH in port cities namely Cochin (Kerala), Chennai (TN), Vishakhapatnam (Andhra Pradesh), Mumbai (Maharashtra), Kolkata (WB), and Kandla (Gujarat).
- **Advantages:**
 - Logistic Efficiency -> Reduced time and cost
 - **Seamless Intermodal transports** -> simplify imports and exports
 - Improved warehousing -> reduced wastage of food
 - Improved Employment opportunities
 - Helps in growth of MSME sector
 - **Environmental benefits** -> improved efficiency -> reduced dependency on fossil fuels

B) SOUTH INDIA'S LARGEST MULTIMODAL LOGISTICS PARK IN BENGALURU (JAN 2024)

- The groundwork for 400-acre facility has begun at Obalapura on the northern outskirts of Bengaluru.
- It will provide a host of logistics, warehousing and cold storage facilities that are aimed at reducing overall logistics costs from 13% to 9% and making exports competitive.
- It will handle 30 million tonnes of cargo by 2070.
- This is a 1770 crore project and is being developed by Bengaluru MMLP Pvt Ltd, a special-purpose vehicle with three stakeholders.
 - The NHAI's National Highways Logistics Management Ltd (NHLML) owns the majority of stake (51.29%), followed by the Karnataka Industrial Areas Development Board (32.38%) and Rail Vikas Nigam Limited (16.33%).

3) LOGISTIC EASE ACROSS DIFFERENT STATES (LEADS) INDEX, 2023

- **Why in news?**
 - » Ministry of Commerce and Industry releases the 5th edition of the LEADS index (Dec 2023)
- **About the Index**
 - » It is a composite indicator to assess international trade logistics across states and Union Territories and is based on stakeholders' survey and uses the World Bank's Logistic Performance Index (LPI) methodology (LPI).
 - » While LPI relies entirely on perception-based surveys, LEADS incorporates both perception as well as objectivity thereby enhancing the robustness and comprehensiveness of the exercise.
- **The 5th edition of the LEADS annual exercise - LEADS 2023 report**, provides insights into improvement of logistics performance at State/UT level.
 - » The report signals a positive shift in States' performance across the key pillars - Logistics Infrastructure, Logistics Services and Operating and Regulatory Environment.
 - » The report is based on a pan-India primary survey, conducted between May and July 2023, covering over 73,000 responses across 36 states/UTs. Additionally, over 750 stakeholder consultations, facilitated by National, regional, and state associations, significantly contributed to this comprehensive evaluation.
 - » **Performance Highlights:**
 - **Coastal Group**
 - Achievers: Andhra Pradesh, Gujarat, Karnataka, Tamil Nadu
 - Fast Movers: Kerala, Maharashtra
 - Aspirers: Goa, Odisha, West Bengal
 - **Landlocked Group**
 - Achievers: Haryana, Punjab, Telangana, Uttar Pradesh
 - Fast Movers: Madhya Pradesh, Rajasthan, Uttarakhand
 - Aspirers: Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand
 - **North-East Group**
 - Achievers: Assam, Sikkim, Tripura
 - Fast Movers: Arunachal Pradesh, Nagaland

- Aspirers: Manipur, Meghalaya, Mizoram
- **Union Territories**
 - Achievers: Chandigarh, Delhi
 - Fast Movers: Andaman & Nicobar, Lakshadweep, Puducherry
 - Aspirers: Daman & Diu/ Dadra & Nagar Haveli, Jammu & Kashmir, Ladakh

5. SHIPPING AND INLAND WATERWAYS

1) HUGE POTENTIAL IN SHIPPING SECTOR

- **India's Geography:** India is endowed with a rich coastline of ~7500 km and has a strategic location on key international maritime trade routes.
- **India's fleet** is just 1.2% of the world's fleet and carries only 8% of India's Exim trade.

2) SEAPORTS IN INDIA

- Our coastline is not very serrated and therefore we have very few natural seaports on our coast. There are **13 major and about 200 non-major ports** in India.
- **Port development** in India is a concurrent subject.
- The Major seaports are maintained and managed by central government (Ministry of Shipping) under **Major Port Authorities Act, 2021** and other seaports are controlled by the state governments under the Indian Ports Act, 1908.
- **Installed capacity of major ports** in India has increased to 1534.91 MTPA in March 2020.

3) MAJOR PORT AUTHORITIES ACT, 2021

- **The need of this act?**
 - Major Ports Trust Act of 1963 was very restrictive which made it difficult for major ports to function in highly competitive environment and respond to market challenges.
 - The Board of Trustees was considered too large and disparate to allow efficient decision making.
- The 2021 act provides for regulation, operation, and planning of major ports in India. It was enacted in Sep 2021 and replaced the Major Port Trusts Act, 1963.
- **Key Provisions:**
 - It vests the administration, control and management of major ports in the **Boards of Major Port Authorities (MPAs)**. It will replace the existing port trusts.
 - » **Responsibility:** The boards are responsible for overall planning, development, and operation of the port. They are also responsible for fixing the scale of rates for port services and assets.
 - **Greater autonomy to MPAs in decision making:**
 - » MPAs are now free to enter into public-private partnership (PPPs) for the development and operation of port facilities.

- » **Significance:** This will allow the ports to be more responsive to the needs of their users and to make decisions that are in the best interest of the port community.
 - They are also responsible for fixing the tariffs for port services based on market conditions.
 - » **Significance:** This will allow ports to be more competitive and to attract more traffic.
 - **Reorient the governance model** in the major ports to landlord port model in line with the global practices.
 - **Improved grievance redressal mechanism:** The act provides for creation of an adjudicatory board to resolve disputes between MPAs and stakeholders.
- The above changes are also expected to increase investment in the port sector.

4) MAJOR SEAPORTS OF INDIA

i. Kandla (now known as Deen Dayal) - Gujarat

- Located in Gulf of Kutch and is the largest port by volume of cargo handled. Its harbor is natural and protected.
- Kandla port also is a free trade zone, where import duties are not levied. The basic concept is that entrepreneurs setting up units in the zone can import raw material and machinery free of duty, but the manufactured products must be completely exported and not sent into hinterland. Consumable articles like TV, tape recorders etc can't be imported in the free trade zone.
- The port is famous for import of petroleum products.
- One limitation of the port is that it is situated in a earthquake prone zone (zone v).
- Updates:

» **Kandla becomes the first Green SEZ (July 2021)**

- It achieved CII's IGBC (Indian Green Building Council) Green Cities Platinum Rating.
 - With this KASEZ (Kandla SEZ) has become the first Green SEZ to achieve the IGBC Green Cities Platinum Rating for Existing Cities.
 - It has been awarded for 'Green Master Planning, policy initiatives, and implementation of Green infrastructure'.
- It shows that GoI is working towards ensuring environmentally sustainable development.

- ii. **Mumbai:** It is situated in the natural serrated area of the Salsette Island and thus have a natural harbour which is safe too.
- Here also, there has been an establishment of free trade zone.
 - It is the largest port in India.

iii. **Nhava Sheva or Jawaharlal Nehru Seaport (JLNP)**

- It is an all whether tidal port.
- Developed near Panvel in Navi Mumbai to ease off the pressure of Mumbai port. It is the most modern sea-port of the country.

iv. **Mormugao Port**- Situated on the left bank of Zuari river in Goa. It is a natural seaport protected by backwater and also by a mole. It is specially known for the export of iron ore (as Goa is rich in it), other products which are exported from here includes Cashew, fish, spices, rice etc.

v. **New Mangalore**

- It handles iron ore export from Kudremukh mines. Other items exported include, fish, fertilizers, cashew, forest products and coffee.



vi. **Kochi**

- It is a natural harbour located in the Vembanad lake on Wellington Island on the coast of Kerala. It is situated on the mouth of a large lagoon parallel to the sea.
- Major items exported from here are coconut products, cashew, tea, rubber, fish and spices.
- Important items imported from this port includes mineral oil, fertilizers, coal and edible oils.

vii. **New Tuticorin (V.O. Chidambarnar Port)**

- It is one of the major ports in TN, located in Gulf of Mannar. It is an artificial, deep sea, open seaport which is located 9 km from the eastern side of Hare Island.
- Its harbour has been made deeper and it has been developed artificially.
- The port handles the trade of coal, food grains, salt, sugar, petroleum products etc.

viii. **Chennai Port**

- It is a major seaport on east coast of India. It is an artificial port and is located in open seas where the ships have to face the wave. To protect the ships, a long wall has been built at 3 km away from the coast.
- It is the second largest trading seaport after Mumbai.
- Key imports: Iron ore, food grain, leather, sugar, tobacco, coconut products, etc.
- Key exports: Petroleum, coal, edible oil, chemicals, cotton etc.

ix. **Ennore Port (Kamarajar Port)**

- Located in Tamil Nadu, North of Chennai. Developed to ease pressure on Chennai.
- Especially significant for coal trading. The Tamil Nadu government gets internal and imported coal for itself from this seaport.

- It is different from the other major ports which are run as trusts, it is incorporated as a company.
 - **Note:** Chennai Port Trust acquired the 67% stake of Centre in the Kamarajar Port Limited on 27th March 2020. The remaining 23% was already held by the **Chennai Port Trust**.

x. **Vishakhapatnam**

- Port of Vishakhapatnam, a deep, natural harbour, was opened to commercial shipping in 1933. It is self-protected from storms because of a hills called 'Dolphin Nose' jutted out of the sea at the mouth of the harbour.
- It is the only Indian Port possessing three international accreditations viz. ISO 14001; 2004 (EMS)/OHSAS 18001 and ISO 90001:2000 (QMS).
- The iron ore of Bailadilla area is exported from this seaport.

xi. **Paradeep**

- It is an artificial seaport on the coast of Odisha. Here there is a mechanical facility of loading and unloading of Iron ore and coal.

xii. **Kolkata Port Trust / Dr. Shyama Prasad Mukherjee Port Trust** (renamed to Dr. Shyama Prasad Mukherjee Port in Jan 2020)

- **About the Port**
 - It is a riverine port located on the left bank of the Hugli River in West Bengal. It is the only riverine major port in the country.
 - It is the **oldest operating port** in India and was constructed by **British East India Company**.
 - Deposition of silt doesn't allow big ships to reach this port. So, the Diamond Harbour has been constructed in the open bay 64 km away from Kolkata.
 - The port has twin dock system viz., Kolkata Dock System on the eastern bank and a deep water dock at Haldia Dock Complex on the western bank of river Hooghly.
 - **Haldia dock complex** eases off the pressure on Kolkata Seaport. It is the harbor of those large sized ships which don't reach Kolkata.
 - In Jan 2020, on the occasion of **150th birth anniversary** celebration of the Kolkata Port Trust, it has been renamed after **Dr. Shyama Prasad Mukherjee**. This was approved by Cabinet in June 2020.

xiii. **Port Blair Port**

- Under the Indian Port Act, 1908, GoI declared Port Blair port as major port in 2010.
 - All major provisions of the Major Port Trusts Act, 1963 has become applicable to the major Port Blair from 1 June 2010.
- The port is of **strategic importance** for India and is located close to **two international shipping lines**, namely Saudi Arabia-Singapore and US-Singapore.
- But **lack of traffic** may soon become a reason for government taking away the major port tag.

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2. FUNDAMENTAL RIGHTS

1) EWS RESERVATION

- The **103rd Constitutional (Amendment) act** amended the constitution to provide economic backwardness as a ground for reservation.
 - » Article 15(6) has been added which empowers the state to make any special provision for advancement of EWS and to provide reservation to EWS for admissions to education institutions (other than minority educational institutions mentioned in Article 30(1))
 - » Article 16(6) empowers the state to provide reservation to people from EWS in government jobs.
 - » Both these kinds of reservation are capped at 10% and can't be claimed by people who are getting reservation benefits under other clauses of Article 15 and Article 16.

A) SUPREME COURT VERDICT: JANHIT ABHIYAN V. UNION OF INDIA, 2022

- **Background:** In Aug 2020, a batch of petitions challenging the 103rd Constitutional Amendment Act was referred to a **five judge Constitutional Bench**.
 - » The SC has agreed that the case involved at least **three substantial questions of law**:
 - i. Economic criteria alone can't be the basis to determine backwardness.
 - ii. The EWS quota exceeds the ceiling cap of 50% set by the Court.
 - iii. The Rights of unaided private institutions (to run their trade freely)
- In Nov 2022 A Constitutional Bench of the Supreme Court, in a 3:2 majority decision, upheld the Constitutional Validity of EWS Reservation:
 - » **Ques:** Whether reservation on the sole basis of economic criteria violated basic structure of the Constitution?
 - The three judges (Justice Maheshwari, Justice Bela Trivedi, Justice Pardiwala) in majority held that the "legislature didn't violate the Basic Structure of the Constitution".
 - Justice Maheshwari took an expansive view that reservation was an "instrument of affirmative action by the state" and shouldn't be confined to SCs, STs, SEBCs, but also include "any class or sections so disadvantaged as to answer the description of 'weaker section'"
 - Justice Bela Trivedi in her separate but concurring opinion upheld the amendment based on presumption that "the legislature understands and appreciates the needs of its own people".
 - » **Ques:** Does 10% EWS quota breach the ceiling of 50% on reservation
 - The Majority verdict held that the 50% formed by the Supreme Court in the Indira Sawhney judgment in 1992 was "not inflexible". Further, it applied only to SC/ST/SEBC/OBC communities and not to general category.
 - » **Ques:** Can private (unaided) colleges be forced to have EWS quota?
 - Only Justice Maheshwari's opinion, part of the majority view, engaged with this issue to some extent. It said "Unaided private institutions, including those imparting

professional education, cannot be seen as standing out of the national mainstream.
Thus, reservations as a concept cannot be ruled out in private institutions where
education is imparted"

- Judges have unanimously agreed to this.

B) SUPREME COURT DISMISSES REVIEW PETITION (MAY 2023)

- The Supreme Court dismissed the review petitions filed against its judgement upholding the validity of 103rd Constitutional Amendment that introduces 10% reservation for the EWS.
 - The SC held "Having perused the review petitions, there is no error apparent on the face of the record. No case for review under Order XLVII Rule 1 of the Supreme Court Rules 2013. The review petitions are, therefore, dismissed".

2) RIGHT TO FREEDOM OF SPEECH AND CRIMINAL DEFAMATION

- **Why in news?**
 - » Supreme Court stays Rahul Gandhi's conviction in 'Modi surname' remark criminal defamation case (Aug 2023)
 - Earlier in July 2023, the Gujarat High Court dismissed Rahul Gandhi's plea against his conviction in defamation case. In March 2023, a Surat magistrate court sentenced Congress leader Rahul Gandhi to two years' simple imprisonment for criminal defamation, in a case filed by BJP leader Purnesh Modi.
 - The case relates to Mr. Gandhi's remark while campaigning for the 2019 Lok Sabha poll in Karnataka. The High Court upheld the Surat Session Court's ruling in which Mr. Gandhi's plea seeking a stay on his conviction was rejected.
- **In India**, defamation falls under **both civil and criminal offence**.
 - » **Civil Defamation** is covered under the Law of Torts where a person who is defamed can move to the court and seek compensation.
 - » **Criminal Defamation** is covered by Sections 499 and 500 of IPC.
 - Section 499 criminalizes speech that is intended to mar the reputation of any person. Section 500 details the punishment for defamation, making a person liable for imprisonment up to two years (with or without a fine).
- **Supreme Court in Subramaniam Swamy vs Union of India, 2016 upheld the constitutional validity of the penal law on defamation (Section 499 and 500 of IPC)**
 - » The court did not agree with the contentions that criminalizing defamation attacks freedom of speech and expression guaranteed under Article 19 (1) of the constitution.
 - » It said that the Freedom of Speech and Expression is not absolute and Reputation of one can't be allowed to be crucified at the altar of the other's right of free speech.
 - » The court also said " **a free press is the heart and soul of political intercourse and is a public educator, but this freedom is not absolute and cannot be used by the media to cause injury to an individual's precious reputation**".
 - » The court also held that criminal defamation law protected the feeling of fraternity - or solidarity - between members of society.

- But various legal experts find a number of problems with the law
 1. The defamation provisions stifle Freedom of Speech and Expression in many ways by powerful and strong (especially that of weaker section and press)
 2. Misused by government/large corporations/ Politicians to stifle any kind of opposition and criticism by journalists and critics.
 3. Other countries have abolished/weakened it.
 - USA, Canada and South Africa have weakened the criminal defamation and UK has completely abolished the law to give more protection to freedom of speech and expression.

A) RAHUL GANDHI CASE: SUPREME COURT STAYS RAHUL GANDHI'S CONVICTION IN 'MODI SURNAME' REMARK HE ALLEGEDLY MADE DURING A POLITICAL RALLY IN 2019.

- The Apex Court pointed out that Gujarat Trial judge, failed to give even a single reason for serving the Congress leader with maximum sentence of two years' imprisonment.
 - Court also said that Mr. Gandhi's alleged remarks, if made, were "not in good taste".
-

B) MOBASHAR JAWED AKBAR VS PRIYA RAMANI

- In Feb 2021, in the **Mobashar Jawed Akbar vs. Priya Ramani** a district court in Delhi, dismissed the criminal defamation case against Priya Ramani and acquitted her from all charges.
 - » Ms Ramani premised her defence on the First Exception to Section 499 which postulates that "It is not defamation to impute anything which is true concerning any person, if it be for the public good that the exception should be made or published".
 - » Ms Ramani also pleaded truth as her defence, made in good faith, in public interest, and for public good. She also contended that the complainant is not a man of stellar good and impeccable reputation, and the accused didn't defame him by publishing the tweets and articles.
 - » The court accepted the defence of the accused that she disclosed the truth regarding the incident of sexual harassment against her on the basis of testimony of two witnesses (Niloufer Venkatraman and Ghazala Wahab)

C) DEFAMATION PROVISIONS UNDER THE BHARTIYA NYAYA SANHITA, 2023:

- **Section 356:**
 - (1) Whoever, by words either spoken or intended to be read, or by signs or by visible representations, makes or publishes in any manner, any imputation concerning any person intending to harm, or knowing or having reason to believe that such imputation will harm, the reputation of such person, is said, except in the cases hereinafter excepted, to defame that person.
 - **Explanation 1:** It may amount to defamation to impute anything to a deceased person if the imputation would harm the reputation of that person if living and is intended to be hurtful to the feelings of his family or other near relatives.
 - **Explanation 2:** It may amount to defamation to make an imputation concerning a company or an association or collection of persons as such.
 - **Explanation 3:** An imputation in the form of an alternative or expressed ironically, may amount to defamation.

- **Explanation 4:** No imputation is said to harm a person's reputation, unless that imputation directly or indirectly, in the estimation of others, lowers the moral or intellectual character of that person, or lowers the character of that person in respect of his caste or of his calling, or lowers the credit of that person, or causes it to be believed that the body of that person is in a loathsome state, or in a state generally considered as disgraceful.

3) HATE SPEECH

- **Introduction:**
 - Hate Speech refers to any form communication (written, oral or otherwise) that expresses hostility, prejudice or violence towards individuals or groups based on attributes such as their race, ethnicity, religion, gender, sexual orientation etc. It often seeks to demean, dehumanize, or marginalize the targeted individuals or groups, and it can contribute to fostering a hostile or discriminatory environment.
- **Legal Provisions for Hate Speech:**
 - » India doesn't have a formal legal framework for dealing with hate speech.
 - » Several provisions of IPC can be invoked. These are primarily laws to deal with offences against religion. These include:
 - **Section 153A:** It penalizes promoting enmity between different groups on grounds on religion, race, place of birth, residence, language etc.
 - **Section 153B:** imputations, assertions prejudicial to national integration
 - **Section 295A:** It defines and prescribes punishment for deliberate and malicious acts, intended to outrage religious feelings of any class by insulting its religion or religious beliefs.
 - The chapter include other provisions also:
 - **Section 295:** Penalize damage or defilement of a place of worship with intent to insult the religion.
 - **Section 296, 297 and 298** also deal with religious issues.
 - » **Representation of People's Act, 1951:**
 - A person convicted under Section:
 - 153A of IPC;
 - Protection of Civil Rights Act, 1955 (preaching untouchability)
 - Is disqualified from being a MP/MLA
 - » **Religious Institutions (Prevention of Misuse) Act, 1988:**
 - Section 3(g) prohibits religious institutions or their managers from using religious premises to promote disharmony or hatred among various religious groups.

A) BHARTIYA NYAYA SANHITA, 2023:

- » **Section 196:** It penalizes - Promoting enmity between different groups on grounds of religion, race, place of birth, residence, language, etc., and doing acts prejudicial to maintenance of harmony.

- » **Section 299:** Whoever, with the intention of wounding the feelings of any person, or of insulting the religion of any person, commits any tress pass in any place of worship or on any place of sculpture, or any place set apart for the performance of funeral rites etc. shall be punishable with imprisonment of either description for a term which may extend to one year, or with fine, or with both.
- » **Section 353(1) and 353(2):** In penalizes publication or circulation of any statement, false information, rumor, report etc. with intention of causing
 - 353(1):
 - (a): mutiny in security forces;
 - (b): fear or alarm to the public, or to any section of public whereby any person may be induced to commit an offence against the state or against the public tranquility.
 - (c): Inciting a community of persons to commit any offence against any other class or community.
 - 353(2): Feeling of enmity, hatred, ill will between different religious, racial, language or regional groups or castes or communities.

B) SUPREME COURT VERDICT (AUG 2023)

- Supreme Court advocated for 'practical and effective' steps to deal with the problem of hate speech so that its earlier decisions are followed both in letter and spirit.
 - It sought responses from the state government, on the status of their compliance with the Tehseen Poonawalla guidelines requiring the establishment of district level officers.

4) SECTION 66A OF THE INFORMATION TECHNOLOGY ACT AND SHREYA SINGHAL JUDGEMENT

- **What was Section 66A of the IT Act?**
 - » Section 66A was a provision under IT Act, 2000 which was introduced by an amendment in 2008.
 - It gave the government power to arrest and imprison an individual for allegedly "offensive and menacing" online posts.
 - It empowered police to make arrests over what policemen, in terms of their subjective discretion, could construe, as "offensive" or "menacing" or for the purposes of causing annoyance, inconvenience, etc.
- **Did Section 66A curb or safeguard the social media?**
 - » The law prescribed 3-year jail for anyone causing "annoyance and inconvenience" on the social media. But annoyance and inconvenience are very subjective. Further, subjectivity of cyber cell of police as questionable. Moreover, it encroached upon the freedom of expression (specifically, freedom of expressing political dissent).
- **Supreme Court in Shreya Singhal vs Union of India quashed the Section 66A of the IT Act, 2000, for being violative of Article 19(1)(a) and not saved under Article 19(2)**
 - » **Background:**
 - A petition came up in the court following the arrest of two girls in Maharashtra by Thane Police in November 2012 over a Facebook post. The girls had made comments on the shutdown of Mumbai for the funeral of Shivsena chief Bal Thackeray. The arrests

triggered outrage from all quarters over the manner in which the cyber law was used. The petition was filed by Shreya Singhal, then a 21-year-old law student.

» **Supreme Court Verdict:**

- **Section 66A is unconstitutional** for being violative of Article 19(1)(a) and not saved under Article 19(2).
 - These provisions were vague and had a chilling effect on the Constitutional Mandate.
 - It is cast so widely that virtually any opinion on any subject would be covered by it, And if it is to withstand the test of constitutionality, the chilling effect on free speech would be total.
- **Marketplace of idea doctrine** - "the truth will emerge from competition of ideas in free, transparent, public discourse and concludes that ideas and ideologies will be culled according to their superiority or inferiority and widespread acceptance among population."
- **The judgement** was considered a landmark judicial pushback against state encroachment on the freedom of speech and expression.
- **Supreme Court Verdict on the issue of continuous use of Section 66A of the IT Act (Oct 2022)**
 - **Background:** A write petition was filed by the NGO People Union for Civil Liberties (PUCL) which highlighted the issue of section 66A of IT Act being invoked despite the judgment in Shreya Singhal vs. UOI (2015).
 - **Supreme Court verdict:**
 - No one should be prosecuted under the section 66A of the IT Act.
 - Directions were issued to DGPs and Home Secretaries of all states to ensure that reference to section 66A is removed from all pending cases.
 - Bare Acts of IT Act published should adequately inform the readers that section 66A has been invalidated.

5) RIGHT TO PRIVACY

- **Evolution of Right to Privacy as a fundamental Right in India:**
 - Constitution of India, upon its adoption in 1950, didn't explicitly mention the right to privacy. However, the framers of the Constitution envisioned a holistic protection of individual rights under Article 21, which guarantees right to life and personal liberty. Over time, this broad provision became foundation for the development of right to privacy jurisprudence.
 - **MP Sharma case, 1954**
 - In this case, the SC had held that the Constitution of India didn't explicitly include the Right to Privacy as a fundamental right. It stated that the concept of privacy was not well-defined in Indian law, and therefore, it couldn't be invoked to challenge the validity of government action.
- **Kharak Singh Case, 1962**

- This case marked the first explicit reference to Right to Privacy by the Supreme Court. Though it recognized right to privacy as an essential element of personal liberty, it didn't rule on the constitutionality of surveillance.
- **Maneka Gandhi Case, 1978**
 - Though this case was not about Right to Privacy, it broadened the scope of Article 21 and held that personal liberty included more than just physical liberty. This laid foundation for the judicial interpretation of privacy in subsequent cases.
- **PUCL v. Union of India (1997)**
 - Here, the SC held that telephone tapping infringed upon an individual's right to privacy unless authorized by law and necessary in a domestic society.
 - This case established the principle that privacy is a fundamental right inherent in Article 21.
- **Justice K.S. Puttaswamy (Retd.) v. Union of India (2007)**: This landmark judgment marked the watershed moment in the evolution of right to privacy. The SC recognized privacy as a fundamental right under Article 21 and Article 19, with an individual's autonomy, personal dignity, and informational self-determination as integral aspect of privacy.

A) JUSTICE KS PUTTASWAMY VS UNION OF INDIA

- In **Justice K.S. Puttaswamy vs Union of India** case, a 9 judge constitutional bench, on 24th Aug 2017, unanimously affirmed that the Right to Privacy is a fundamental right under the Indian Constitution.
- **Key Highlights of the judgment**
 - The decision in **MP Sharma case (1955)** and **Kharak Singh Case (1962)** which held that right to privacy is not protected by the Constitution stands over-ruled.
 - **The right to privacy is protected as an intrinsic part of the right to life and personal liberty under Article 21 and as part of the freedoms guaranteed by Part III of the constitution.**
 - » The court agreed that Privacy is a fundamental right and have provided an all-encompassing interpretation. All nine judges agreed that privacy was at the heart of individual self-determination, of dignity, autonomy, and liberty. It is inseparable from the meaningful exercise of other guaranteed freedoms such as speech, association, movement, personal liberty, and freedom of conscience.
 - **Right to Privacy is however not an absolute right.**
 - » It is a qualified right subject to national security, public interest, and other reasonable restrictions.
 - » But it may be **restricted only by state action that passes each of the three tests:**
 1. **First**, such state action must have legislative mandate.
 2. **Second**, it must be pursuing a legitimate state purpose.
 3. **Third**, it must be proportionate i.e., such state action - both in its nature and extent, must be necessary in a democratic society and the action ought to be the least intrusive of the available alternatives to accomplish the ends.

- » The courts will conduct as case-by-case analysis to determine the scope of this right to privacy.

B) OTHER JUDGEMENTS WHICH EMANATED DUE TO PUTTASWAMY JUDGMENT

- A number of landmark judgments since Puttaswamy have referred to this judgment:
 - » **Navtej Singh Johar vs Union of India** -> Decriminalized homosexuality
 - The judgement was built in part upon the **autonomy doctrine** of personal choice from the privacy doctrine
 - » **Joseph Shine v. Union of India** -> Decriminalized Adultery
 - » **Shafin Jahan v. Ashokan KM** -> Restrained the courts from dictating the choice of an adult women to choose her partner.

6) DIGITAL PERSONAL DATA PROTECTION ACT, 2023

- **Why in news?**
 - The Digital Personal Data Protection Bill, 2023 passed in both Lok Sabha and Rajya Sabha (Aug 2023)
- **Need of a Personal Data Protection Law**
 - National Security**
 - Preventing Misuse of Data**
 - Protecting Fundamental Rights of Citizens:** Ensuring Right to Privacy which is a fundamental right (**KS Puttaswamy judgement**)
 - Strengthening of bargaining powers of Data Principals**
 - Absence of Institutional Framework** for data privacy and security. For e.g. there was a lack of independent supervisory authority such as privacy commissioner that individuals may approach in case of noncompliance.
 - Right to Forget** is increasingly being considered an integral part of right to privacy, but this is not available in India yet.
- **Key Provision of the Act:**
 - Definitions:**
 - Personal Data** is defined as any data about an individual who is identifiable by or in relation to such data.
 - Processing** has been defined as wholly or partially automated operation or set of operations performed on digital personal data.
 - Unlike the 2019 bill, this act narrows the scope of the data protection regime to personal data protection.**
 - It will apply to the processing of digital personal data within India where such data is collected online, or collected offline and is digitized. It will also apply to such processing outside India if it is for offering goods and services in India.
 - Consent:** Personal Data may be processed only for a lawful purpose upon consent of an individual.

- Consent may not be required for specified legitimate uses such as voluntary sharing of data by the individual or processing by the state for permits, licenses, benefits and services.
- iv. **Special Protection to Children:** The act places three conditions on data processing entities for children's data:
 - Obtaining Verifiable consent; Not causing harm to children; and no tracking or monitoring children or targeting ads to them.
- v. **Rights and Duties of Data Principal:**
 - Right to obtain information about processing, seek correction and erasure; Nominate other person to exercise rights in the event of death or incapacity; grievance redressal.
 - Duties include not registering false complaints; not furnishing false info or impersonate other person.
 - Violation of duties will be punishable.
- vi. **Obligation of Data Fiduciaries:** Data Fiduciaries are required to maintain the accuracy of data, keep data secure, and delete data once its purpose has been met; inform data principal and data protection board in case of a breach.
- vii. **Concession to Cross Border Data flow:** The bill allows transfer of personal data outside India, except to countries restricted by the Central government through notification.
- viii. **Exemptions:** Central government may exempt government agencies from the provisions in the interest of security of state, public order, and prevention of offences.
 - Personal data which is processed for research, archiving, or statistical purpose will also be exempted under clause 17(2)(b).
- ix. **Data Protection Board of India** - To be established by central government to adjudicate on non-compliance with the provision of the bill.
 - The members will be appointed for a period of 2 years and can be reappointed.
- x. **Amendment to IT Act, 2000** to remove clause for obligation on corporates to award damages to affect persons in case of negligent handling of sensitive data.
- xi. **Amendment to RTI Act, 2005** to protect the personal information from disclosure.
 - Section 44(3) of the bill amends section 8(1)(j) of the RTI Act, which will have the effect of totally exempting personal information from disclosure.

7) PERSONALITY RIGHTS

- **Why in news?**
 - » Delhi High Court protects Anil Kapoor's Personality Rights (Sep 2023)
- **What is a personality right?**

- » 'Personality Rights refer to the right of a person to protect his/her personality under the right to privacy or property. The personality may include name, images, voice, signature, or any other feature which is easily identifiable by the public.
 - This personality may be inappropriately used in commercials by various businesses to increase sales. Therefore, to protect their personality rights, famous people and celebrities take legal recourse in a court of law.
 - Many celebrities may register some aspects as a trademark to use them commercially. For e.g., Usain Bolt's 'bolting' or lighting pose is a registered trademark.

- **How is Personality rights protected in India?**
 - » Personality Rights or their protection are not directly expressed in the Constitution of India or any of the laws, the Indian Courts have sought to derive the same from Article 19(1)(a) and Article 21 of the Indian Constitution and the Right to Property.
 - Many concepts in Intellectual Property Rights used in protection of trademarks such as passing off, deception etc can be applied while deciding whether a celebrity deserves to be protected through an injunction.

- **Important Court Verdicts in India:**
 - » **Anil Kapoor vs Simply Life India & Ors, 2023**
 - Anil Kapoor had moved to the Delhi High Court in a civil suit seeking protection of his personality - his name, photograph, manner of speaking, gestures, etc. He also claimed protection of his copyright in a dialogue and in the image and other associated work.
 - Kapoor's lawyer, IP Right specialists, Praveen Anand argued that several defendants had misappropriated Kapoor's name and elements of his persona to earn profits.
 - The Delhi High Court passed granted ex-parte, omnibus injunction restraining 16 entities from using Kapoor's name, likeness, image, using technological tools like AI, face morphing, and even GIFs for monetary gain or commercial use.
 - **Note:** An ex-parte injunction is when relief is granted to a party without hearing the other side. An omnibus injunction granted against any unauthorized use- even those that are not mentioned in the plea.

 - » **Amitabh Bachchan Case vs Rajan Negi 2022**
 - Delhi High Court injunctioned the use of personality rights including "unique style of addressing computer as' Computer Ji' and lock kiya jaye.
 - **The High Court had relied on a 2012 verdict: Titan Industries Ltd. V. Ramakumar Jewelers, 2012:**
 - » In this case the defendant unlawfully exploited the photograph of Indian actor Mr. Amitabh Bachchan and his wife, Ms. Jaya Bachchan, taken specifically for use in endorsing plaintiff's jewellery product.
 - » The Delhi High Court granted a permanent injunction against the defendant. It also observed that "a renowned person's name can be used in advertisements for business purpose, but only with the person's consent and approval".
 - » The court also defined 'celebrity' as a "a famous or a well-known person and is merely a person who "many" people talk about or know about".
 - » The court also held that "the right to control commercial use of human identity is the right to publicity".

- » **Shivaji Rao Gaikwad v. Varsha Production, 2015:** In this case the Madras High Court was dealing with a case that was filed by the reputed Indian actor Mr. Rajnikanth.
 - In this case the famous actor Rajnikanth had filed lawsuit against the producer of the movie "Main Hoon Rajnikanth" claiming that his name, image, style of delivering dialogue had infringed his personality rights.
 - The court observed that 'personality rights vests on those persons, who have attained the status of celebrity'. It said that from the title of the movie, the public viewing the movie would identify it with only the actor alone.
- » **Note:** Despite corporate bodies being viewed as legal persons by the legal system, the personality or publicity rights are specific to and applicable solely to "individuals" and not to corporate organizations.

8) PREVENTIVE DETENTION

- **What is Preventive Detention?**
 - Preventive detention is the arrest of a person to "prevent" a crime from happening i.e. there is a strong suspicion/probability that the arrested person if allowed to remain free would get involved in some illegal activities.
- **History of Preventive Detention Laws in the country**
 - Bengal Regulation III of 1818 -> empowered government to arrest anyone for defence or maintenance of public order without giving the person recourse to judicial proceedings
 - Rowlatt Acts of 1919 -> allowed confinement of suspect without trial.
 - Preventive Detention Act of 1950 - Expired on Dec 31, 1969
 - Maintenance of Internal Security Act (MISA) in 1971 -> repealed in 1977 by the Janta Party government.
 - National Security Act, 1980 -> brought by Indira Gandhi government when she came back to power.
- **Constitutional Provisions regarding Preventive Detention in India**
 - **Article 22(4)-22(7)** deals with cases of **preventive detention** here certain safeguards/rights have been provided to person getting detained under Preventive Detention Laws. These safeguards are available to **both Citizens and Aliens**.
 - » **(22(4)):** No person can be detained for a period more than 3 months (reduced to 2 months by 44th amendment, but not notified yet) unless
 - a. An advisory Board consisting of persons who are, or have been, or are qualified to be appointed as, Judges of a High Court has reported before the expiration of the said period of three months that there is sufficient cause for such detention.
 - Nothing in the above sub-clause shall authorize detention beyond maximum period prescribed by parliament under sub clause (b) of clause (7)
 - » **(22(5))** provides for communication of grounds on which detention order has been made and affording earliest opportunity of making representation against order.
 - » **(22(6))** Nothing in clause (5) shall cause the disclosure of facts which the authority considers to be against the public interest to disclose.
 - » **(22(7))** provides that Parliament may by law provide for

- a. The circumstances under which, and the classes of cases in which a person may be detained for a period longer than three months under any law providing for preventive detention without obtaining the opinion of an Advisory Board.
- b. The maximum period for which any person may in any class or classes of cases be detained under any law providing for preventive detention.
- c. Procedure to be followed by an advisory board in an enquiry.

- **Other Constitutional Provisions**

» Division of legislative powers

- The parliament has exclusive power to make laws of preventive detention on the subjects of defence, foreign relations and security of India.
- Both Parliament and State legislatures can concurrently make a law of preventive detention on subject of security of state, maintenance of public order and the maintenance of supplies essential to the community.

C) NATIONAL SECURITY ACT, 1980

- **About the Act**

- » It is a law aimed at preventing crimes which may affect India's security and public order. The provision of the act allows for preventive detention which can be extended for months.
- » **The grounds for preventive detention under the Act include:**
 - i. Acting in a manner which is prejudicial to the defence and security of India or India's relations with foreign powers.
 - ii. Regulating the continued presence of foreigners in India or for making arrangements for their expulsion from India.
 - iii. Preventing them from acting in a manner prejudicial to the security of the state, public order, or maintenance of supplies and services essential for the community.
- » Preventive detention under NSA happens through administrative order passed by the Divisional Commissioner or the District Magistrate (DM) - and not detention ordered by police based on specific allegations or for a specific violation of law.
- » Under the NSA, an individual can be detained without charge for upto 12 months (advisory board made of high court judges have to approve detention beyond 3 months); the state government needs to be intimated that a person has been detained under the NSA.
 - The person can be detained under the NSA for upto 10 days without being told the charges against them.
 - » The detained person can appeal before the high court advisory board, but they are not allowed a lawyer during the trial.

- **Various Preventive Detention Laws under state governments**

- » Various state governments have their own Goondas Acts which provide for preventive detention for maintenance of public order, supply of essential commodities etc.

- **Criticism of the Preventive Detention laws** (violation of rights (human, constitutional and statutory); misuse; political tool; used regularly rather than in exceptional cases; violates separation of power; against the grain of fair trial; No Records with NCRB)

- **Arguments in support of Preventive Detention laws** (Necessary evil; reforms can reduce the misuse; Constitution allows reasonable restrictions on the ground of national security and public order)

- In July 2023, the Supreme Court emphasized on the importance of strictly adhering to procedural requirements in cases concerning preventive detention laws.
 - » The court recognized that "All laws on preventive detention are necessarily harsh. They curtail personal liberty of an individual, who is kept behind bars without any trial. In such cases, procedure is all a detenue has. Laws of preventive detention must therefore be strictly complied".

3. PLACES OF WORSHIP (SPECIAL PROVISIONS) ACT, 1991

- Why in news?
 - » A slew of petitions have been filed in the Supreme Court against the act, contending that the law has barred Hindus, Jains, Buddhists, and Sikhs, from approaching courts to "re-claim" their places of worship which were "invaded" and "encroached" upon by fundamentalist barbaric invaders".
- The act prohibits conversion of any place of worship and provides for maintenance of religious character of any place of worship as it existed on 15th Aug 1947.
 - » Section 3 of the act declares that no person shall convert any place of worship of any religious denomination into one of different religious denomination or sect.
 - » Section 4(1) provides that religious character of a place of worship shall continue to be the same as it was on 15th Aug, 1947.
 - » Section 4(2) provides that all pending suits, appeals or other proceedings regarding conversion of the character of a place of worship existing on 15th Aug 1947, will stand abated when the act commences, and no fresh proceedings shall be filed.
 - But legal proceedings can be initiated with respect to the conversion of the religious character of any place of worship if the change of status took place after 15th Aug 1947.
 - » Exemptions:
 - Section 4(3)(a) further exempts from the operation of the act, any place of worship which is an ancient and historical monument or an archeological site or remains covered by Ancient Monuments and Archeological Sites and Remains Act, 1958.
 - The act will also not apply to any suit that has been finally settled or disposed of, any dispute that has been settled by the parties before the 1991 Act came into force, or to conversion of any place that took place by acquiescence.
 - Section 5 of the Act particularly exempts the Ram Janmabhoomi from its application.
- Ayodhya Judgment, 2019:
 - » A five-judge bench of the Supreme Court had found that the 1991 Act spoke to our history and to the future of the nation... In preserving the character of places of public worship, the Parliament has mandated in no uncertain terms that history and its wrong shall not be used as instruments to oppress the present and the future.
 - » But, in an Oct 2022 hearing, Solicitor General Tushar Mehta, who appeared for the government, had however, ventured his personal opinion that the remarks made in the Ayodhya Judgment about the 1991 act wouldn't preclude the court from examining the validity of the statute now.

- **Supreme Court in July 2023:**
 - » The Supreme Court gave the Centre "sufficient time" till 31st Oct to clarify its stand on the validity of the Places of Worship Act.
 - Solicitor General Tushar Mehta had said that the government required "a little more time to make its mind about the law. Earlier in 2022 and 2023 also government took a similar stance of seeking more time to make up its mind.
- **Analysis:** Arguments supporting the act:
 - » Prevent future communal tensions.
- **Various Grounds on which act is being challenged:**
 - a. The act creates a statutory bar against judicial remedy:
 - The act legitimizes historical forcible occupation of places of worship.
 - b. Abatement of Pending Proceedings:
 - Not only does the act obstructs aggrieved persons/ communities from taking recourse to legal remedies, it goes a step ahead by taking away pre-existing rights/ remedies of persons, who had already taken legal recourse to the injustice caused to them.
 - c. Arbitrary and Irrational Cut-off date:
 - The petitioners have argued that destruction/occupation of their religious places of worship has taken place over a period of centuries, which has no nexus with the cut-off date of Aug 15, 1947.
 - d. Discrimination Qua Exception:
 - The law is violative of Article 14, as it put worshipper of one deity (Lord Rama) on a higher pedestal than other Hindus who worship other deities.
 - e. "Pilgrimages, other than pilgrimages to places outside India" is mentioned in the state list.

A) GYANVAPI MOSQUE CASE

- A suit was filed in 2022 in the Varanasi district court by a group of Hindu women worshippers seeking to assert their right to worship deities they claim are still found on the premises of the Gyanvapi mosque.
 - » The plaintiffs say that they have a right to worship Ma Sringar Gauri, Ganesh, Hanuman, and other "visible and invisible" deities.
- Another batch of suits filed in 1991 seeking a declaration that a part of the site of the Gyanvapi mosque belongs to Lord Vishweshwar.
 - » The main basis for the suits is that the Hindu side says that an old temple of Lord Vishweshwar lies at the centre of the Gyanvapi compound. The site, they contend, is the abode of the 'self-manifested' deity since time immemorial. They claim that the temple was demolished on the orders of Aurangzeb in 1669.
- **Courts:**
 - » So far, court orders have favoured the position that these suits are not barred by the Places of Worship Act.
 - On the district court's order, the ASI has conducted a survey of the premises.
 - The ASI report, submitted to the Varanasi District Court, claims that a temple existed there prior to the construction of the mosque. Subsequently, the court has allowed the conduct of Hindu prayers at a cellar on the premises. The order allowing Hindu prayers

has been questioned by the Anjuman Intezamia Masjid Committee, which administers the Gyanvapi mosque.

B) SHAHI IDGAH OF MATHURA

- The suits in Mathura pertains to the Shahi Idgah mosque that stands adjacent to the Krishna Janmabhoomi Temple there. The suits claims that the mosque was built over the birthplace of Lord Krishna. The mosque committee denies the allegation.
 - The dispute was settled through a compromise between the Sri Krishna Janmasthan Seva Sansthan and the Shahi Idgah Trust in 1968 and implemented through a decree in 1974. As part of the settlement the Sansthan had given up a portion of the land to Idgah.
- The current suits challenge this compromise as 'fraudulent' and seek the transfer of the entire parcel of land to the deity.
- The Allahabad High Court has transferred to itself all suits pertaining to the Mathura dispute.

C) WHY HAS THE PLACES OF WORSHIP (SPECIAL PROVISIONS) ACT, 1991 NOT BARRED SUITS ON GYANVAPI AND SHAHI IDGAH

- In both the disputes, the respective mosque committees had opposed the suits using the provisions of Places of Worship (Special Provisions) Act, 1991. However, the court orders so far say the Act doesn't bar these suits and that they must go on.
- In the Gyanvapi case, the ruling is that the suits aimed to assert the right of worship of Hindu deities and didn't seek to convert the status of the mosque.
 - » Regarding the earlier batch of suits, the Allahabad High Court has taken the view that the Act doesn't define the term 'religious character'. A structure can't have the dual character of being both Hindu and Muslim, and that only an examination of evidence can determine its religious character. The act can't be an absolute bar on proceedings to ascertain its religious character.
- Regarding Mathura Dispute:
 - » The district court has taken the view that the suits are not barred by the Places of Worship Act, as what is under challenge is the compromise decree based on the 1968 agreement. As the decree was drawn up before the commencement of the 1991 act, it is not applicable in the case.

4. BHARTIYA NYAYA (SECOND) SANHITA, 2023 (BNS2)

- Why in news?
 - Bhartiya Nyaya Sanhita, 2023; Bhartiya Nagarik Suraksha Sanhita 2023; and Bhartiya Sakshya Adhiniyam, 2023 passed by both houses of the Parliament (2023)

- **Background: Indian Penal Code (IPC), 1860:** It is the principal law on criminal offence in India. It includes offences those affect:
 - (i) Human Body such as assault and murder.
 - (ii) Property such as extortion and theft.
 - (iii) Public Order such as unlawful assembly and rioting.
 - (iv) Public health, safety, decency, morality, and religion
 - (v) defamation
 - (vi) offences against state
 - **Over the years**, several new offences have been added. Courts have also decriminalized several offences such as homosexuality, adultery, attempt to suicide.
 - **Several states** have amended the IPC to provide different punishments for sexual offences, selling minors for prostitution, adulteration of food and drugs and sacrilege of religious texts.
- **Bhartiya Nyaya Sanhita (BNS)** was introduced on 11th Aug 2023. It was examined by the Standing Committee on Home Affairs. The BNS2 was introduced in Dec 2023 to incorporate some recommendations of the standing committee.
- **Bhartiya Nyaya (second) Sanhita, 2023 (BNS2, 2023): Key Highlights**
 - **Offences against body:**
 - The IPC criminalizes acts such as murder, abetment of suicide, assault, and causing grievous hurt.
 - **The BNS2 retains these provisions.** It adds new offences such as:
 - **Terrorism** is defined as an act that intends to threaten the unity, integrity, security or economic security of the country, or strike terror in the people.
 - Earlier, terrorism was covered under UAPA, 1967.
 - **Organized Crimes** includes crimes such as kidnapping, extortion, and cyber-crime committed on behalf of a crime syndicate. Petty organized crime is also an offence now.
 - So far, Organized crime is covered under state laws such as the **Maharashtra Control of Organized Crime Act, 1999 (MCOCA)**, and similar laws enacted by Karnataka, Gujarat, Uttar Pradesh, Haryana and Rajasthan.
 - **Significance:** Since the organized crimes may occur in all states, so addition of organized crime under BNS2 makes sense.
 - **Concerns:**
 - Duplication with several state laws.
 - Bhartiya Nagarika Suraksha (Second) Sanhita, 2023 (BNSS2) and Bhartiya Sakshya (Second) Sanhita (BSS2) don't provide for a separate criminal procedure for these offences.
 - **But, special laws like UAPA have several departures** from ordinary criminal procedure. The remove several safeguards such as condition of bail and the establishment of police confessions. NIA Act 2008 establishes special courts for terrorism cases.
 - **Under BNSS2**, case of terrorism will be tried in session courts. This will result in varying investigation and trial procedure for similar offences.

- **Mob Lynching:** The BNS2 adds murder or grievous hurt by five or more people on specified grounds, as an offence. These grounds include race, caste, sex, language, or personal belief.
 - **Sexual Offences against women:**
 - The IPC criminalizes acts such as rape, voyeurism, stalking, and insulting the modesty of a woman.
 - **BNS2 retains these provisions.** It increases the threshold for the victim to be classified as a major, in the case of a gangrape, from 16 to 18 years of age. It also criminalizes sexual intercourse with a woman by deceitful means or making false promises.
 - **Sedition is no more an offence.**
 - **BNS2 instead penalizes the following:**
 - (i) exciting or attempting to excite secession, armed rebellion, or subversive activities,
 - (ii) encouraging feelings of separatist activities, or
 - (iii) endangering the sovereignty or unity and integrity of India.
 - These offences may involve exchange of words or signs, electronic communication, or use of financial means.
 - **Rulings of the Supreme Court** have been incorporated and several offences have been omitted. It includes adultery, homosexuality etc. as offence.
 - It introduces **community service** as a form of Punishment in offences such as: (i) theft of property worth less than Rs 5,000, (ii) attempt to commit suicide with the intent to restrain a public servant, and (iii) appearing in a public place intoxicated and causing annoyance.
 - **Concern:** The BNS2 doesn't define what community service will entail and how it will be administered. The Standing committee had recommended defining the term and nature of 'community service'.
- **Key Issues:**
- a. **Age of Criminal Responsibility higher than several other jurisdictions:**
 - Under IPC, nothing is considered an offence if committed by a child below the age of 7 years. The age of criminal responsibility increases to 12 years, if the child is found to not have attained the ability to understand the nature and consequence of his conduct.
 - The BNS2 retains these provisions. This age is lower than the age of criminal responsibility in other countries (Germany: 14 years; England and Wales: 10 years; Scotland: 12 years). In 2007, a UN Committee recommended states to set the age of criminal responsibility to above 12 years.
 - b. **Age threshold of the victim for similar offences against children varies:**
 - For rape, the penalty is different based on whether the victim's age is below 12 years, between 12 and 16 years, or above. This is inconsistent with POCSO, 2012, which classifies all individuals below the age of 18 as minor.
 - Under BNS2, age threshold of the victim for certain offences against children is not 18 years.
 - For e.g. Kidnapping or abducting a child with the intent to steal from a parent applies only to a child under 10 years.

- It means that if a child of age 11 years or above is kidnapped, it would be treated as kidnapping of adult.

c. **Duplication of offences with other special laws:**

- This overlap may cause additional compliance burden and costs. It may also lead to multiple laws providing varying penalties for the same offences; it may also lead to multiple regulatory regimes.

BNS2	Special Law
<i>Adulteration of food or drink for sale</i>	
Imprisonment up to 6 months, fine up to Rs 5,000, or both. Non-Cognizable, bailable. (IPC Sec. 272, 273; BNS2 Clause 274, 275)	The Food Safety and Security Act, 2006: Imprisonment up to life, and a fine up to Rs 10 lakh for manufacture, storage, sale of unsafe food. Sentence proportionate to damage caused. (Sec. 59)
<i>Adulteration of drugs, and sale of adulterated drugs</i>	
Adulteration penalised with imprisonment up to a year, fine up to Rs 5,000, or both. Sale of adulterated drugs penalised with imprisonment up to 6 months, fine up to Rs 5,000 or both. Non-Cognizable, bailable. (IPC Sec. 274, 275; BNS2 Clause 276, 277)	The Drugs and Cosmetics Act, 1940: Consumption of adulterated drugs causing death or grievous hurt penalised with imprisonment between 10 years and life, and fine of at least Rs 10 lakh, or 3 times the value of the seized drugs, whichever is higher. In other cases, penalty is imprisonment of 3-5 years, and fine of at least Rs 1 lakh, or 3 times the value of the seized drugs, whichever is more. (Sec. 27)
<i>Unlawful compulsory labour</i>	
Imprisonment up to one year, fine, or both. Cognizable, Bailable. (IPC Sec. 374; BNS2 Clause 146)	The Bonded Labour System (Abolition) Act, 1976: Imprisonment up to 3 years and fine up to Rs 2,000. (Sec. 16, 17, 18).
<i>Abandoning a child</i>	
Parent or guardian abandoning a child below the age of 12 is punishable with imprisonment up to 7 years, fine, or both. Cognizable, bailable. (IPC Sec. 317; BNS2 Clause 93)	The Juvenile Justice Act, 2015: Abandoning or procuring a child for abandonment is punishable with imprisonment up to 3 years, fine up to Rs 1 lakh, or both. Biological parents abandoning a child due to circumstances beyond their control are exempt. (Sec. 75)

Punishable with imprisonment up to 6 months, fine up to Rs 1,000 or both.

Cognizable, bailable, non-compoundable. (*IPC Sec 279; BNS2 Clause 281*)

The Motor Vehicles Act, 1988: Punishment for first offence: imprisonment up to 6 months, and/or fine up to Rs 5,000.

Subsequent offence within three years: imprisonment up to 2 years and/or a fine up to Rs 10,000. Cognizable, bailable, compoundable. (*Sec. 184*)

d. **Penalty for a crime by member of a gang differs from that of an individual**

- The BNS2 defines **petty organized crime** as an offence. It includes: vehicle theft, pick-pocketing, selling of public examination papers, any other similar criminal acts. To qualify as petty organized crime such offence must be committed by members of a group or gang. This offence is penalized with imprisonment of one to 7 years, and a fine.
- **But, the penalty creates a distinction between the offence committed by a member of a gang and a person committing an offence on his own.**
 - For e.g., the penalty for a theft is upto 3 years imprisonment, whereas if the same is committed by a gang or group, the penalty is between 1 to 7 years of imprisonment.

e. **In the offence of Rape, several recommendations made by Justice Verma Committee and Supreme Court** has been ignored

f. **BNS2 retains the provisions for Solitary confinement** for offences that are penalized with rigorous imprisonment. Such offences include criminal conspiracy, sexual harassment, kidnapping or abducting to murder. The BNS2 retains these provisions.

- **But, Supreme Court** (1979) has held that measures such as pushing prisoners into solitary confinement deprives them of their right to life and liberty under Article 21.
- **In 1971**, even Law Commission of India recommended removing solitary confinement from the IPC.

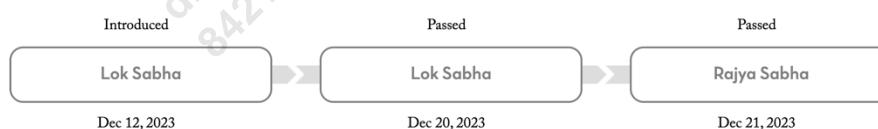
g. **Some Drafting Issues:**

- For e.g. BNS2 doesn't retain section 377. This implies that rape of an adult man will not be an offence under any law, neither will having intercourse with an animal. The standing committee of Home Affairs (2023) has recommended re-introducing this provision.

5. BHARTIYA NAGRIK SURAKSHA (SECOND) SANHITA, 2023 (BNSS2, 2023)

- **Why in news?**

Ministry: Home Affairs



- **Background:**

- The Code of Criminal Procedure, 1973 (CrPC) is a procedural law established for the administration of the Indian Penal Code (IPC). It governs the procedure for investigation, arrest, prosecution, and bail for offences.
- CrPC was first brought in 1861 to address the problem of multiplicity of legal system in India. The existing CrPC was introduced in 1973 to replace the previous one. It introduced the concept

of anticipatory bail. It was amended in 2005 to add changes such as provisions for plea bargaining and rights of arrested persons.

- **CrPC governs the procedural aspects of criminal justice in India.** The key features include:
 - **Separation of Offences:** The CrPC classifies offences into **two categories**:
 1. **Cognizable offences** are those in which police can arrest and initiate an investigation without a warrant.
 2. **Non-Cognizable** offences require a warrant and, in some cases, a complaint by the victim or a third party.
 - **Nature of Offence:** CrPC dealt with various types of offence including traffic violation to murder.
 - **Bailable and non-bailable offence:** Bailable offence are those in which the accused has the right to bail from police custody.
- **The BNSS, 2023** was introduced in Lok Sabha in Aug 2023. The bill was examined by the Standing Committee on Home Affairs. **BNSS2** was introduced in Dec 2023 after incorporating some recommendations of the committee.
- **The BNSS2 retains most of the provisions of CrPC:** Key changes proposed include:
 - » **Detention of Undertrials:**
 - **CrPC** says that if an accused has spent half of his maximum period of imprisonment in detention, he must be released on personal bond. This doesn't apply to offences punishable by death.
 - **The BNSS2** retains the above provision and adds:
 - **First time offenders**, get bail after serving one-third of the maximum sentence.
 - **The BNSS2** also adds that provisions will also not apply to:
 - (i) Offences punishable by life imprisonment and (ii) Person against whom proceedings are pending in more than one offence.
 - » **Medical Examination:**
 - **CrPC** allows medical examination of the accused in certain cases, including rape cases. This medical examination can only be done after request from at least a sub-inspector level police officer.
 - **The BNSS2** provides that any police officer can request such examination.
 - » **Forensic Investigation:** The BNSS2 mandates forensic investigation for offences punishable with seven years' imprisonment or more.
 - Forensic experts will visit crime scenes to collect forensic evidence and video record the process.
 - » **Signature and Finger Impressions:** The **CrPC empowers a Magistrate** to order any person to provide specimen signature or handwriting.
 - **BNSS2** expands this to include finger impressions and voice samples. It allows these samples to be collected from a person who hasn't been arrested.
 - » **Timeliness for Procedure:** The BNSS2 prescribes timelines for various procedures.
 - For instance, it acquires medical practitioners who examine rape victims to submit their reports to the investigating officer within 7 days.

- Other specified timelines include: (i) giving judgement within 30 days of completion of arguments (extendable upto 45 days), (ii) informing the victim of progress of investigation within 90 days, (iii) framing of charges by a sessions court within 60 days from the first hearing on such charges.
- » All trials, inquiries, and proceedings may be held in electronic mode. Production of electronic communication devices, likely to contain digital evidence, will be allowed for investigation, inquiry, or trial.
- » If a proclaimed offender has absconded to evade trial and there is no immediate prospect of arresting him, the trial can be conducted, and judgement pronounced in his absence.
- » **Hierarchy of Courts:**
 - The CrPC establishes a hierarchy of courts for the adjudication of criminal matters in India.
 - These include: (i) **Magistrate's Courts**: subordinate courts responsible for the trial of most criminal cases, (ii) **Sessions Courts**: Presided over by sessions judge and hear appeals from Magistrate's courts (iii) **High Courts**: They have inherent jurisdiction to hear and decide criminal cases and appeals, and (iv) **Supreme Court**: Hear appeals from High Courts and also exercise its original jurisdiction in certain matters.
 - The CrPC empowers the state governments to notify any city or town with a population of more than 1 million as a **metropolitan area**. Such areas have **Metropolitan magistrate**. The BNSS2 removes the classification of metropolitan areas and **Metropolitan magistrate**.

6. BHARTIYA SAKSHYA ADHINIYAM, 2023 (BHARTIYA SAKSHYA (SECOND), BILL, 2023)

- **Background:**
 - » The Indian Evidence Act, 1872 (IEA) governs the admissibility of evidence in Indian Courts. It applies to all civil and criminal proceedings.
 - » With changing times and technology, IEA has been regularly amended. For e.g. In 2000, the IEA was amended to provide for the admissibility of electronics records as secondary evidence. In 2013, it was amended to add provisions related to consent in case of rape. It shifted the onus on accused to prove that consent was given and added that the character of the victim and sexual history will not be relevant when determining consent.
- **Bhartiya Sakshya Adhiniyam, 2023:**
 - » It retains most of the provisions of IEA. These include:
 - i. **Admissible Evidence**: Parties in a legal proceeding can only present admissible evidence. Admissible evidence can be classified as either 'facts in issue' or 'relevant facts'.
 - IEA provides for two kinds of evidence - documentary and oral evidence.
 - ii. **Police Confessions**: Any confession made to a police officer is inadmissible. Confessions made in police custody are also inadmissible, unless recorded by a Magistrate. However, if a fact is discovered as a result of information received from an accused in custody, that information may be admitted if it distinctly relates to the fact discovered.

» Key changes made by BSA, 2023 include:

i. Documentary Evidence:

- Under the IEA, a document includes writings, maps, and caricatures.
- The BSA, 2023 adds that electronic records will be considered as documents.

ii. Oral Evidence:

- Under the IEA, oral evidence includes statements made before Courts, by witnesses in relation to a fact under inquiry.
- BSA, 2023 allows oral evidence to be given electronically. This would permit witnesses, accused persons, and victims to testify through electronic means.

iii. Admissibility of Electronic or digital records as evidence: Documentary evidence includes information in electronics records that have been printed or stored in optical or magnetic media produced by a computer.

- BSA (or BSB2) provides that electronic or digital records will have the same legal effect as paper records.

iv. Secondary Evidence: The BSA, 2023 expands secondary evidence to include: (i) Oral and Written Admissions, and (ii) the testimony of a person who has examined the document and is skilled to examine the documents.

v. Joint Trials: A joint trial refers to the trial of more than one person for the same offence.

- The IEA states that in a joint trial, if a confession made by one of the accused which also affects other accused is proven, it will be treated as a confession against both.
- The BSA adds an explanation to this provision. It states that a trial of multiple persons, where an accused has absconded or has not responded to an arrest warrant, will be treated as a joint trial.

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2. FUNDAMENTAL DUTIES CONTINUES:

1) RIGHT AGAINST SELF-INCRIMINATION/ RIGHT TO SILENCE

- The right against self-incrimination includes the right to refuse to take the witness stand and the right to refuse to answer an incriminatory question.
- Under Constitution of India, the right against self-incrimination is provided under **Article 20 (3)**. It says that no person accused of any offence shall be compelled to be witness against herself.
 - » The above protection extends to both oral evidence and documentary evidence.
 - » However, it doesn't extend to:
 - Compulsory production of material objects.
 - Compulsion to give thumb impression, blood samples etc.;
 - compulsory exhibition of the body.
 - Further, it extends only to criminal offences and not to civil proceedings or proceeding which are not of criminal nature.
 - » **Note:**
 - The right to be presumed innocent until proven guilty, and the right to remain silent in an interrogation essentially flow from this constitutionally guaranteed right against self-incrimination. The right also ensures that police can't coerce anyone to confess to a crime, and obtain a conviction based on that offence.
 - Since the onus of proving the case against the accused beyond reasonable doubt is on the state, a person can't be compelled to testify against himself or share information that might go against him in trial.
- **Supreme Court Verdicts:**
 - » **The State of Bombay vs Kathi Kalu Oghad, 1961**: In this case, an 11 judge bench of the SC ruled that obtaining photographs, fingerprints, signatures, and thumb impressions wouldn't violate the right against self-incrimination of an accused. The court distinguished "to be a witness" from "furnishing evidence".
 - » **Selvi vs State of Karnataka, 2010**: Here, the SC ruled that a narcoanalysis test without the consent of the accused would amount to violation of the right against self-incrimination.
 - However, obtaining a DNA sample from the accused is permitted. If an accused refuse to give a sample, the court can draw adverse inference against him under section 114 of the Evidence Act.
 - » **Ritesh Sinha vs State of Uttar Pradesh, 2019**: The SC broadened the parameters of handwriting samples to include voice samples, adding that this would not violate right against self-incrimination.
- **All accused have a right to silence and investigators can't force them to speak up or admit guilt:** Supreme Court (July 2023)
 - » The Constitution accords every person a right against self incrimination.
 - » "**Cooperation**" with an investigation can't mean "confession", and thus the investigation agency can't make out a case against the accused just because they choose to remain silent.

3. DPSPS

1) UNIFORM CIVIL CODE

- **Why in news?**
 - The 22nd Law Commission of India on Wednesday sought fresh suggestions from various stakeholders, including public and religious organizations, on the Uniform Civil Code (June 2023)
- Uniform Civil Code means **same law for every citizen of the country** in civil matters such as marriage & divorce, succession & inheritance; Minority & Guardianship; and adoption & maintenance.
 - » It doesn't only mean same law (or equality before law) between different communities, but also within the communities (i.e. between men, women, transgenders etc.)
- Article 44, of the Constitution of India declares that the state shall endeavor to secure the citizens a Uniform Civil Code.
 - » Further Article 37 of the constitution states that "the principles laid down under DPSP are fundamental in the governance of the country and it shall be the duty of the state to apply these principles in making laws".
- At the time of independence, **UCC was only accommodated as a DPSP** due to communal disharmony and resistance to remove personal laws against the backdrop of partition.
 - » There was a need to placate every community by providing that their way living was not endangered in India.
- **Need of Uniform Civil Code**
 - » **National Integration**
 - » **Absence of UCC can be seen as Violation of Fundamental Right to Equality**
 - » Different civil laws complicates the legal system and leads to more delays.
 - » **Opportunity to reform personal laws**
 - » **Supreme has supported introduction of UCC in a number of rulings:**
- **Why India has not been able to implement UCC yet.**
 - » **Lack of understanding of UCC among people:**
 - » **Diversity of personal practices in India**
 - » **Contradictory Provisions of the Constitution (UCC vs other provisions of the Constitution)**
 - The **sixth schedule of the Constitution** was added for the administration of tribal areas in **Assam, Meghalaya, Tripura and Mizoram** and confers powers on district councils and Regional Councils in those states to make laws with respect to inheritance, marriage, divorce and social customs.
 - **Special Provisions** (Article 371A for Nagaland, 371F for Sikkim, and 371G for Mizoram provide special provisions protecting the religious or social practices and customary laws.
 - » **Various laws allow for diversity in Civil Code:**
 - For e.g. PESA Act, 1996; the Chota Nagpur Tenancy Act, 1908; and the Santhal Parganas Tenancy Act, 1876, recognize various customary practices among tribals. This is also protected under 5th schedule of the Constitution.
- **Some criticisms of UCC**
 - » **'United' Nation does not mean uniformity.**
 - » **Secularism cannot contradict the plurality prevalent in the country**
 - » **Society is not ready.**

2) UTTARAKHAND UCC

- **Why in news?**
 - » President approves Uttarakhand's UCC Bill (March 2024)
- **Process of passage of the UCC:**
 - » UCC was a poll promise made by then CM of UK Dhami in case of re-election. UK government had formed an expert committee (headed by Retd Justice Ranjana Prakash Desai) in June 2022, to examine the way UCC can be introduced in the state. This committee submitted its report in Feb 2024 and within a few days the state assembly passed the bill. The bill approved by the Governor and was then sent to President. This is because UCC is a matter of concurrent list and thus requires approval of the President. President has given its approval in March 2024.
 - » With this, Uttarakhand has become the first state in independent India to have a Uniform Civil Code (UCC).
 - » Government has already formed a committee to make rules and implementation of UCC which is headed by retired IAS officer and UCC draft committee member Shatruघan Singh.
- **Key Highlights:**
 - » The bill has kept tribal out of its ambit.
 - » It has complete ban on practices like, Polygamy, Polyandry, halala, Iddat and Talaq as both men and women will have same rights in matters related to marriage and divorce.
 - » It also allows marriages to be solemnized only between a man and a woman. The age of marriage has been set at 21 years for boys and 18 years for girl.
 - » It also makes it mandatory to register marriage and divorce, failing which the couple concerned will be deprived of the benefits of all government facilities.
 - But, no marriage shall be deemed to be invalid solely because it was not registered or details mentioned in the memorandum were defective, irregular, or incorrect.
 - All marriages after 26th March 2010, would have to be registered in the state within a period of six months.
 - » **Child Custody:** In case of divorce or domestic dispute between husband and wife, the custody of the child upto 5 years of age will remain with the mother.
 - » **Provisions related to live-in relationship:**
 - **Mandatory Registration of Live-in relations:** Stringent provisions for failures to register live-in relations which calls for imprisonment upto three months and a fine not exceeding Rs 25,000 or both.
 - The live-in status registration will be required if such couples want to rent or buy property in the hill state.
 - **The child born out of live-in relationship** will be considered a legitimate child of the couple under UCC and will have all legal rights applicable to children born out of a marriage.
 - **If a women gets deserted** by her live-in partner, she shall be entitled to claim maintenance.
 - **Termination of relationship** also needs to be intimated in format prescribed by government.
 - » **Equal Rights to Property** have been given to sons and daughters for all classes.
 - » **No distinction between legitimate and illegitimate child, adopted child, child born through surrogacy and children born through assisted reproductive technology**.

» After the death of a person, his wife and children are given equal rights in his property along with the deceased's parents.

- **Analysis: Criticism:**

» Doesn't deal with adoption, maintenance and guardianship (though it provides for maintenance during matrimonial dispute).

4. BASIC STRUCTURE

- **Why in news?**

» 50 years of basic structure doctrine: The verdict was given on 24th April 1973 (April 2023)
» Vice-President Jagdeep Dhankar has criticized the Supreme Court for using Basic Structure Doctrine to strike down constitutional amendments by Parliament, such as the NJAC Act. (April 2023)

- **What is the Basic Structure Doctrine?**

» The Basic structure doctrine is a judicial innovation of the Constitution of India which puts a limitation on the amending powers of the Parliament. It says that the Constitution has some 'Basic Features' that can't be altered or destroyed by amendments by Parliament. .

- **Evolution of the Basic Structure Doctrine - Keshavnand Bharti Case and Minerva Mill Case**

» The extent of amending powers exercised by Parliament became a cause of adjudication from the very first Constitutional Amendment Act (1951) which curtailed the Right to Property (which was a fundamental right then).

» In **Shankari Prasad case** (1951) the SC held (6/11 majority) that the powers of Parliament to amend the Constitution under Article 368 of the Constitution includes the power to amend Fundamental Rights and that the word 'law' in Article 13 of the Constitution includes only ordinary laws and not the Constitutional Amendment Acts. Thus, the Parliament can take away any of the fundamental rights by Constitutional Amendment.

» However, in **Golak Nath case** (1967), the Supreme Court reversed its earlier stand and held "the Fundamental Rights are given a transcendental and immutable' position and hence Parliament can't abridge or take away any of these rights. It also held that a CAA is also law within the meaning of Article 13 of the Constitution and hence would be void for violating Fundamental Rights.

» **The Parliament sought** to supersede the Golakhnath judgement by amending Article 368 itself through 24th CAA, 1971.

▫ The amendment said that an amendment under Article 368 will not be considered a law within the meaning of Article 13 of the Constitution and the CAA can't be challenge on the ground that it affects a fundamental Right.

» **In Keshavananda vs State of Kerala 1973**, the Supreme Court upheld the 24th CAA.

▫ Thus, the question of amendability of the Fundamental Rights have been settled i.e. a CAA can amend fundamental rights in India and a CAA will not be considered law under the meaning of Article 13 of the Constitution.

- However, the Constitutional Bench (largest ever - 13 judges) also held that there are certain basic features of the Constitution of India, which can't be modified by an amendment under Article 368 of the Constitution of India.
 - These basic features include (without being exhaustive) - sovereignty and territorial integrity of India, the federal system, judicial review, Parliamentary system of government etc.
- Using the doctrine of the 'Basic feature of the Constitution', the Apex court declared second part of the section 3 of 25th CAA as unconstitutional as it limited the powers of Judicial review which is one of the basic features of the Constitution.
- Through 42nd CAA, the Parliament tried to remove any limitation on its power of amendment by adding that there is no limitation on the constituent power of the Parliament and no amendment can be questioned in any court on any ground including that of the contravention of any FR.
- However, the Supreme Court in the **Minerva Mills case** invalidated the above amendment as it excluded Judicial review which is one of the basic features of the Constitution.
 - » The Court held "*Since the Constitution had conferred a limited amending power on the Parliament, the Parliament cannot under the exercise of that limited power enlarge that very power into an absolute power. Indeed a limited amending power is one of the basic features of the Constitution and, therefore, the limitations on that power cannot be destroyed*"

- **Elements of the Basic Structure**

- So far, Supreme Court has not defined an exhaustive list of the Basic structure doctrine. But from various judgments we can enumerate following features as part of basic features of the Constitution of India
 - Supremacy of the Constitution; Sovereign, Democratic and Republican nature of the Indian Polity; Secular character of the Constitution of India; Separation of Power; Federal Character of the Constitution of India, Unity and Integrity of the nation; Welfare State; Judicial Review; Freedom and Dignity of the individual; Parliamentary System; Rule of Law; Principle of Equality; Free and Fair Elections; Independence of Judiciary etc.

- **Other important Supreme Court Verdicts which expanded the Basic Structure Doctrine:**

- » **Indira Gandhi vs Raj Narain 1975:** The Basic structure doctrine was used for the first time to strike down 39th Constitutional amendment Act (1975) provision that barred court's jurisdiction over election disputes.
- » **Kihoto Hollohan vs Zachillhu (1992):** Free and Fair Elections
- » **Indira Sawhney vs Union of India, 1992:** Rule of Law
- » **Bommai Case (1994):** Democracy, Federalism, and Secularism.
- » **M Nagraj Case (2006):** Equality
- » **Coelho Case (2007):** Judicial Review
- » **NJAC Case (2015):** Judicial Independence

5. THE UNION (EXECUTIVE AND LEGISLATURE)

1) PRESIDENT

- **Why in news?**
 - » The 2022 Indian Presidential Election was the 16th Presidential election in India held on 18th July 2022 to elect President of India. BJP candidate Droupadi Murmu won the election by a margin of 296, 626 votes against Yashwant Sinha, the United Opposition candidate (July 2022)
 - **Note:** Droupadi Murmu is the first member of a Scheduled Tribe and only the second women to become President of India, as well as the first President of India who was born after Independence.
 - **Introduction:**
 - » President of India is the head of the Union Executive.
 - **Constitutional Provisions:**
 - » **Article 52:** There shall be a President of India.
 - » **Article 53:**
 - (1)The executive power of the Union of India shall be vested in the President and shall be exercised by him either directly or through officers subordinate to him in accordance with the Constitution
 - (2) The Supreme Command of the Defence Forces of the Union shall be vested in the President and the exercise thereof shall be regulated by law.
 - » **Article 54: Election of President**
 - The President shall be elected by the members of an electoral college consisting of the elected members of both Houses of Parliament; and the elected members of the Legislative Assemblies of the States.
 - » **Article 62(1):** An election to fill a vacancy caused by the expiration of the term of office of President shall be completed before the expiration of the term.
 - **Election of the President: Details**
 - President of India is elected by indirect election, i.e., by an electoral college, in accordance with the system of proportional representation by means of the single transferable vote and the voting is by absolute majority.
 - As per Article **54** of the Constitution of India, the President is elected by an electoral college consisting of elected MPs of both houses of Parliament and elected MLAs of the states and Delhi and Puducherry.
- | | |
|----------------|--|
| Note-1: | <p>Wherever an assembly is dissolved, the <u>members cease to be qualified to vote in presidential election</u>, even if fresh elections to the dissolved assembly are not held before the presidential election.</p> |
| Note-2: | <p>The nominated members of both the houses of Parliament, the nominated members of the state legislative assemblies, <u>the members (both elected and nominated)</u> of the state legislative councils (in case of bicameral legislature) and the nominated members of the legislative Assemblies of Puducherry <u>don't participate in the election of the President</u>.</p> |
- **Value of Votes of MLAs and MPs:**

- » Article 55: As far as practicable, there shall be uniformity of representation of the different states at the election, according to the population and the total number of elected members of the legislative assembly of each state, and parity shall also be maintained between the States as a whole and the Union.
- » To achieve this "uniformity" and "parity" the number of votes of each MLA and MP is determined as follows:
 - **Votes of each MLA:** (Total Population of State)/(Total number of elected MLAs in the state * 1000)
 - **Votes of Each MP:** (Total value of votes of all MLAs of all states)/Total number of elected members of Parliament:
 - **Electoral quota to win the elections:** [(Total number of valid votes polled)/2] + 1
- All doubts and disputes in connection with election of the President are inquired into and decided by the Supreme Court whose decision is final.

Note:	The <u>election of a person as President cannot be challenged</u> on the ground that the <u>electoral college was incomplete</u> (i.e. the existence of any vacancy among the members of electoral college). <u>If the election of a person as President is declared void by the Supreme Court, acts done by him before the date of such declaration of the Supreme Court are not invalidated and continue to remain in force.</u>
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- Why did India go for an Indirect form of election for the selection of President?
 - » It is in harmony with the Parliamentary form of government, where the President is only a nominal head, and the real powers are vested in the council of ministers.
 - » **Save time and cost:** Direct elections of the President would have used a lot of resources of the country. This was unwarranted considering that the president was only going to be the nominal political head.
- Why has role been given to MLAs (other than MPs) in the election of President -> Current system ensures that the President is a representative of the Union and the States equally.
- The term '**Proportional Representation**' is a misnomer and should be called 'preferential and alternative vote system'.

Note	Proportional representation takes place where two or more seats are to be filled. In case of President, the vacancy is only one. It could better be called a ' <u>preferential or alternative vote system</u> '.
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- **Qualification:** In order to be qualified for election as President, a person must:
 1. Be a citizen of India
 2. Have completed the age of 35 years
 3. Be qualified for election as a member of the House of People; and
 4. Must not hold any office of profit under the Gol or the Government of any state or under any local or other authority subject to the control of any of the said government.
- **Nomination Stage:** Before election comes the nomination stage, where the candidates intending to stand in the election, files the nomination along with a signed list of 50 proposers and 50 seconders.
 - These proposers can be anyone from the electoral college from the states or national level.
 - **Why?**

- The rule for securing 50 proposers and 50 seconders was implemented in 1974. It was because, several candidates, many without even a bleak chance of winning, would file their nomination to contest the polls.
- An elector cannot propose or second the nomination of more than one candidate.

2) PARLIAMENTARY SECRETARY

- **Who is a parliamentary secretary?**
 - A parliamentary secretary is a member of Parliament in the Westminster system, who assists a more senior minister with her duties. She often holds the rank of Minister of State and has the same entitlement as is assigned to a government department.
- **What are the main criticisms of the office of Parliamentary secretaries?**
 - These posts tend to violate some constitutional provisions
 - Office of Profit clause** (discussed in detail separately)
 - Cap on the number of ministers**.
 - **Article 164(1A)** (and Article 75(2) at central government level) specifies that the number of ministers including the chief minister has to be within 15% of the total number of members of the assembly.
 - This provision was included by the 91st constitutional amendment of Indian constitution on the recommendation of the National Commission for Review of the Working of the Constitution headed by former Chief Justice of India, M.N. Venkatchaliah on misuse and drainage of public money to put a ban on over-sized cabinet.
 - **Article 239AA** provides that in case of National Capital Territory of Delhi, the number of ministers should not exceed 10% of the total number of members in the assembly.

3) OFFICE OF PROFIT AND ASSOCIATED ISSUES

- **Why in news?**
 - » Governor CP Radhakrishnan said that Raj Bhavan is examining the Election Commission's report on an **Office of Profit case** against CM Hemant Soren over the extension of a stone mining lease to him. The Election Commission sent its recommendation in Aug 2022. (Dec 2023)
- Office of profit refers to those positions under the government which a member of parliament or legislative assembly should not be holding. The term originated in 18th century England, where no person holding an office or receiving any salary from the king was allowed to serve as a member of house of common.
 - » **The Constitution of India** (Article 102(1) and Article 191(1)) specifies holding of office of profit as one of the conditions which disqualify MPs, and MLAs from membership of their respective legislative institutions.
 - » The **essence of this provision** is that there should be no conflict between the duties and interests of an elected member.
 - » Articles 102 and 191 also clarify that a person holding office of minister will not be deemed to hold an office of profit.

- Article 192(2) says that Before giving any decision on any such question, the Governor shall obtain the opinion of the Election Commission and shall act according to such opinion.
- Which offices would be considered office of profit?
 - » 'Office of Profit' has not been defined under the constitution.
 - » Over the years following broad principles have evolved from various Supreme Court Judgments (Maulana Abdul Shakur vs Rikhab Chand (1958); Guru Gobind Basu vs Sankari Prasad Ghosal (1964); Pradyut Bordoloi vs Swapan Roy (2001)) to determine whether an office is office of profit or not:
 - Whether the government has the control over the appointment, removal or function of the holder of office.
 - Whether the government pay any remuneration.
 - Whether the office has government powers (releasing money, allotment of land, granting of licenses etc.)
 - Whether the body in which office is held wields influence or power by way of patronage.
 - **Note: Not all the conditions have to be satisfied at one go**
 - Supreme Court in various cases has held that all the above tests need not exist conjointly for determining whether an office is an office of profit under the government.
 - » In **Jaya Bachan vs. Union of India** case, the Supreme court said that if the pecuniary gain is receivable in connection with the office then it becomes an office of profit, irrespective of whether such pecuniary gain is actually received or not
 - » Similarly, in **Raman v. PTA Rahim, 2014**, the court had said that only posts that are capable of yielding pecuniary gains, as distinguished from compensatory allowances, would be offices of profit. Another important point decided in this case is that 'status', 'influence' etc of an office should not be taken into consideration while deciding the question of office of profit.
- Provisions for exemptions to office of profit rule:
 - » The Constitution specifies that Parliament and state Legislative Assemblies have the power to enact laws and keep certain offices out of the purview of the office of profit.
 - » **Parliament enacted a law in 1959** to specify offices that would not attract disqualification under the constitution. This law has been amended on several occasions. In 2006, it was amended to include the office of Chairperson of NAC and office of UPFDC, making them immune from disqualification.

4) RAJYA SABHA: SIGNIFICANCE AND ASSOCIATED ISSUES

- Details
 - » Rajya Sabha is the upper house of the bicameral Parliament of India. It is a permanent house and can't be dissolved. To ensure continuity, one-third of its members retire after every second year, under Article 83(1) of the Constitution, and "biennial elections" are held to fill these vacancies. The term of a member is six years.
 - » Out of 245 members:

- » **12** are nominated by the President and;
 - Under Article 80(3), the 12 nominated members should have special knowledge or practical experience in matters like literature, science, art etc.
 - A nominated member may join a party within six months of taking a seat.
- » **233** are representatives of the States and UTs of Delhi and Puducherry.

- **Significance of Rajya Sabha:**

- » **Institutionalize federal principle** of power sharing between Centre and States. It acts as safety valve within the legislature itself, easing federal tensions.
- » **Review and re-evaluation of the bills**
- » **Enhances deliberation.**
- » **Platform for nonpolitical talent and expertise:**
- » **Representation to Vulnerable Sections**
- » **Some Special powers to Rajya Sabha:**
 - Rajya Sabha can pass a resolution [with a majority of not less than 2/3rd of the members presents and voting] empowering the Parliament to make laws in the State List (Article 249) and to create one or more All India Services [Article 312]
 - In case the Lok Sabha is dissolved, and emergency is proclaimed, the proclamation remains valid if a resolution approving it is approved by the Rajya Sabha.

- **Elections of Rajya Sabha MPs:**

- As per Article 80(4) of the Constitution, members of Rajya Sabha are elected by indirect election by the elected members of the Legislative assembly of each state. Here the method of proportional representation by means of single transferable vote method is used.

- **Criticism of Rajya Sabha:**

- **No direct election** -> not directly accountable to the voters
- **No Equal Representation** to states
- **Money bill mechanism** is being misused to bypass Rajya Sabha
- It has become a placement mechanism for losing candidates.
- **Nominated members** haven't been generally very active.

5) SECRETARIAT OF PARLIAMENT

- **Constitutional Provisions:** Article 98 in the Constitution of India provides for Secretariat of Parliament.
 - » It says that each house of the Parliament shall have a separate secretariat staff and that Parliament may by law regulate the recruitment, and the conditions of service of persons appointed to these secretariats.
 - Clause (1) says that each house of the parliament shall have separate secretariat staff. It further adds that nothing in this clause shall be construed as preventing the creation of posts common to both Houses of Parliament.
 - Clause (2) provides that Parliament may by law regulate the recruitment, and the conditions of service of persons appointed, to the secretariat staff of either house of the Parliament.
 - Clause (3) provides that until provisions under clause (2) are made, President may after consultation with the Speaker of the Lok Sabha or the Chairman of the council of States, as

the case may be, make rules regulating the recruitment, and the conditions of services of persons appointed, to the secretariat staff of the House of the People or the Council of States, and any rules so made shall be subject to provisions of any law made under the said clause Conduct of Business.

» Note: Article 187 makes similar provisions for the Secretariat of State Legislatures.

- Significance of Separate Secretariat for Parliament

» Separate secretariat ensures independence of legislature from executive. It marks a feature of a functioning parliamentary democracy.

- Current Situation:

» Each House of Parliament has separate secretariat staff of its own, and there are some posts common to both the Houses.

» Recruitment and service conditions are regulated by Parliament.

» The Secretariat of each house is headed by Secretary General. He is a permanent officer and is appointed by the Presiding officer of the house.

» Speaker is assisted by Secretary-General, Lok Sabha in the discharge of her constitutional and statutory responsibilities and, Chairperson of Rajya Sabha is assisted by Secretary General, Rajya Sabha in her duties.

» Secretary General of Lok Sabha and Rajya Sabha have the same status, ranking, pay scale etc. as that of highest government officer (i.e. cabinet secretary).

» Secretary General also enjoys certain privileges such as freedom from arrest, immunity from criminal proceedings, and any other obstruction and breach of their rights.

- Key Issues in the functioning of Secretariat of Parliament

» Most of the Secretary Generals of Rajya Sabha have been parachuted from the Civil Services or other services from time to time.

» For e.g. the current Rajya Sabha Secretary General P.C. Mody is a retired IRS officer.

- This hampers the principle of Separation of Power (between legislature and Executive)
- Serving/retired civil servants come with long-held baggage and the clout of their past career.

» Secretary general should also have vast knowledge of parliamentary procedures, practices, and precedents. Most of the civil servants lack this aspect of expertise.

6) ANTI-DEFECTION LAW

- Why in news?

» Maharashtra assembly speaker Rahul Narwekar recognized the group led by chief minister Eknath Shinde as the "real Shiv Sena" and dismissed all the disqualification petition filed against 16 ruling MLAs (Jan 2024)

- The speaker was directed by the Supreme Court to decide on the matter.
- He also dismissed the Shinde faction's disqualification petition against 14 MLAs from the Uddhav camp.

- Introduction

- » *Aaya Ram Gaya Ram* was a phrase that became popular in Indian politics after a Haryana MLA Gaya Lal changed his party twice within the same day and then again within a fortnight in 1967.
 - » The **anti-defection law** sought to prevent such political defections which may be due to reward of office or other similar consideration and lead to **political instability** and **horse trading**.
 - » **Constitution (52nd Amendment) Act, 1985**, added the **10th Schedule** to Indian Constitution which lays down the process by which legislators may be disqualified on grounds of defection by the **Presiding officer of a legislature** based on a petition by any other member of the house. This law came into effect on 1st March 1985.
- **Key Provisions of the law:**
- » **A member incurs disqualification** under the anti-defection law if:
 - She **voluntary resigns / gives up membership** of the party on whose ticket she is elected to the house.
 - If she **votes/ abstains from voting** in the house against the direction given by the Political party.
 - If an **independent candidate** joins a political party after the election
 - If a **ominated member** joins a party **six months after** she becomes a member of the legislature.
 - » **Allowed Exceptions:**
 - In case at least 2/3rd legislators of a party in a house merge with or into another party, then neither members who decide to merge nor the ones who stay with the original party will face disqualification.
 - » The law also says that a **question of disqualification** under 10th schedule would be **decided by the Speaker or the Chairman of the House** and his decision in this regard would be **final**. It also **bars the jurisdiction of courts** in any matter connected with the disqualification of a member of House under this schedule.
 - Under Article 190(3) of the Constitution, the Speaker has to satisfy himself that the resignation are voluntary and genuine and can reject them if he feels they are not. The **speaker has absolute discretion on this**.
 - However, Supreme Court in **Kihoto Hollohan's case (1992)**, while analyzing the meaning of the word 'final' in the context of such clause said that it doesn't exclude court's intervention under articles 136, 226 and 227 of the constitution i.e. the decision of Speaker/Chairman is subject to judicial review.

- **Constitutional Validity of 10th Schedule**

- » The constitutional validity of the 10th schedule was analyzed by the Supreme Court in **Kihoto Hollohan v Zachillu, 1992**. The court held the provisions of 10th schedule valid and said that the provisions don't subvert the democratic rights of the elected members of the Parliament and the legislatures of the state. It doesn't violate their freedom of speech, freedom of vote and conscience as contended.

- **Other important SC judgments:**

- » **Keisham Meghachandra Singh vs The Hon'ble Speaker of Manipur Legislative Assembly & Ors (2020): Key recommendations of the SC:**
 - **Petition under the disqualification provision** should normally be decided within a period of three months from the date of their filing.

- The court suggested that an independent tribunal can be appointed which will substitute the Speaker of the LS and Legislative Assemblies to deal with matters of disqualifications under the 10th schedule.
 - This tribunal should be headed by a retired SC judge or a retired chief justice of High Courts.
- **Need of Anti-defection law**
 - » **Curbing the instability in the political system**
 - » **Controlling Horse Trading/Corruption**

7) DEVICES OF PARLIAMENTARY PROCEEDINGS

A) QUESTION HOUR

- Question hour has been devised to **help Parliament hold government accountable**.
- Generally, the first hour of every parliamentary sitting is slotted as question hour. During this hour, Member of Parliaments (including from ruling party) ask questions to Ministers and hold them accountable for the functioning of the government.
 - » These questions can be of three types:
 - **Starred:** They require oral answers and hence supplementary questions can follow.
 - **Unstarred:** They require a written answer and hence, supplementary questions can't follow.
 - **Short Notice:** they are asked by giving a notice of 10 days and are answered orally.
 - » The **Parliamentary rules provide guidelines** on the kind of questions that can be asked.
 - 150-word limit
 - Precise (not very general)
 - Related to areas of responsibility of government.
 - Not seek information on secrets or matters under court jurisdiction.
 - » Now, question hour in both houses is held on all days of the session except on the day when President addresses the MPs from both the house (i.e. at the beginning of the Lok Sabha and on the first day of a new Parliamentary year) and on the day when Finance Minister presents the budget.
 - » During question hour, even an MP (non-Minister) can be questioned. Such question should be limited to the role of MP or to a bill or resolution being piloted by him.

B) ZERO HOUR

- **Understanding Zero Hour**
 - » It is an informal device (not mentioned in the rules of procedure) available with Member of Parliaments to raise issues without any prior notice. It starts immediately after question hour and continues till the beginning of the regular business of the day.
 - » It is an **Indian innovation** in the field of Parliamentary procedure and the concept of zero hour started organically in the first decade of Indian Parliament, when MPs felt the need for raising important constituency and national issues.
- **Significance of Question Hour and Zero Hour**
 - » These parliamentary devices have been used to shine light on the functioning of government and highlight the irregularities to the public domain.

- » One of the parliamentary publications describe question hour as, "**the test of the Government's accountability, an indispensable part of the art of the opposition and even a deterrent on bureaucratic inertia**".
- » The question hour also **helps government to understand the pulse of the nation**.
- » The **information** so made available adds to **public information essential to informed debates** on matters of interest or concern.
- » Question hour is also **an instrument of unmatched criticality to hold government accountable** (i.e. fulfill the objective of parliamentary democracy) as it is available on **daily basis**, and provides **equality to every member** of the House, Rajya Sabha or Lok Sabha

8) LAPSLING OF BILLS DUE TO DISSOLUTION OF LOK SABHA

- On dissolution of Lok Sabha, **most of the business pending before it or its committees** (including bills, resolutions, notices, petitions and so on) lapse. These (if to be pursued in future) need to be introduced again in the newly formed Lok Sabha.
 - » **What doesn't lapse?**
 - Some pending bills and all **pending assurances that are to be examined by the Committee of Government Assurance** do not lapse on the dissolution of Lok Sabha.
 - A **bill for which joint sitting has been notified by the President**.
 - A bill **pending in Rajya Sabha** (but not passed by Lok Sabha)
 - A bill **passed by both houses** (but pending President's assent)
 - A bill **passed by both houses** (but returned back by the President for reconsideration)
- **What lapses?**
 - » **A bill pending in Lok Sabha** (whether originating in Lok Sabha, or transmitted to Lok Sabha after passage by Rajya Sabha)
 - » **A bill passed by LS but pending in Rajya Sabha lapses.**

9) MONEY BILL AND ASSOCIATED ISSUES

- **Why in news?**
 - The Supreme Court said that it **will constitute a seven-judge bench** to consider the **issue of validity of passage of laws** like the **Aadhaar Act** as Money Bill (Oct 2023)
 - » Its **formation is due to** the reference made by the Constitution bench in **Roger Mathew v. South Indian Bank** on the **interpretation of Article 110(1) of the Constitution of India**. The correctness of the majority judgement in Aadhaar case on this point was also doubted by the court.
 - » Thereafter in the **PMLA case**, the question was **left open for the consideration of larger bench**.
 - » The **decision of the 7-judge bench** which is yet to be formed will definitely have a far reach impact on the constitutional law and the contemporary development in the Indian Parliamentary system and politics.
- **What is Money Bill**
 - According to **Article 110** of the Constitution of India a bill is deemed to be money bill if it contains '**only**' provisions dealing with all or any of the following matters:
 - a. the **imposition, abolition, remission, alteration or regulation of any tax**;

- b. the regulation of the **borrowing** of money or the giving of any guarantee by the **Government of India**, or the amendment of the law with respect to any **financial obligations undertaken** or to be undertaken by the Government of India;
- c. the **custody** of the **consolidated Fund or the Contingency Fund of India**, the payment of moneys into or the withdrawal of moneys from any such Fund;
- d. the **appropriation of moneys** out of the consolidated Fund of India;
- e. the declaring of any expenditure to be **expenditure charged on the Consolidated Fund of India** or the increasing of the amount of any such expenditure;
- f. the **receipt of money on account of the Consolidated Fund of India or the public account of India** or the custody or issue of such money or the audit of the accounts of the Union or of a State; or
- g. any **matter incidental** to any of the matters specified in sub clause (a) to (f)

- Article 110(3)-> Speaker's decision final.
- Article 122 -> prohibits courts from inquiring into proceedings of Parliament and examining their validity.

- In order to ensure financial independence and continuity to government functioning, the Constitution gives **primacy to Lok Sabha** with respect to Money Bill. Such bills can only be introduced in Lok Sabha, can't be amended by Rajya Sabha. The upper house can only make some recommendations to the money bill passed by the lower house within a period of fourteen days which the lower house may accept or reject.
- Since **Powers of Rajya Sabha are greatly reduced on Money bill**, government (majority in Lok Sabha) sometimes bypasses the Rajya Sabha by getting a bill which doesn't satisfy the conditions for money bill declared as money bill.
- Some recent examples include:
 - Adhaar Bill, 2016 contained provisions relating to providing of benefits, subsidies and services funded from Consolidated Fund of India, but it also contained several other provisions like allowing Adhaar to be used for opening bank accounts etc.
 - Finance Bill, 2016 also had provisions other than those related to taxation. It amended the RBI Act to create Monetary Policy Committee. It also amended the Foreign Contribution Regulation Act (FCRA) (with retrospective effect) to change the definition of foreign company.
 - Finance Bill, 2017 also had provisions related to structure and organization of the Tribunals.
 - Finance Bill, 2019 was used to amend the provisions of the Prevention of Money Laundering Act (PMLA).
- Supreme Court Verdict on Aadhaar Bill, 2016 in Sep 2018
 - Accepts Adhaar Bill as money bill.
 - » The Supreme Court held that government was fine to use money bill route as long as the **main focus** on the bill fit the criteria - and even if other provisions were unconnected to taxation or government expenditure.
 - Dissenting Judgment: Adhaar Act as Money Bill is a fraud on constitution.
 - » Justice Chandrachud said that superseding the authority of the Rajya Sabha is in conflict with the Constitutional Scheme and the legitimacy of democratic institutions.
 - He pointed to an important word in provision (i) of Article 110: "only".

- Supreme Court Verdict on Finance Bill, 2017 (Nov 2019): Rojer Mathew vs South Indian Bank Ltd And Ors
 - In Nov 2019, a five Judge Constitutional Bench of the Supreme Court judgement while examining the legality of a number of changes to the composition of tribunals passed through Finance Bill, 2017, which the court struck down, it also brought up the money bill question.
 - The bench headed by CJI Ranjan Gogoi decided "It is clear to us that the majority dictum [in the Aadhaar judgment] did not substantially discuss the effect of the word 'only' in Article 110(1) and offers little guidance on the repercussions of a finding when some of the provisions of an enactment passed as a "Money Bill" do not conform to Article 110(1)(a) to (g)." The court was dissatisfied with the way the Aadhar judgement in the K Puttuswamy case had dealt with the issue of what could be certified as a money bill.
 - The court has thus also raised question of whether the Finance Act 2017 could have been passed as money bill.
 - The matter has been referred to a larger Seven Judge Bench.

10) PARLIAMENTARY PRIVILEGES

- Parliamentary privilege refers to rights and immunities enjoyed by Parliament as an institution, MPs in their individual capacity and various committees. These privileges ensure effective working of the Parliament and ensure authority, dignity and honour of the Parliament and its members.
- The Indian Constitution specifies the powers and privileges of Parliament in Article 105 and those of State legislatures in Article 194. This includes
 - i. Freedom of Speech in Parliament subject to other provisions of the Constitution and standing order of the house (Article 105(1), 194(1)).
 - ii. Immunity for all speeches and votes in the parliament or any committee from judicial scrutiny (Article 105(2), 194(2))
 - Immunity for persons publishing any report, paper, votes or proceeding by Parliament or under the authority of parliament.
 - iii. Powers and privileges and immunities of each house of the Parliament, and of the members and the committee of each house, shall be such as may from time to time be defined by Parliament by law. (105(3), 194(3))
 - Until then it would have the same privilege as the British Parliament had in 1950.
 - This was amended by the **44th Constitutional Amendment Act**. It provided that other privileges of each house of Parliament, its committees and its members are to be those which they had on the date of commencement (i.e. 20th June 1979), until defined by Parliament.
 - Till now, parliament or state legislature have not passed any law to codify their privileges.
 - iv. The above immunities are also applicable to persons who by virtue of this constitution has the right to speak in, or otherwise to take part in the proceedings of, a House of Parliament or any committee thereof as they apply in relation to members of Parliament. (104(4), 194(4))
- Note

- Article 194 is an exact reproduction of Article 105 and it deals with the state legislatures and their members and committees.

- Two Types of Parliamentary Privileges

1. Collective Privilege:

- The privileges, immunities enjoyed by each house of the parliament collectively
 - Right to publish its reports, debates and proceedings
 - Excluding strangers from its proceedings
 - Holding secret sittings
 - To Punish members as well as outsiders for breach of its privileges or its contempt by reprimand, admonition or imprisonment (also suspension or expulsion, in case of members)
 - The Courts are prohibited to enquire into proceedings of a House or its committees

2. Individual Privilege:

- In Civil cases, no arrest during the session of the house of 40 days before the beginning of the session and 40 days after end of the session
- Freedom of Speech in Parliament.** No proceeding can be initiated against them in any court for anything said or any vote given in Parliament or its committees.
 - This freedom is subject to the provisions of the Constitution and to the rules and standing orders regulating the procedure of the Parliament.
- They are exempted from jury service.

- Need of Parliamentary Privileges

- Enable each house of the legislature to discharge function properly and free of any pressure.
- The members of highest deliberative body in the country and in each state should have freedom of speech to ensure all views (no matter how small, fringe or different) are being discussed.
- Immunity from Judicial proceedings** ensure non-interference by Judiciary in the parliamentary proceedings and separation of powers.
- These privileges ensure that undue influence, pressure or coercion is not brought on the legislature in the course of its functioning.

- What constitutes a breach of privilege?

- » A breach of privilege is a violation of any of the privilege of MPs/Parliament.
 - Among other things, any action 'casting reflections' on MPs, parliament or its committees; could be considered breach of privilege.
- » **No clearly laid out rules** on what constitutes breach of privilege and what punishment it entails.
 - This has led to a very high weightage being given to view of the members of the house.

- Sources of the Parliamentary Privilege

- » Not codified yet
- » They are based on following sources:
 - Constitutional provisions
 - Various laws made by Parliament
 - Rules of Both the Houses
 - Parliamentary Conventions

5. Judicial Interpretations

- **Cases of breach of privileges?**
 - » Several such cases.
 - In 1967, two people were held to be in contempt of Rajya Sabha, for having thrown leaflets from the visitors' gallery.
 - In 1983, one person was held in breach for shouting slogans and throwing chappals from the visitor's gallery.
 - Sentenced to simple imprisonment.
 - » Similarly, there are many cases on breach of privilege of state assemblies.
 - In June 2017, Karnataka Assembly speaker ordered the imprisonment of two journalists for a year based on recommendations in two separate reports of its privilege committee.
- **Criticism of Parliamentary Privileges:** Against Freedom of Speech; Against Right to Life and Personal Liberty; No Codification -> Unlimited Power; Conflict of Interest -> Politicians act as judge in their own case; Used for non-essential reasons; Against Separation of Power

11) 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)
- **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.
- **Note:**
 - » 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.

12) ORDINANCE MAKING POWER OF THE PRESIDENT

- **Why in news?**
 - » In May 2023, the President of India promulgated the ordinance - 'National Capital Territory of Delhi (Amendment) Ordinance, 2023' (May 2023)
 - The ordinance promulgated by President Droupadi Murmu gave the LG of Delhi, who is appointed by the Centre, power over services, and established a "National Capital Service Authority" comprising of chief ministers and two senior IAS officials, which would decide matters "by majority of votes of the members present and voting" - essentially creating a stipulation in which the view of the elected CM could be potentially be overruled.
- **Introduction:**
 - » **Article 123 (Article 213 for Governors)** of the constitution empowers the President to promulgate ordinance during recess of Parliament. The Ordinance making power is the most important legislative power of the President. It has been vested in her to deal with unforeseen and urgent matters.
 - » These ordinances have the same force and effect as an act of Parliament, but are in the nature of temporary laws.
 - » **What can ordinance do?**
 - It cannot amend constitution. Otherwise, it can do everything which parliament is empowered to implement.
- **Constitutional Safeguards:** The exercise of the Ordinance power is subject to 4 limitations :

- i. Ordinance can be promulgated only when atleast one of the Houses of the Parliament is not in session.
 - ii. President can make ordinance only when he is satisfied that the circumstances exist that render it necessary for him to take immediate action.
 - In Cooper case, (1970), the Supreme Court held that President's satisfaction can be questioned in a court on the ground of Malafide.
 - iii. His ordinance making power is coextensive as regards all matters except duration, with the law-making powers of the Parliament. Two implications - Subject restrictions and Article 13 restriction.
 - iv. Every ordinance issued by president during recess of Parliament must be laid before both the Houses of Parliament when it reassembles.
 - If the ordinance is approved by both the houses, it becomes an act.
 - If Parliament takes no action at all, the ordinance ceases to operate on the expiry of six weeks from the reassembly of Parliament.
 - The President can withdraw ordinance at any time, however, it is not a discretionary power and must be done on the advice of Council of Ministers.
- **Statement explaining the circumstances**
- The rules of Lok Sabha require that whenever a bill seeking to replace an ordinance is introduced in the House, a statement explaining the circumstances that had necessitated immediate legislation by ordinance should also be placed before the Houses.
- **Important SC Judgments**
- In Cooper case, (1970), the Supreme Court held that President's satisfaction can be questioned in a court on the ground of Malafide.
- **D C Wadhwa Case (1987)**
- The court ruled that successive re-promulgation of ordinances with the same text without any attempt to get the bills passed by the assembly would amount to violation of the constitution and the ordinance so re-promulgated is liable to be struck down. It held that the exceptional power of law-making through ordinance cannot be used as a substitute for legislative power of the state legislature.
- **Krishna Kumar Singh vs. State of Bihar, 2017:** In a blow to Ordinance Raj, a 7 judge Constitutional Bench of the Supreme Court widened the boundaries of judicial review to the extent that it can now examine whether the President or the State Governor was spurred by an "oblique motive" to bypass the legislature and promulgate an ordinance.
- Further, the court added that "the ordinance making power is not a parallel source of legislation". The court also held that "re-promulgation of ordinance is a fraud on the constitution and a sub-version of democratic and legislative process".
- **Why this temptation for ordinance?**
- » Reluctance to face legislatures on certain issues
 - » Lack of majority in upper house
 - » Repeated and willful disruption by opposition parties

6. TOPICS TO BE COVERED

- 1) SUSPENSION OF MPS**
- 2) DISQUALIFICATION OF MPS/ MLAS**
- 3) OFFICE OF SPEAKER**
- 4) DEPUTY SPEAKER**
- 5) DEPUTY CHAIRPERSON OF RAJYA SABHA**
- 6) LEADER OF OPPOSITION**
- 7) DELIMITATION COMMISSION**

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2. FUNDAMENTAL RIGHTS

1) RIGHT TO WALK

- **Punjab** has become the first state in India to enforce Right to Walk.
 - In May 2023, Punjab enforced the Right to Walk, as per Article 21 of the Indian Constitution, following a 2010 petition filed in the Punjab & Haryana High Court demanding safety for pedestrians on state roads.
 - Government of Punjab has issued orders directing all road making agencies operating in the state, including NHAI, the state public works department and local bodies department to ensure there are footpaths in all future expansion of roads and construction of new ones.
 - **Note:** More than 4,500 lives were lost in road accidents in 2021 of which pedestrian deaths were 395. Nationwide in 2021, more than 18936 pedestrians lost their lives.

2) HIGH COURT QUASHES JOB RESERVATION FOR LOCALS

- **Why in news?**
 - » The Punjab and Haryana High Court on Friday quashed the Haryana government's law guaranteeing 75% reservation to locals in private sector jobs in Haryana (Nov 2023)
- **Haryana State Employment of Local Candidates Act, 2020.**
 - » The act was notified by Haryana government in Jan 2022. It provided for 75% of the new employment to be given to local candidates for jobs having salary of less than Rs 30,000 per month in various privately managed companies, societies, trusts, limited liability partnership firms, partnership firms, etc. situated in Haryana.
- **On what ground was it challenged?**
 - » It provides reservation in private employment and creates an unprecedented intrusion by the State government into the fundamental rights of employers to carry on their business and trade as provided under Article 19 of the Constitution of India.
 - » It was also submitted that the law infringed on Article 14 of the Constitution of India. It added that fundamental wedge is sought to be created between persons domiciled in different states by the law in question.
- **High Court Verdict (Nov 2023)**
 - » The bench said that the law is unconstitutional and violative of the Part-III of the Constitution.
 - » **Broad grounds on which the Court has declared the law as "unconstitutional":**
 - **Article 35 Bars state from legislating on Requirement of Domicile in Employment**
 - The court said that a perusal of the Article 35 would go on to show that there is a specific bar to the legislature of the state not to make any laws in respect of the matters which are under Article 16(3).
 - The court referred to State of Tamil Nadu and ors vs K. Shyam Sundar and Ors (2011) and opined that "it is beyond the purview of the state to legislate on the issue and restrict the private employer from recruiting from the open market for the category of employees who were receiving less than Rs 30,000 per month".
 - **Discrimination Against Individuals Not Belonging to State**

- **Violation of Equality Guaranteed under Article 14**
- **Violation of freedom guaranteed under Article 19**
- **Violation of Constitutional Morality**
 - The bench said that the concept of constitutional morality has been openly violated by introducing a secondary status to a set of citizens not belonging to the State of Haryana and curtailing their fundamental rights to earn their livelihood.

3. UNION (LEGISLATURE AND EXECUTIVE) CONTINUES..

1) WOMEN RESERVATION IN PARLIAMENT AND LEGISLATIVE ASSEMBLIES

- **Background:**
 - » Even though the 2019 Lok Sabha elections saw the highest ever presence of women in parliament, it still stands at **78 (14.39%) among 543 seats**. This percentage is well below the global average (24.6%) showing that in India gender discrimination is quite prevalent even in case of elections to the top positions in the country. At state assemblies' level this performance is more dismal with only **9% seats being filled by women**.
 - » **Previous efforts to provide reservation for women in legislative bodies:**
 - Bills amending the Constitution to reserve seats for women in Parliament and State Assemblies have been introduced in 1996, 1998, 1999, and 2008. The first three lapsed due to dissolution of their respective Lok Sabhas. The 2008 bill was introduced in RS and passed in RS in 2010, but it also lapsed with the dissolution of 15th LS.
 - » In **2015, the Report on the Status of Women in India** noted that the representation of women in state assemblies and Parliament continues to be dismal.
 - **Decision making positions in political parties** have negligible presence of women.
 - It recommended reserving atleast 50% seats for women in local bodies, state assemblies, Parliament, ministerial levels, and all decision-making bodies of the government.
 - » The **National Policy for the Empowerment of Women (2001)** had stated that reservation will be considered in higher legislative bodies.

A) THE CONSTITUTION (106TH AMENDMENT) ACT, 2023: WOMEN RESERVATION BILL, 2023 (NAARI SHAKTI VANDAN ADHINIYAM)

- **Reservation:** The amendment reserves, as nearly as possible, 1/3rd of the seats for women in Lok Sabha, State Legislative Assemblies and Legislative Assembly of NCT of Delhi. This reservation will be applicable to seats reserved for SCs and STs in Lok Sabha and State Legislatures.
- **New Articles Inserted:**
 - i. **Article 330A:** Reservation of 1/3rd of the seats for women in LS.
 - ii. **Article 332A:** Reservation of 1/3rd of the seats for women in LA.
 - iii. **Article 334A:** The reservation will be effective after the census is conducted after commencement of this act has been published.

- » **Based on census**, Based on Census, delimitation will be undertaken to reserve seats for women.
 - » **Sunset clause:** This reservation will be provided for 15 years. However this reservation will continue till such date as Parliament determines by a law.
 - » **Rotation of seats:** Seats reserved for women will be rotated after each delimitation, as determined by a new law made by Parliament.
- **Article Amended:**
- 239AA:** To reserve 1/3rd of the seats for women in LA of NCT of Delhi.

B) THE JAMMU AND KASHMIR REORGANIZATION (SECOND AMENDMENT) ACT, 2023

- Passed in Parliament in Dec 2023
- It amends the J&K Reorganization Act, 2019. This act had provided for reorganization of the state of J&K into UT of J&K (with legislature) and Ladakh (without legislature).
- **Key highlights of the amendment:**
 - » **Reservation:** The amendment reserves, as nearly as possible, one-third of all elected seats in J&K legislative assembly for women. The reservation will also apply to seats reserved for SCs and STs in the assembly.
 - » **Commencement of the Reservation:** (Same provisions as Article 334A of the Constitution)
 - » **Rotation of seats:** Seats reserved for women will be rotated after each delimitation, as determined by the law made by Parliament.

C) THE GOVERNMENT OF UTS (AMENDMENT) ACT, 2023

- Passed in the Parliament in Dec 2023. It amends the Government of UTs Act, 1963 to provide for reservation of seats for women in Legislative Assembly of UT of Puducherry.
- Provisions are exactly same as J&K Reorganization (2nd Amendment) Act, 2023 or 106th Constitutional Amendment Act.

2) OFFICE OF SPEAKER

- In Lok Sabha, this presiding officer is the Speaker.
- **Selection and Removal of the Speaker**
 - Article 93 of the Constitution of India provides that *the house of people shall, as soon as may be, choose two members of the house to be respectively Speaker and Deputy Speaker thereof and, so often as the office of Speaker or Deputy Speaker becomes vacant, the house shall choose another member to be Speaker or Deputy Speaker, as the case may be.*
- **Removal**
 - Article 94 of the Constitution specifies that a speaker (or deputy speaker)
 - a. Shall vacate the office if he ceases to be a member of the house.
 - b. May at any time, by writing to Deputy Speaker (Speaker) resign his office.
 - c. May be removed from his office by a resolution of the House of the People passed by a majority of all the then members of the house.

- **Note1:** A resolution under Article 94(c) can only be moved after providing at least a **14 days' notice** of the intention to move the notice.
- **Note2:** In case of dissolution of the house, the speaker shall not vacate his office until immediately before the first meeting of the House of the People after the dissolution.

- Powers and Functions

- **Sources of Speaker's Power and Duties:** Powers and Duties of the speaker are derived from **three sources** - The Constitution of India, the Rules of Procedure and Conduct of Business of Lok Sabha and Parliamentary Conventions.
- **Speaker's power and functions can be carved into three broad categories:**

- i. **Speaker Facilitates the business of the house.**
 - a. She **presides** over the meeting of Lok Sabha (except when a resolution for his removal is under consideration).
 - b. She also **presides** over the **joint sitting** of two houses of the Parliament (Article 118(4))
 - c. Speaker has a **casting vote** in case of equality of vote in the house on any matter.
 - **Note:** The provision of the absence of vote in first instance increases the impartiality of the speaker (like in England)
 - d. Within the house, she is the **final interpreter** of the Constitution of India, Rule of Procedure and Conduct of Business of Lok Sabha, and (c) the parliamentary precedents within the house.
 - e. She **assists members in holding the executive accountable** by selecting members who may ask supplementary questions and compelling ministers to make statements before the house.
 - f. She **appoints the chairman of all parliamentary committees of the Lok Sabha** and herself presides over Business advisory committee, the Rules Committee, and the General-Purpose Committee.
- ii. **For maintaining order in the house, he takes on the role of a disciplinarian**
 - She has primary responsibility and final power wrt **maintaining order and decorum** in the House.
 - In case of indiscipline she is empowered to suspend members, or ask them to withdraw from the house.
 - In case of gross disorder, she adjourns the house.
 - To ensure decorum, the speaker can **interrupt members to withdraw their statements** if they are un-parliamentary.
- iii. **Speaker also fulfills some quasi-judicial roles.**
 - She has the power to **designate a bill as money bill** when it is transmitted from lower house to the Upper House.
 - She decides the **question of disqualification** on the grounds of **defection** of a member of the Lok Sabha.

- Independence and Impartiality of the Office of Speaker

- **GV Mavlankar**, the first Speaker observed: "*Once a person is elected Speaker, he is expected to be above parties and above politics*".
- For this Constitution has provided for following provisions:

- i. Speaker is provided with security of tenure, and he can be removed only by resolution passed by Lok Sabha by an **absolute majority** (majority of the total members of the house).
 - ii. He **can't vote in first instance** thus reducing bias in support or opposition to a bill.
 - iii. Salaries and allowances of speaker is fixed by the Parliament and are charged on the Consolidated Fund of India and thus are not subject to annual vote of parliament.
 - iv. His work and conduct can't be discussed in Lok Sabha except on a substantive motion.
 - v. The speaker's conduct in regulating the procedure or maintaining order of the house is not subject to jurisdiction of any court.
 - vi. Speaker also has a **very high position** in the order of precedence. He is **placed at seventh rank**, along with the CJI. This means, he has a higher rank than all cabinet ministers except the Prime Minister.
- **What more can be done to ensure neutrality of the Speaker:**
- **Provisions that can be taken from United Kingdom:** Other than most of the similar protections as given by the Indian Constitution, the neutrality of Speaker in UK is ensured by:
 - i. By convention, **the speaker gives up the membership** of his/her political party.
 - ii. **Promise of continuity in office** for many terms is provided for speaker. In Britain by convention, political parties (usually) don't field candidate against the speaker at the time of general elections. Thus, speaker can continue in office, until deciding to do otherwise.
 - iii. Further, **speaker don't contest on political issues** but instead stand as "Speaker seeking re-election."

3) HOUSE OF DEPUTY SPEAKER REMAINED VACANT IN 17TH LOK SABHA

- **Introduction:**
 - The post of Deputy Speaker has been lying vacant since the beginning of the 17th Lok Sabha in May 2019.
- **Constitutional Provisions:**
 - **Article 93:** The Lok Sabha shall, as soon as possible, choose two members of the House (simple majority) to be respectively **Speaker and Deputy Speaker** and thereof, so often as the office of Speaker or Deputy Speaker becomes vacant, the House shall choose another member to be Speaker or Deputy Speaker, as the case may be.
 - **Article 178** contains the corresponding position for speaker and Deputy Speaker of the Legislative assembly of the state.
- **Term of Deputy Speaker, vacation of office, and disqualification**
 - Once elected, a deputy speaker usually continues in office until the dissolution of the house.
 - Speaker or deputy speaker vacate her office if she ceases to be member of the house.
 - They may also **resign** or may be removed from office by a resolution of the House of the People passed by a majority of all the then members of the house.
 - **Disqualification provisions of MPs** are still valid on Speaker /Deputy Speaker except **one exception**.

- » Para-5 of the **tenth Schedule** says that a person who has been elected **speaker/deputy speaker** shall not be disqualified if she, by reason of his election to that office, **voluntarily gives up the membership of the political party** to which he belonged immediately before such election - and **doesn't**, so long as she continues to hold office thereafter, rejoin that political party or become a member of another political party.
- » **Note:** This exception is also applicable to **Vice chairperson of Rajya Sabha, Speaker/Deputy Speakers of Legislative assembly** and **Chairman/Deputy chairman of Legislative Council.**

- **Functions of Deputy Speaker**

- Deputy Speaker is a **Presiding Officer**.
 - Article 95(1) of the Constitution says that **when the office of speaker is vacant, the duties of the office shall be performed by the Deputy Speaker**.
- He is also **ex-officio chairman of some committees** by virtue of his position.
- In case of **joint sitting of the two houses** and **absence of speaker**, Deputy Speaker presides over the joint sitting of the two houses.

- **Powers of Deputy Speaker**

- In general, the **deputy speaker has the same powers** as the speaker when presiding over a sitting of the house. All references to the speaker in the rules are deemed to be references to the **Deputy Speaker** when he presides.
- Further, **no appeal lies to the Speaker** against a ruling given by Deputy Speaker or any person presiding over a sitting of the House in the absence of Speaker.
- **Note:** Deputy Speaker is **not subordinate** to Speaker. When he presides over a sitting, he has all the powers of a Speaker.

- **Is it mandatory to elect a deputy speaker?**

- Constitutional experts point out that both **Article 93 and Article 178** use the words "**shall**" and "**as soon as may be**" - indicating that not only is the selection of Speaker and Deputy Speaker **mandatory**, it must be **held at the earliest**.

- **Is there a time frame?**

- **Constitution** provides for "**as soon as possible**".

- **Conventions which are being followed:**

- **Generally**, the practice in both Lok Sabha and the State Legislative Assemblies has been to **elect speaker during the (mostly short) first session of the new House** - **usually on the third day after oath-taking and affirmation take place over the first two days**.
 - » The **election of deputy speaker** generally takes place in the **second session**, even though there is **no bar** in having the elections in the first session of the new Lok Sabha/Assembly. But the election of **deputy speaker** is usually **not delayed beyond the second session** without genuine and unavoidable constraints.
- Since, the term of **Morarji Desai government**, the tradition of the post of the Deputy Speaker **going to the Opposition party** has been followed.

- **Why Deputy Speaker hasn't been elected yet?**

- The ruling party hasn't been able to agree on a **suitable opposition party member** for the post. Opposition doesn't have the required numbers to choose their own person.
- **Speaker from the ruling party:** Rule 8 of The Rules of Procedure and Conduct of Business in Lok Sabha provides that the **election shall be held on such date as the Speaker may fix**", and the Deputy Speaker is elected once a motion proposing his name is carried.
- **Significance of Deputy Speaker**
 - **Continuity of the Speakers Office** by acting as the **Speaker** when the office becomes vacant due to illness, death, resignation, or any other reason.
 - **Unlike the panel of chairpersons**, appointed by Speaker, which comprise of 9 MPs from various political parties, who preside over the house when the Speaker is not in the chair, **they don't enjoy the same constitutional or administrative power as the speaker**.
 - Further, since the **position of deputy speaker by convention is held by opposition party**, it increases the **accountability of majority party to legislative process to some extent**.

4) LEADER OF OPPOSITION

- **Introduction**
 - For the success and survival of democracy, **an effective opposition is of a categorical imperative**. Towards this the office of the Leader of Opposition (LoP) plays a key role and is of great significance in the functioning of a legislature.
- **Functions/Significance of Opposition and Leader of Opposition:**
 - Increases accountability of government to public.
 - Checks hasty decisions.
 - Ensures Political neutrality in selection of key posts (CVC, Lokpal, CBI Director etc.)
- **Provisions regarding Leader of Opposition**
 - The **Constitution of India** or the **Rules of Procedure in Lok Sabha** **don't have any provision** related to the Leader of Opposition.
 - The **Salaries and Allowances of Leaders of Opposition in Parliament Act, 1977** **defines LoP** as the leader of **numerically biggest party in opposition** to the government and **recognized as such by the speaker/chairman**.
 - » The act **extends to LoPs in the Lok Sabha and Rajya Sabha** the same official status, allowances and perks that are admissible to Cabinet Ministers.
 - » Note that **there is no 10% seat requirement** in the law or in the constitution.
 - The **10% rule** originated **following the formation of the first Lok Sabha in 1952**. The rules governing Lok Sabha procedure **empowers the speaker of the house to issue 'Directions' to conduct business in the lower house**.
 - » In 1956, the then Speaker of **Lok Sabha introduced the 10% rule to Indian Parliamentary politics** through **Directions 120-123**. These directions concern the recognition of an LOP, and basically list the **requirements for an association of members to be recognized as a parliamentary "party"**. Direction **121(i)(c)** lays down **the 10% rule for recognition of a 'party'** and other parties were categorized as 'groups'.

- At the same time the Section 121(i)(a) of the direction says that pre poll alliance on the basis of ideology will also be recognized as a party.
- The **Leaders and Chief Whips of Recognised Parties and Groups in Parliament (Facilities) Act, 1998** refers to a recognised party in the Lok Sabha as a party that has not less than 55 members.
 - » But, in Clause 3(ii), it clearly mentions that such provisions are **not valid for LoP as defined in section 2 of the Salary and allowance of the Leaders of Opposition in Parliament Act, 1977.**
- **From 9th - 15th Lok Sabha**, since the requirement of having a minimum strength of 55 members was fulfilled, the Lok Sabha had duly recognized opposition parties and LoPs, including Rajiv Gandhi, L.K. Advani, Atal Bihar Vajpayee, P.V. Narsimha Rao, Sharad Pawar, Sonia Gandhi and Sushma Swaraj.

4. SCHEDULE AND TRIBAL AREAS

1) 5TH SCHEDULE

- **Constitutional Provisions: Article 244(1):** The Provisions of the fifth schedule shall apply to the administration and control of the Scheduled Areas and Scheduled Tribes in any State other than the States of Assam, Meghalaya, Tripura and Mizoram.
- **Schedule-5:**
 - » ***Declaration of Scheduled Areas:***
 - The President can declare an area to be a schedule area. She can also increase or decrease its area, alter its boundary lines, remove such designation or make fresh orders for such redesignation on an area in consultation with the governor of the state concerned.
 - » ***Executive Power of state and Centre:***
 - The executive powers of the state extend to schedule area. But, governor has the responsibility of submitting a report to the President annually or whenever the President requires about the administration of such areas.
 - The executive powers of the Centre extends to giving directions to the states regarding the administration of such areas.
 - » ***Tribes Advisory Council:***
 - Every state which has a schedule area has to set up a Tribes Advisory Council to advise on welfare and advancement of the scheduled tribes. It is to consist of 20 members, three-fourth of whom are to be the representatives of the scheduled tribes in the state legislative assembly.
 - In case a state has scheduled tribes but no schedule areas, they also have to set up a Tribes Advisory council if the President so directs.
 - » ***Law applicable to Scheduled Areas:***
 - Governor can provide that any law of parliament or the state legislature is not applicable in scheduled areas or is applicable with specified modifications and exceptions.
 - He can also make regulations for peace and good government of a scheduled area after consulting the Tribes Advisory Council.

- These regulations may prohibit or restrict the transfer of land by or among members of the scheduled tribes, regulate the allotment of land to members of the scheduled tribes and regulate the business of money-lending in relation to the scheduled tribes.
- These regulations may also repeal any act of Parliament from being applicable in these areas.
 - **Note:** All such regulations require **assent of the President**.
- » **Note:** Currently 10 states have fifth schedule areas: Himachal Pradesh, Rajasthan, Gujarat, Madhya Pradesh, Chhattisgarh, Jharkhand, Odisha, Maharashtra, Telangana and Andhra Pradesh.
- » **Note:** The Constitution requires the President to appoint a commission to report on the administration of the Scheduled areas and the welfare of scheduled tribes in the states. President can appoint this commission any time she wants, but compulsorily after ten years of the commencement of the Constitution.
 - The first such commission was formed in 1960 (U N Dhebar Commission) which submitted its report in 1961.
 - Second commission was appointed in 2002 (Dilip Singh Bhuria Commission) which submitted its report in 2004

2) PANCHAYATS (EXTENSION TO SCHEDULED AREAS) ACT, 1996 (PESA ACT)

- **Background of PESA:**
 - » Article 243(M) of the Constitution says that Part IX (The Panchayats - Article 243 - 243O) shall not apply to Scheduled Areas (Article 244(1)) and Tribal Areas (Article 244(2))
 - » But, Article 243(M)(4)(b) provides that Parliament may, by law, extend the provisions of this part (Part IX) to the Scheduled Areas and Tribal areas subject to such exceptions and modifications as may be provided in the law.
- On the basis of the report of the Dileep Singh Bhuria Committee submitted in 1995, the Parliament enacted the Panchayats (Extension to Scheduled Areas) Act, 1996 to extend the Part IX of the Constitution to the Fifth Schedule areas, with certain modification and exceptions.
 - » **Note:** Ministry of Panchayati Raj is the nodal Ministry for implementation of the provisions of PESA in the states.
- **Key Highlights of PESA:**
 - » It is a unique and remarkable flagship legislation that brings together the simple system of tribal communities governed by their respective customs and traditions, and the formal system of states.
 - » **PESA** was enacted to ensure self-governance through gram Sabhas for people living in schedule areas. It gives pre-eminence to Gram Sabha rather than to elected Gram Panchayat.
 - » It legally recognizes the rights of tribal communities, residents of schedule areas, to govern themselves through their own systems of self-government, and also acknowledges their traditional rights over natural resources.
 - » **Key powers and functions given to Gram Sabhas are:**
 - **Safeguarding and Preserving** their traditions and customs, cultural identity, community resources and customary mode of dispute resolution

- Prevention of alienation of land and restoration of any unlawfully alienated land of scheduled tribes.
 - Right to mandatory consultation in land acquisition, resettlement, and rehabilitation of displaced persons.
 - Control over institutions and functionaries in all social sector.
 - Ownership of MFP
 - Control over Minor Minerals:
 - Recommendation in granting prospecting license or mining leases for minor minerals, and concessions for the exploitation of minor minerals by auction.
 - Management of minor water bodies.
 - Management of Village markets.
 - Exercise and control over money lending
 - Prohibiting/Regulating intoxicants
 - Approval of social and economic development plans.
 - Selection of beneficiaries under poverty alleviation and other programs.
- State legislatures were required to amend their respective Panchayat Raj Acts without making any law that would be inconsistent with the mandate of PESA.
- Note: PESA Act is referred as "**Constitution within the Constitution**" as it provides for the extension of the provisions of Part IX of the Constitution relating to the Panchayats to Schedule areas of 10 states.
- **PESA is significant as it can play a role in:**
 - **Democratization at grassroot level** - by empowering Gram Sabhas, PESA radically democratize governance.
 - **Inclusive growth:** By ensuring that benefits of minor forest product, minor minerals etc. primarily benefits tribal community
 - **Reducing Grievances of tribal people and Safeguarding tribal culture and way of life.**
 - **Environment Protection:** (For e.g. cancellation of mining projects on Niyamgiri hills)
 - In 2013, Supreme Court referred to PESA and asked the Odisha Government to go to Gram Sabha to get permission for bauxite mining in Kalahandi and Rayagada district. Local forest dwellers decided against the mining of Niyamgiri hills which led to cancellation of a huge project.
 - This case is considered a milestone and shows the power of the Gram Sabha. But, this was one of the rare achievements of PESA even as it underlines the possibilities the act carries.
 - **Reducing alienation** of tribal community and thus ensuring enhanced internal security.
 - Less alienated communities wouldn't be influenced by the LWE ideologies.
 - **Progress So far:**
 - As of Nov 2022, out of 10 PESA states, eight states, namely; Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Maharashtra, Madhya Pradesh, Rajasthan, and Telangana have framed and notified their state PESA rules under their respective State Panchayati Raj Acts.

3) 6TH SCHEDULE

- **Why in news?**
 - Sonam Wangchuk led groups in Ladakh demand Constitutional protection under 6th Schedule (March 2024)
- **Details**
 - **Constitutional Provisions: Article 244: Administration of Scheduled Area and Tribal Areas**
 - **Article 244(2):** The provisions of the sixth schedule shall apply to administration of the tribal areas in the state of **Assam, Meghalaya, Tripura and Mizoram.**
 - **Sixth Schedule of the Constitution: Provisions as to the administration of Tribal Areas** in [Assam, Meghalaya, Tripura and Mizoram].
 - It seeks to safeguard the interests and rights of tribal population through the formation of Autonomous District Councils (ADC) and Regional Councils.
 - These are bodies representing a district to which the Constitution has given varying degrees of autonomy within the state legislatures.
 - **Autonomous Districts and Autonomous Regions**
 - Tribal areas of Assam, Meghalaya, Tripura and Mizoram have been identified as Autonomous districts.

Tribal areas	Part-1	The North Cachar Hills District; [The Karbi Anglong District.]; [The Bodoland Territorial Areas District.]
	Part-2	Khasi Hills District; Jaintia Hills District; The Garo Hills District Note: Almost all of Meghalaya - except a tiny area within capital Shillong - is covered by the sixth schedule to the Constitution of India under Article 244 of the Constitution.
	Part-2A	Tribal Area District
	Part-3	The Chakma District; The Mara District; The Lai District

- If there are different scheduled tribes in an autonomous district, the Governor may divide the area or areas inhabited by them into Autonomous Regions.
- The governors of these states are empowered to reorganize boundaries of these autonomous districts/regions.
- **Constitution of District Councils and Regional Councils:**
 - There shall be a **District Council** for each autonomous district consisting of not more than thirty members. Of these thirty members, not more than four would be nominated by the Governor, and the rest shall be elected by adult suffrage.
 - There shall be a **Separate Regional Council** for each area constituted as autonomous region.
 - **Powers of Administration of a region** is vested in the Regional Council and Powers of **Administration of an autonomous district** shall be vested in the **District Council** (except for those area which go under Regional Council)

- District Council will only have such powers with respect to the areas under the authority of regional council which may be delegated to it by the Regional Council.
- **District Councils and Regional Councils** have also been given various **law making and Judicial Powers**.
 - | | |
|----|---|
| NN | Powers have been given to District Councils and Regional Councils for making laws |
|----|---|
 - **District Councils and Regional Councils** are also empowered to constitute village councils or courts for the trial of suits and cases between the parties all of whom belong to ST within such areas.
 - **The High Court** shall have and exercise such jurisdiction over the suits and cases as the Governor may from time to time specify.
 - **District and Regional Funds** have been created. In these funds, all moneys received respectively by district council and regional council in the course of administration would be provided.
 - CAG of India shall cause the accounts of district council and regional council audited.
 - **The acts of Parliament or the state legislature do not apply** to autonomous districts and autonomous regions or apply with specified modifications and exceptions.
- **Advantages of inclusion in sixth schedule:**
 - i. **Democratic devolution of power**
 - ii. **Protect unique tribal culture and practices**
 - iii. Effectively protecting agrarian rights including rights over lands from outsiders
 - iv. **Effective development** as transfer of funds to sixth schedule area may be higher.
- **Demand for inclusion in 6th Schedule by Ladakh**
 - **Reasons:**
 - » Fragile ecology ->
 - Melting glaciers
 - Cold Desert of Ladakh is extremely sensitive to climate change
 - **Parliamentary Standing Committee on State Affairs** tabled a report in the Parliament recommending inclusion of Ladakh in the sixth Schedule because its tribal communities account for 79.61% of its total population.
 - » But the Home Ministry said in Dec 2022 that the main objective of including tribal population under the Fifth/Sixth Schedule is to "ensure their overall socio-economic development, which the UT Administration has already been taking care of since its creation. Sufficient funds are being provided to Ladakh to meet its overall developmental requirements".

5. FUTURE CLASS

- Centre State Relations
- Inter-State Relations
- Judiciary
- Election related issues

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3. SPACE

1) SPACEPORTS OF INDIA

A) SATISH DHAWAN SPACE CENTRE (SDSC)-SHAR

It is the 'Spaceport of India'. It is the backbone of the ISRO in providing launch base infrastructure for the Indian Space Program.

It is situated along the east coast of Andhra Pradesh and is located 80 km off Chennai. It currently provides launch infrastructure to all ISRO missions. It is equipped with a solid propellant processing setup, static testing, and launch vehicle integration facility, telemetry services, - tracking and command network to oversee the launch – and a mission control centre.



B) KULASEKARAPATTINAM SPACE PORT

In Feb 2024, PM Modi laid down the foundation stone for India's second spaceport at Kulasekharapattinam, a coastal village in TN's Thoothukudi district on 28th Feb 2024.

Why this location?

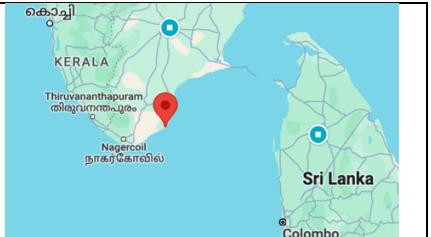
- It offers a strategic advantage, particularly in enhancing payload capability with its direct southward launch trajectory for small launch vehicles.

On the day of laying of foundation stone only, ISRO launched Rohini Sounding Rocket "RH200" from the newly established launch complex.

- The RH200 rocket, developed by Vikram Sarabhai Space Center (VSSC), has a long-standing reputation for reliability, with this launch marking its 1928th successful mission.

Launch site is expected to be fully commissioned within 24 months and will enhance the space activities of NGEs (Non-Government Entities).

- The new site will focus on launches of smaller payloads.
- The new facility will permit anywhere between 20 to 30 SSLV launches annually.
- Advantages:**
 - As the Penetration of private sector increases, more launchpads (spaceports) will be needed to launch satellites.



Problem with launching small satellites from Sriharikota:

Dogleg Maneuver takes extra fuel and reduces the payload capacity. Polar satellites launched from Sriharikota spaceport of south India frequently use this maneuver to avoid flying over Sri Lanka.

Rockets make a steep 40-degree arc in order to bypass the city of Colombo. For larger satellites, fuel required for this maneuver is insignificant compared to the total fuel. However, this is very inefficient for smaller rockets.

- The Kulasekharapattinam space port will allow a direct southward and smaller trajectory for the light weight SSLVs carrying less fuel. It is because Kulasekharapattinam is located several kms to the west of Colombo. It will enhance the payload capacity.

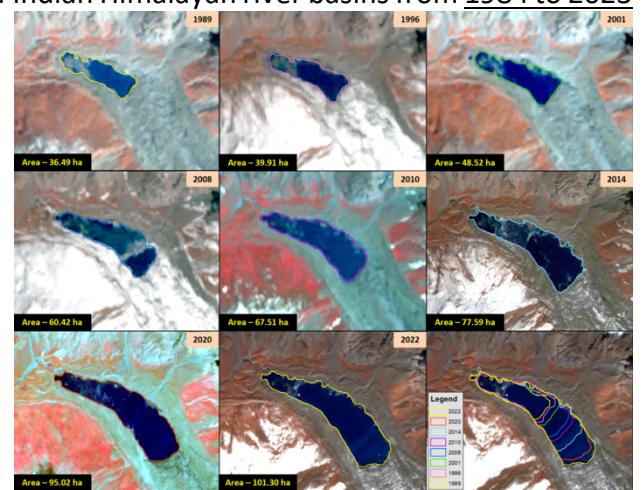


2) TATA ADVANCED SYSTEM LIMITED (TASL)'S TSAT-1A

- In April 2024, Tata Advanced Systems Limited (TASL) announced the successful deployment in space of its sub-metre resolution optical satellite, TSAT-1A.
 - » SpaceX's Falcon 9 rocket launched **TSAT-1A** satellite from the Kennedy Space Centre, Florida.
- About TASL:** It is a wholly owned subsidiary of Tata Sons and is a significant player for aerospace and defence solutions in India.
- About TSAT-1A:**
 - » It will deliver high resolution optical satellite images with increased collection capacity, dynamic range, and low-latency delivery through its multispectral and hyperspectral capabilities.
 - » It was assembled in TASL's Assembly, Integration and Testing (AIT) plant in its Vemagal facility in Karnataka.
- Collaboration with Satellogic:** The achievement follows the collaboration agreement signed between TASL and Satellogic in Nov 2023, leveraging Satellogic's expertise to develop and integrate an advanced EOS in India and TASL's capability to undertake complex system integration.
- About Satellogic:** It is a company specializing in Earth Observation Satellites. It is headquartered in Montevideo, Uruguay.

3) IN APRIL 2024, ISRO RELEASED SATELLITE DATA ANALYSIS ON EXPANSION OF GLACIAL LAKES IN THE CATCHMENTS OF INDIAN HIMALAYAS RIVER BASINS

- Satellite remote sensing technology is an excellent tool for inventory monitoring due to its wide coverage and revisit capability.
- Long term satellite imagery covering the catchments of Indian Himalayan river basins from 1984 to 2023 indicates significant changes in glacial lakes.
- **Key Highlights of ISRO's Data**
 - Of the 2,431 lakes larger than 10 hectares identified during 2016-17:
 - » **676 glacial lakes have notably expanded since 1984.** (Specifically, 130 lakes are situated within India).
 - 601 lakes (89%) have expanded more than twice
 - 10 lakes have grown between 1.5 to 2 times
 - 65 lakes at 1.5 times.
- **Long term changes in the Ghepan Ghat glacial lake** (Indus River Basin) at an elevation of 4,068 m in Himachal Pradesh, India, show a 178% increase in size from 36.49 hectares between 1989 and 2022.



The long-term changes in the Ghepan Ghat Glacial Lake area

4) FIRST INDIAN SPACE TOURIST: GOPI THOTAKURA

- » **Blue Origin** was established by Jeff Bezos in 2000.
 - New Shepherd, is a fully reusable sub-orbital launch vehicle developed specifically for space tourism by Blue Origin. It completed first human flight to space on 20th July 2021 with four private citizens on board. The flight went upto a height of 107 kms.
- **Update: (April 2024)**
 - » Entrepreneur and Pilot **Gopi Thotakura** is set to become the first Indian to venture into space as tourist on the NS-25 mission of **Blue Origin** – a company founded by Jeff Bezos, who is also the founder of Amazon.
 - » This **NS-25 mission** will be suborbital mission. The whole crew members will be taken to outer space via New Shepherd.
 - » If the mission is successful, he will become only the **2nd Indian to go into space** (the first one was **Wing Commander Rakesh Sharma**, who flew to the **Salyut 7 space station** on a Soviet Spacecraft in 1984).

4. BIOTECHNOLOGY UPDATES

1) GENE EDITED CROPS

- **Note:** There is a slight difference between GM crops and Gene-Edited Crops:
 - **Gene-Edited crops** are trans-gene free and contain no foreign genes. Gene editing tools are used to generate changes to native genetic material to yield beneficial outcomes.

- Regulatory framework for gene editing are nascent and generally less prohibitive relative to GMOs. Legislations regarding gene editing is emerging globally and trending towards allowing gene-edited products to pass from research to production with relative ease, compared to GMOs.
- Gene Editing Tools can be used to produce GMOs. In this case, novel configurations of genetic material can be precisely inserted into the genomes of organisms by using gene editing machinery.
- Gene-Modified Crops contains foreign genes. They leverage the genetics of other organisms to improve desired traits. (e.g. BT-Cotton, DMH-11, Golden Rice)

A) GENE EDITED MUSTARD – LESS PUNGENT, MORE USEFUL

- **Why in news?**
 - Indian Scientists have developed first ever low-pungent mustard that is pest and disease resistant (Aug 2023)
- **Understanding the Problem:**
 - Mustard/Rapeseed is one of the most significant oilseed grown in India. But, mustard seeds have very high levels of glucosinolates, a group of sulphur and nitrogen-containing compounds contributing to the characteristic pungency of their oil and meal. This limits the acceptance of mustard oil by many users specially those who are used to less strong odour and flavour. The problem is even more in case of meal (the residual cake after extraction of oil from the seeds). Rapeseed meal is unpalatable to poultry and pigs, while having to be mixed with fodder grass and water for giving to cattle and buffaloes. Moreover, high glucosinolates are also known to cause goitre (swelling of neck) and internal organ abnormalities in livestocks.
- **Efforts to improve the quality of Mustard:**
 - Various institutions including Centre for Genetic Manipulation of Crop Plants (CGMCP) and the Indian Council of Agricultural Research has gone into breeding of rapeseed-mustard lines of so called Canola Quality. Normal Mustard (*Brassica juncea*) contains 120-130 ppm of glucosinolates. Canola has sub-30 ppm levels.
 - Scientists have bred low glucosinolates variety of mustard, but large scale cultivation couldn't take place. This is because reducing glucosinolates increases the vulnerability of crops to pests and diseases.
 - So, what is needed is to reduce the glucosinolates level in seeds, without lowering the levels in rest of the plant.
- **The Gene Editing Breakthrough:**
 - Glucosinolates are synthesized in the leaves and pod walls of mustard plants. They are transported and accumulated in seeds through the action of glucosinolates transporter or

GTR genes. There are 12 such genes under **two distinct classes** of GTR1 and GTR2 with six copies each.

- Scientists at NIPGER, the lead lab and CGMCP have edited 10 out of 12 GTR genes in 'Varuna', a high yielding variety of Indian mustard. They used CRISPR/Cas9 tool for this. This editing made changes in the encoded proteins which were responsible for transport of the glucosinolates to the seeds.
- **Result:**
 - **GTR Edited Low-seed high-leaf glucosinolate:** Seeds of GE Varuna mustard variety has glucosinolates content well below the 30 ppm canola quality. Other parts of the plant, especially the leaves and pod walls enclosing the seeds, has significantly higher glucosinolate accumulation.
 - **Resistance against pest is intact:** The edited variety continues to display defence against virulent fungal pathogen Sclerotinia sclerotiorum and the insect pest Spodoptera litura. This defence is at par or better than that of wild variety of mustard. This is because there is higher glucosinolate concentration in the leaves and pod walls.
 - These scientists have published their research finding in Plant Biotechnology Journal.

- **GE crops are subjected to less stringent “environmental release” regulation in India.**
 - For **GM Crops**, clearance has to come from Genetic Engineering Appraisal Committee and MoEF&CC (final nod). But, for GE crops requirement is less stringent.
 - In March 2022, an office memorandum from the MoEF&CC exempted GE Plants “free of exogenous introduced DNA” from the requirement of GEAC approval for open field trials leading to commercial release. Such clearance is now necessary only at the level of Institutional Bio-Safety Committee (IBSC), comprising scientists from the institutions engaged in the GE Crop development and from the DBT.
- **This work will increase the acceptability of mustard oil both within country and in the export market.**
- **GM Hybrid Mustard** (DMH-11) and the new GE low-seed and high-leaf glucosinolate lines are major plant breeding advancements – from Indian scientists. It can go some way towards bringing down the dependence on imported vegetable oil.

5. HEALTH:

1) TRANSMISSION MECHANISM OF VIRUSES: HOW EXTRACELLULAR VESICLES ACT AS DEFENCE MECHANISM (APRIL 2024)

- The mere presence of a virus in bodily fluid doesn't mean it is transmitted via that route.

- » For e.g. Dengue, Chikungunya, zika viruses are present in body fluid like saliva and semen but don't spread orally or sexually.
- **What do virus do inside the body?**
 - » **Transmission** is a crucial event in a virus' life cycle. A virus that can't transmit is of no consequence to anyone.
 - » **Different methods:**
 - **Through bodily fluid:** Most human virus achieve transmission by ensuring that they are present in bodily fluids that contact the outer environment, and subsequently a new host.
 - **Through Vectors:** E.g Dengue, Chikungunya etc.
 - » **Role of Surface Protein and Receptor on the host:**
 - Once inside the body, virus must be present at correct location to infect new target cells. Viruses are usually highly selective in the cells they infect. This phenomenon, called **Tropism**, occurs because most viruses have special proteins on their outer surface that contact a receptor on the host cell. Any cell-type that makes the receptor can be infected by the virus.
 - **Examples:** for HIV virus, receptor is **CD4**; for SARS-CoV-2 the receptor is **ACE2**;
 - So, the cells which express ACE2 become the target of SARS-CoV-2. These cells include cells of respiratory tract and some cardiovascular cells. T-Cells don't have ACE2 so, SARS-CoV-2 can't infect them.
 - » **One strategy virus uses to achieve more transmission is to make proteins on the surface that have receptors on multiple cell-types.**
 - This allows them to infect different cell types, allowing access to multiple body fluids, enabling faster transmission.
- **What is PS Receptor?**
 - » **Phosphatidyl Serine (PS)**: It is a lipid which is usually expressed by dying cells in the body, as a signal to destroy them.
 - The immune cells express the PS receptor and fuse themselves with these cells, quietly destroying them.
 - » **Viruses hijack this pathway** with a process called **apoptotic mimicry**: By expressing PS lipid on their own surfaces, allowing them to infect the very cells that will destroy them.
 - » **PS Receptor** is expressed by many cells - apart from some cells of the immune system - the virus tends to be present in multiple compartments.
 - Yet, the mere presence of a virus in a given compartment wouldn't guarantee transmission from that route.
 - **Zika virus** can be detected in semen, saliva, and breast milk, but rarely spreads through these means despite the presence of target cells in the oral and genital cavities. It transmits mainly via mosquitoes.
- **Why Zika and some other viruses are not transmitted by non-conventional route?**
 - » **Body uses extracellular vesicles** in these bodily fluids to inhibit viral infection.

- **Vesicles** are small structures enclosed by fat that a cell uses to transport substances from one part of the cell to another. When they are secreted outside the cell, they're called extracellular vesicles. These vesicles are abundant in saliva and semen and contain the same PS lipids on their surface that viruses like zika use for infection. The concentration of these extracellular vesicles that contain PS is low in blood and high in saliva and semen. These PS containing vesicles compete for the same receptors the viruses use for entry, thus crowding the latter out and preventing an infection.
- **The study shows that all viruses** that use the PS receptor for apoptotic mimicry - the dengue, chikungunya, West Nile, Ebola, and the vesicular stomatitis viruses - are inhibited by the presence of extracellular vesicles. The vesicles presence didn't affect the infectivity of viruses that don't use the PS receptor for entry, such as HIV and SARS-CoV-2.
- **The discovery of PS-coated vesicles for immunity represents a novel type of host defence against viral infection.**
 - While it is too early to speculate on potential therapeutic applications from this discovery, it opens up avenues for further research.

2) FOOD SAFETY: LIQUID NITROGEN IN FOOD & DRINKS (APRIL 2024)

- **Why in news?**
 - The Tamil Nadu Government has issued an advisory banning the use of liquid nitrogen in food and warned of strict action against violators (April 2024)
 - » A week ago, a video of child creaming went viral on social media. There were also visuals of adults spewing white smoke from their mouth and nose.
 - » Earlier in 2017, a man drank a cocktail with liquid nitrogen in a pub and ended up with a perforation in his stomach.
- Liquid nitrogen is the cooled liquified form of nitrogen gas. It can instantly freeze anything that it comes in contact with while evaporating.
- **Applications:**
 - **Food Preservation:** It is used to improve the quality of shelf life of food. It introduced droplets of liquid nitrogen the packaging on the production line.
 - » Since nitrogen's volume expands 700-times when it evaporates, it displaces the oxygen in the food pack, preventing microbial action and preserving the freshness.
 - **Health: Cancer Therapy:** It has been used in the management of any benign pre-cancers and cancers since the 1960s. This form of treatment is generally used to manage cancers wherein conventional surgery is not possible or can be used as an adjunct to conventional surgery.
 - » Nitrogen (at -196 degree C) is used to freeze and destroy cancer cells. This treatment is scientifically described as Cryotherapy.
- A liquid nitrogen cocktail is any mixed drink whose preparation involves the use of liquid nitrogen.
- **Why liquid nitrogen is added**
 - **For smoky, bubbling "cauldron effect"**

- » Liquid nitrogen boils at -196 degree celsius and thus room temperature quickly vaporizes to give bubbly appearance to drinks. The smoky appearance is produced because of the condensation of the moisture (water vapor) in the surrounding air above.
- **Quick chilling affect**
 - » It has become popular in the preparation of the cocktails because it can be used to quickly chill glasses or freeze ingredients.
- **Why is it dangerous?**
 - **Very Cold:**
 - » Can be extremely damaging to body tissues, causing frostbite and cryogenic burning on contact.
 - » If ingested it can lead to severe internal damage, destroying tissue in the mouth and digestive tract.
 - **Explosive effect**
 - » It has a large expansion ratio 1:694 (at 20 degree celsius). When liquid nitrogen evaporates it produces a large volume of gas, which means it can burst the stomach if swallowed in a sufficiently large amount.
 - **Lack of awareness/training about its use**
 - » Drink should not be bubbling when a person consumes it, as this indicates that there is still nitrogen in it. The white smoke like liquid vapor, however, is no problem as it forms due to moisture around after the gas has evaporated and cooled the drink around.
 - » Most of the bartenders are learning the process from YouTube videos.

- **Why does its use continue?**
 - It is not a regulated substance in most of the countries.
- **Regulation in India**
 - Liquid nitrogen is permitted as an additive in frozen food as per the guidelines of the FSSAI.
 - It's use in drinks is in gray area. There is no clear cut guideline for it and generally it is considered to be a novel technique, which can be used by food and business operators.
 - Some states including Haryana, and TN have banned the use of liquid nitrogen in food (other than for food preservation).

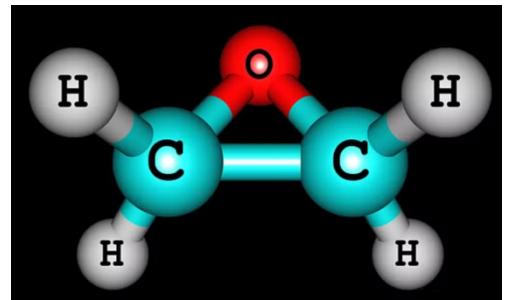
3) FOOD SAFETY: ETHYLENE OXIDE (APRIL 2024)

- **Why in news?**
 - In April 2024, Hong Kong suspended sales of three MDH spice blends (Madras Curry, Sambhar, Curry Powder) and an Everest mix for fish curries.
 - » Singapore Food Agency (SFA) has also issued a recall for Everest's fish curry masala, due to the detection of ethylene oxide, a pesticide, exceeding safe limits for human consumption.
 - » MDH has released a statement saying that MDH doesn't use ethylene oxide at any stage of storing, processing, or packing of spices.
 - » In view of the above development, FSSAI has started taking samples of spices of all brands, from across the country to check the quality of product sold in the domestic market.

- **About Ethylene Oxide:**
 - It is a colorless gas which is used as a pesticide and sterilizing agent. It was originally intended to sterilize medical devices.
 - **Why is ethylene oxide used in food?**
 - ETO is often used as a sterilizer in order to keep a curb on microbial load. Since it is gaseous, it can easily seep into breathable packaging and come in contact with items that require sterility assurance level. The process of sterilization neutralizes yeast, molds, bacteria etc. It disrupts the reproductive processes of micro-organisms, thus preventing food from getting spoiled.
 - If food sterilized by ETO is not aerated, it leaves behind residue. This residue in turn from toxic compounds like 2-Chloroethanol (2-CE), Ethylene Chlorohydrin (ECH), and Ethylene Glycol (EG).
- **Negative Impact:**
 - Experts believe that even short term exposure can be harmful. Individuals may face respiratory issue, headaches, nausea, vomiting, or cyanosis.
 - It is classified as a Group 1 Carcinogen by the International Agency for Research on Cancer. It poses threats like breast cancer, lymphoma, leukemia, neurotoxicity.

4) FOOD SAFETY: SALMONELLA (APRIL 2024)

- **Why in news?**
 - The US has reportedly refused almost a third of shipments from MDH since Oct 2023 due to Salmonella contamination (April 2023)
- **Salmonella**
 - Salmonella is a group of bacteria that can cause gastrointestinal illness and fever called salmonellosis. It may lead to diarrhea, fever, stomach cramps etc. Children, elderlyies and people with weak immune system may face more severe symptoms and may need hospitalization.
 - **How does it spread?**
 - » According to the Centre for Disease Control and Prevention (CDC), Salmonella naturally lives in animals' intestine and can be found in their feces (poop). The bacteria spreads to human if they come in contact with bacteria infected animals or items in their environment.
- **Possible reasons:**
 - **Unhygienic practices:**
 - » The FDA had physically inspected MDH's manufacturing plant in Jan 2022, during which it noted that the "plant didn't have adequate sanitary facilities and accommodations. It also observed that plants equipment and utensils were not designed and constructed to be adequately cleaned or maintained to protect against contamination.



5) FOOD SAFETY AND STANDARDS ACT, 2006 (ALSO KNOWN AS FOOD ACT)

- Came into force in 2011.
- **Key Provisions**
 - i. **Consolidation of existing mechanisms**
 - » The FSS Act consolidated a number of food legislations, rules, orders etc and established a single law for all matters relating to food safety and standards.
 - » It subsumes acts like Prevention of Food Adulteration Act, 1954, The Fruit Product Order, 1955 etc.
 - ii. **Classification into standardized and non-standardized**
 - » **Standardized Food products** - Standards are prescribed and do not require product approval prior to manufacture, sale distribution, or import. The first time manufacturer or importer only requires an FSSAI license to begin a food business.
 - » **Non-standardized food products** - don't have standards as their safety parameters are either not known or either not yet ascertained.
 - iii. **Statutory Authority: Food Safety and Standards Authority of India (FSSAI) and State Food Safety Authorities**
 - » FSSAI is the apex body for food quality regulation in the country. It is responsible for setting standards and regulate, manufacture, storage, distribution, sale and import of food items to ensure food safety.
 - iv. **Commissioner of Food Safety of state**
 - » Appointed by respective state governments
 - » For efficient implementation of the Food Safety Act and various rules and regulations regarding food safety
 - » Commissioner also responsible for appointing Food Safety Officers for various local areas
 - v. **Graded Punishment and penalties** for contravention of the Act

No Injury	Sentence upto <u>six months</u> and fine upto <u>one lakh rupees</u>
Non-grievous injury	Sentence upto <u>1 year</u> and a fine <u>upto 3 Lakh rupees</u>
Grievous Injury	Sentence upto <u>6 years</u> and a fine upto <u>five lakh</u>
Death	Sentence <u>not less than 7 years</u> and <u>may extend upto life</u> and a fine <u>not less than 10 lakh rupees</u> .
 - vi. **Adjudicating and Appellate Tribunal**

6. COMPUTER AND IT

A) LLAMA 3: META'S MOST SOPHISTICATED AND CAPABLE LARGE LANGUAGE MODEL YET

- **Llama** (Large Language Model AI) is a family of LLMs introduced by Meta AI in Feb 2023.
 - The **first version** of the model was released in four sizes – 7B, 13B, 33B, and 65 billion parameters.
 - » Meta has claimed that 13B model of Llama outperformed OpenAI's GPT-3 which had 135 billion parameters.

- » **Note:** Parameters is a measure of the size and complexity of an AI model and generally, a large number of parameters means an AI model is more complex and powerful.
- **The second version** (Llama-2) was released by Meta in July 2023 which was a significantly upgraded version of Llama-1. It was trained on 40% more data than Llama-1.
- **Llama-3** is the latest iteration of Meta's large language model. It is based on Llama-2 architecture, and has been released in 2 sizes, **8B** and **70B** parameters. Both sizes come with a base model and an instruction-tuned version that has been designed to augment performance in specific tasks.
 - **According to Meta**, Llama-3 is the best open-source model that is on par with the best proprietary models available today. Llama 3 outperformed Google's Gemma 7B and Mistral's 7B, Anthropic's Claude 3 Sonnet in benchmarks such as MMLU 5-shot (Massive Multitask Language Understanding), GPQA 0-Shot (A graduate level Google Proof Q&A Benchmark), HumanEval 0-shot (A benchmark for evaluating the multilingual ability of code generative AI Models), GSM-8K 8-shot and Math 4-shot, CoT (maths and word problems).
 - **For now**, only text based models in the Llama-3 collection of models has been developed. However, the company has plans to make Llama 3 multilingual and multimodal.
- Meta will be integrating its latest model into its proprietary virtual assistant – Meta AI.
- **How to try Llama-3:**
 - Meta have said that it will be integrating Llama-3 into Meta AI which can be used on Facebook, Instagram, Whatsapp, Messenger, and the Web.
 - It is readily available for developers as Meta has integrated the LLM into the Hugging Face Ecosystem. It is also available through Perplexity Lab, Fireworks AI, and on Cloud provider platforms such as Azure ML and Vertex AI.
 - Llama 3 models will soon be available on AWS, Google Cloud, Hugging Face, Databricks, Kaggle, IBM WatsonX, Microsoft Azure, NVIDIA NIM, Snowflake etc.

LARGE LANGUAGE MODEL (LLMS)

LLMs are a category of foundation models trained on immense amounts of data making them capable of understanding and generating natural language and other types of content to perform a wide range of tasks.

7. IPR ISSUES

1) INTRODUCTION: IPR AND TYPES

- **Introduction**

- Intellectual Property refers to creation of mind: inventions; literary and artistic works; and symbols, names and images used in commerce.
- Intellectual Property Rights are the rights given to persons over the creations of their minds. They usually give the creator an exclusive right over the use of his/her creation for a certain period of time.

- IPRs are customarily divided in **two main types** (1. **Copyrights and Rights related to copyrights** 2. **Industrial Property**)
 - **Copyrights and Rights related to copyrights** cover rights of authors of literary and artistic work (books, music composition, painting, computer programs, films, sculpture etc.). It also includes **rights of performers** (e.g., actors, singers, musicians, broadcasting organizations etc.)
 - Generally, these rights are protected for a period of **50 years after the death of the author**.
 - **Purpose:** Encourage and reward creative work, promote innovation, provide appropriate financial benefits.
 - **Industrial Property** focuses on protecting inventions and **Creative work** (with industrial or commercial applications).
 - Industrial Property includes patents for inventions, Industrial design for aesthetic creations, and trademarks or geographical indications for distinctive signs.
 - **Industrial property can be divided into two main sections**
 1. **Protection of distinctive signs** in particular trademarks and geographical indications
 - **Trademarks** distinguish the goods and services of one undertaking from those of other undertakings
 - **Geographical indications** identify a good as originating in a place where a given characteristic of the good is essentially attributable to its geographical origin).
 - The protection may last indefinitely, provided the sign in question continues to be distinctive.
 - **Aims:** The protection of such distinctive signs aims to stimulate and ensure fair competition and to protect customers, by enabling them to make informed choices between various goods and services.
 2. **Patents, Industrial Design and Trade Secrets**
 - This is the second type of Industrial Property.
 - The aim is to stimulate innovation and design and promote creation of technology. It also gives incentive and means to finance R&D activities.
 - A functioning IPR regime also facilitates transfer of technology in the form of FDI, joint ventures and licensing.
 - The protection is usually given for finite term (typically 20 years in the case of patents)

2) INTERNATIONAL INSTITUTIONS / AGREEMENTS DEALING WITH INTELLECTUAL PROPERTY RIGHTS

A) WORLD INTELLECTUAL PROPERTY ORGANIZATION (WIPO)

- It is one of the specialized organizations of UN which was created in 1967 "to encourage creative activity, to promote the protection of intellectual property throughout the world".
 - It is a global forum for intellectual property services, policy, information, and cooperation.

- WIPO administers 26 international treaties.
 - The importance of intellectual property was first recognized in Paris Convention for the Protection of Industrial Property (1883) and the Berne Convention for the Protection of Literary and Artistic Works (1886).
- In 2018, the Union Cabinet approved DIPP recommendation of accessing to WIPO Copyright Treaty, 1996 and WIPO Performance and Phonograms Treaty, 1996
 - **WIPO Copyright Treaty:**
 - It came in force on March 6, 2002, and is **A Special agreement under Berne Convention** (for protection of literary and artistic works).
 - It has provisions to extend the protection of copyrights contained therein to the digital environment.
 - Further it recognizes the rights specific to digital environment, of making work available, to address "on-demand" and other interactive modes of access
 - **WIPO Performances and Phonograms Treaty**
 - Came into force in 2002.
 - It deals with rights of two kinds of beneficiaries
 - Performers (actors, singers, musicians) etc.
 - Producers (of phonograms) etc.
 - The treaty empowers right owners in their negotiations with new digital platforms and distributors.
 - It recognizes moral rights of the performers for the first time & Provides exclusive economic rights to them.
 - **Significance**
 - Making India's IPR policy compliant to global standards
 - It will contribute to fight against online piracy.

B) TRIPS AGREEMENT OF WTO

- The Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) is an international agreement administered by the World Trade Organization (WTO) that sets down the minimum standards for any forms of intellectual property (IP) regulation as applied to nationals of other WTO members.
- It was negotiated at the Uruguay Round of General Agreement on Tariffs and Trade (GATT) in 1994.
- **Key provisions**
 - **WTO members to provide protection of:**
 - copyrights, covering content producers including performers, producers of sound recordings and broadcasting organizations;
 - geographical indications, including appellation of origin;
 - industrial design,
 - integrated circuit layout design;
 - Patents;
 - new plant varieties;

- trademarks;
- trade dress;
- and undisclosed or confidential information.
- **Enforcement Procedures**
- **Dispute Resolution Procedures**

- Protection and enforcement of all IPRs shall meet the **objectives**:
 - To contribute to the promotion of technological innovation
 - To the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations.

C) INDIA AND INTERNATIONAL PATENT REGIME

- India has gradually aligned itself with international regimes pertaining to intellectual property rights.
- In 1994, India signed the TRIPS agreement mandated by the WTO. The agreement came into effect on January 1, 1995.
- Following this, it amended its internal laws to comply with TRIPS, most notably in 2005, when process patents and patents for pharmaceutical products were brought into legislation.
- India is also signatory to several IPR related conventions, including the Berne Convention, which governs copyright, the Budapest Treaty, the Paris Convention for the protection of IPR, and the Patent Cooperation Treaty (PCT), all of which govern various patent-related matters.
- In **recent past**, some positive steps which have been taken are – Accession to WIPO Performances and Phonograms Treaty and WIPO Copyright Treaty, collectively known as the WIPO Internet Treaties, in 2018 and the Nice Agreement in 2019.

D) 2005 AMENDMENT TO THE PATENT ACT:

- Although the TRIPS treaty was signed in 1994, India took about 10 years to establish a patent law that was in line with WTO mandate. The new patent law was officially enforced on January 1, 2005, but retrospectively from 2004.
- Through the **new Patent law of 2005 (Patent (amendment) Act, 2005)**
 - ✓ **Earlier**
 - The 1970 Act, allowed for only process patent and didn't allow product patent.
 - It became a major factor in the growth of Indian pharmaceutical sector as medicines couldn't be patented (only the process of making it could be). This was based on the recommendations of a 1959 commission chaired by the jurist Rajgopala Ayyangar, which had said that laws need to be designed “with special reference to the economic conditions of the country, the state of its scientific and technological advance, its future needs and other relevant factors.. so as to minimize if not eliminate the abuses to which a system of patent monopoly is capable of being put out”.
 - They used the process of reverse engineering to manufacture the drugs
 - **Timeframe** for the validity of patent is **5-7 years**.

- ✓ **Key changes**
 - **Product Patent** reintroduced
 - **Increased the timeframe** of the applicability of patent
 - All patents were given a time frame of 20 years. (Under the 1970 act, the life of a patent was limited between five to seven years)
 - **Intellectual Property Appellate Board** was established as a specialized judiciary to hear IP cases.

6) ACTS AND POLICIES OF GOVERNMENT OF INDIA

A) PATENT ACT, 1970

- Patent act defines what invention is and makes it clear that any existing knowledge of thing cannot be patented.
- **Three prerequisites for patentability defined by the act:**
 - 'Novelty' standard
 - 'Non-obviousness' or inventive step
 - Industrial applicability
 - It shouldn't attract the provisions of section 3 and 4 of the Patents Act 1970.

Discoveries are excluded from patent protection under section 3 of the Indian Patent Act.

- Discovery essentially refer to finding out something which already existed in nature but was unknown or unrecognized.
- **Section 3** deals with what doesn't qualify as an invention under the Act.
- **Contentious Provisions (Section 3(d) and Section 84(1))**

B) SECTION 3D (WHAT IS NOT PATENTABLE)

- Discovery of a new form of a known substance which doesn't result in the enhancement of the known efficacy cannot be patented.
- Discovery of a new property or new use of a known substance cannot be patented
 - For e.g.
 - Ethyl alcohol acts as solvent, but further discovery of its new property as anti-knocking, thereby making it usable as fuel, cannot be patented.
 - New use of Aspirin for treatment of the cardio-vascular diseases, which was earlier used for analgesic purpose, is not patentable.
- The mere use of a known process, machine or apparatus unless such known process results in a new product or employs atleast one new reactant
 - However, a new and alternative process for preparing Aspirin is patentable
- **Aim of the provision under Section 3d: Prevent Evergreening**
- **Does section 3(d) violate TRIPS?**

- No

C) SECTION 84(1) (COMPULSORY LICENSING)

- Why in news?

- At the time of shortage of remdesivir, opposition parties were demanding that government should issue compulsory licenses for manufacture of an affordable generic version of Remdesivir (July 2020)

- Provisions of the law:

any person may request a compulsory license if

- after three years from the date of grant of patent, the needs of the public to be covered by invention have not been satisfied.
- invention is not available to public at affordable price;
- or the patented invention is not "worked in", or manufactured in the country, to the fullest extent possible

- Compulsory Licensing - Basics

- Compulsory licensing is when a government authorizes a party other than the patent owner to produce the patented product or process, without the patent owner's consent.
- In 2012 India Granted its first compulsory license to generic drug producer.
 - The decision effectively ended German Pharmaceutical company Bayer AG's Monopoly over an anti-cancer drug and authorizes the production of a low-cost version for the Indian market.

- Importance of Compulsory Licensing

- Promotes India's status as "pharmacy of the world"
- Promotes "people's accessibility to medicines"
- Benefits India's fight against Drug Resistance TB, HIV, Cancer etc
- strengthen our soft power especially in African countries for whom India is a source of low-cost generic medicine.

- Is Section 84(1) (Compulsory Licensing) compliant with TRIPS agreement

- The TRIPS agreement explicitly allows compulsory licensing as long as procedures and conditions set out in Article 31 of TRIPS are fulfilled.
 - Conditions in Article 31
 - Failure of negotiation for voluntary license
 - Payment of adequate remuneration to the patent owner
 - Compulsory license can't be given exclusively to licensee (e.g., the patent holder shall continue to produce)
 - Subject to legal review within the country
 - During emergency situation, the first condition need not be met
- Doha declaration on TRIPS agreement and Public Health confirms that countries are free to determine the grounds for granting compulsory licenses.
- **So yes, compulsory licensing is complaint with TRIPS agreement**

D) PATENTING TRENDS REPORT RELEASED BY NASSCOM (APRIL 2024)

- India witnessed 83,000 patents being filed in FY2023, marking an annual growth rate of 24.6%, the highest in the last two decades.
 - The **number of patents granted** also witnessed significant growth rising over **2X** between FY2019-FY2023. This trend was expected to increase significantly with over **1,00,000** patents granted between 15th March 2023 and 14th March 2024.
 - **Among the top technology patents**, Deep tech companies are filing patents for Artificial Intelligence, the IoT and Neurotechnology.

7) COPYRIGHTS ACT, 1957 (AMENDED IN 2012)

- It was the first copyright act in Independent India, it has been amended six times by now.
- Copyright Act 1957, and the Copyright Rules 2013, as last amended in 2016 are two laws that govern copyright in India.
- **Key highlights**
 1. **Types of Work Protected:** Literary, dramatic, musical and Artistic
 2. **Duration of Protection:**
 - Lifetime of the author + 60 years from the beginning of the next calendar year next following the year in which the author dies.
 3. **Foreign Work:** Copyrights of work mentioned in the International Copyright Order (WIPO) are protected in India, as if such work is Indian work.
 4. **Ownership**
 - Author
 - For work done in author's employment under a "contract of service" or apprenticeship, the employer is considered the first owner of the copy right, in the absence of any agreement on the contrary.
 5. **Exemption to Copyright infringement in India**
 - Fair dealing with any copyright work for certain specifically mentioned purposes and
 - Certain specific activities enumerated in the statute.
 - Exception for *the educational use of copyright materials, including their production "in the course of instruction"*.
 6. **Remedies available against copyright infringement in India**
 - The act provides three kinds of remedy
 - Administrative remedies
 - Detention of the infringing goods by the custom authorities
 - Civil Remedies
 - Injunctions, damages and account of profits
 - Criminal Remedies
 - Imprisonment (up to 3 years) along with a fine (up to 200,000)
 7. **Enforcement Authorities**
 - Civil Court

- Criminal Court -> for criminal infringement
- The Copyright Board constituted under the act -> it provides an alternative forum for resolving certain limited disputes, such as those pertaining to assignments and payments of royalties.

8) NATIONAL INTELLECTUAL PROPERTY RIGHTS POLICY

- The policy approved in May 2016, lays down the future roadmap for intellectual property in India.
- The Policy recognizes the abundance of creative and innovative energies that flow in India, and the need to tap into and channelize these energies towards a better and brighter future for all.

- **Objectives**

- The policy lays down the following seven objectives.
 - i. **IPR Awareness:** NIPR policy comes with the most important motive of increasing awareness about social, cultural and economic benefits of IPR among all sections of society.
 - ii. **Stimulate generation of IPRs** -> maximize the number of IPRs being filed.
 - iii. **Commercialization of IPRs** to get value through them.
 - iv. **Legal and Legislative Framework** - To have strong and effective IPR laws, which balance the interests of rights owners with larger public interests.
 - For e.g. India doesn't have law on trade secrets, the policy aims to create specified laws on it.
 - v. **Administration and Management** - To modernize and strengthen service-oriented IPR administration.
 - vi. **Enforcement and Adjudication** - To strengthen the enforcement and adjudicatory mechanism for combating IPR infringements
 - vii. **Human Capital Development** - To strengthen and expand human resources, institutions and capacities for teaching, training, research and skill building in IPRs.
 - The policy focuses on recruiting people and training them in order to address the pendency of cases.
- The Policy also recommends that IP be taught in schools and colleges.

9) GEOGRAPHICAL INDICATION

- **Introduction**

- A 'geographical indication' (GI) is a place name used to identify the origin and quality, reputation, or other characteristics of products. It is a sign used on products that have specific geographical origin and possess qualities or a reputation by virtue of their geographical association. The owner of the GI tag has exclusive rights over the product and can prohibit others from using the same name.
- For instance: champagne, Darjeeling tea, Nagpur Orange, Kangra Paintings etc.
- **India's GI Law** "Geographical Indications of Goods (Registration and Protection) Act, 1999" has come into force with effect from Sep 2003.
 - In India, the tag is awarded by the GI Registry in Chennai, and it indicates that a produce possesses certain qualities exclusive to its land of origin.

- **WTO Law:** GIs have been defined under Article 22(1) of the WTO Agreement on TRIPS.
- **Darjeeling tea** became the first GI tagged product in India, in 2004-05. Other famous GI products of India include Basmati Rice, Chanderi Fabric, Mysore Silk, Kanchipuram Silk, Banarasi Silk Saree, Jaipur Blue Pottery, Kullu Shawl, Kangra Tea, Thanjavur Painting, etc.
- **Significance of GI registration**
 - Legal protection -> Prevents unauthorized use of GI by others.
 - Consumer protection -> right information -> GI Tag conveys an assurance of quality and distinctiveness, which is essentially attributable to the place of its origin.
 - Promotes economic prosperity of the producers of goods by enhancing demand in national and international market
 - Essential to get protection in other countries.
 1. Article 22 of TRIPS agreement says unless a geographical indication is protected in the country of its origin, there is no obligation under the agreement for other countries to extend reciprocal protection.
 - **Opportunity to promote development in rural areas:** GI registration along with strengthening of e-commerce in rural areas can promote higher income for people producing GI tagged products.
 - The hyper-localized nature of GI offers solutions to reverse urban migration and conserve India's ancient crafts, culture and food.
 - **Other wider benefits** – Encourages protection of biodiversity, local know-how and natural resources.
- **Recent GI Tagged Products: Useful for Prelims**

A) **RED AUNT CHUTNEY (KAI CHUTNEY) OF ODISHA**

- In Odisha's Myurbhanj district, red weaver ants are used for making chutney or a water semi-solid paste known as "Kai Chutney". This chutney is renowned in the region for its medicinal and nutritional properties.
- **In Jan 2024**, this distinctive savory chutney was awarded the GI Tag.
- **Red Weaver Ants**, scientifically known as Oecophylla smaragdina, are notable for their extremely painful sting, capable of causing blisters on the skin.

B) **GI TAGS TO VARIOUS PRODUCTS IN JAN 2024**

- **From Odisha:**
 - a) **Simplipal Kai Chutney**
 - b) **Dhenkanal Magji**: A type of sweet made from cheese of buffalo milk.
 - c) **Lanjia Saura Paintings**: It is a style of wall mural paintings. Those paintings are also called ekons or the idital and have a significant spiritual importance for the tribe. **Lanjia Sauras** are an indigent society today, and labour in preserving their culture – the idital being an important part of it.

- d) **Dongria Kondh Shawl (Kapdaganda Shawl):** The traditional knitted shawls are both unique and ancient. Their culture, tradition, faiths and beliefs, as well as the biodiversity of the forests are reflected in the shawl.
 - e) **Khajuri Guda (date palm jaggery):** It is a natural sweetener produced from the sweet juice of palm called neera. It is prepared by the tribal population, including the Lanja Saura, of Gajapati, Boudh, Angul, and Dhenkanal districts of Odisha.
 - f) **Nayagarh Kanteimundi Brinjal,** a vegetable crop with lots of prickly thorns on the flesh as well as the whole plant grown in whole of Nayagarh district of Odisha also received a tag.
 - g) **Koraput Khalajeera rice:** The black colored rice variety, also known as the 'Prince of Rice' is famous for its aroma, taste, texture, and nutritional value. Tribal people of the Koraput region have preserved this rice for around 1,000 years.
- West Bengal:
- a) Tangail Saree
 - b) Garad Saree
 - c) Korial Saree
 - d) Kalonunia Rice
 - e) Sundarban Honey
- Gujarat
- a) Kachchii Kharek: The indigenous variety of dates from Kutch, known as Kuchchhi Desi Kharek.
- J&K:
- a) Ramban Anardana
- Arunchal Pradesh:
- a) Wancho Wooden Craft: It intimately weaves into the socio-cultural fabric of the skillful Wancho of Longding and Changlong districts. It has been practiced by Wancho tribes for generations. It is used to decorate drawing rooms and gifts.
 - b) Adi Kekir (Ginger)

C) GUCCI MUSHROOM (NOT GIVEN GI TAG YET)

- As per J&K Government, Gucci is the final stage of evaluation at the GI Registry.
- Gucci mushroom is locally known as "Kanngech" and as 'Morel Mushroom', it is a prized harvest for people in districts of Kupwara, Baramulla, Budgam, and Anantnag.
- The market price of this mushroom is somewhere between Rs 25,000 to Rs 30,000 per kg.
- Recent years have seen low yield for the mushroom due to climate change and other environmental factors.

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2. HEALTH

1) GLYCEMIC INDEX (GI), GLYCEMIC LOAD (GL) AND DIABETES

- The **Glycemic Index (GI)** of a food refers to the property of the food to **increase blood glucose level** and is a measure of '**quality**' of carbohydrate.
 - **Glucose** or white bread is used as a comparator. The GI of glucose is taken as **100** and the GI of other foods are given as a percentage of this.
 - Food is classified as **low, medium, or high glycemic food** and **ranked on a scale of 0-100**.
 - The **lower the GI of a specific food, the less it may effect your blood sugar levels**.
 - **Here are three GI ratings:**
 - » **Low: 55 or less:** Fruits (apples, strawberries, dates, oranges, Banana, Blue Berries etc); Vegetables (Carrots (boiled)); Grains (Barley, Quinoa); Legumes (Soyabean, Kidney beans, Chickpeas, Lentils etc.); Dairy Products and alternatives (Soymilk; skim milk; whole milk; Yoghurt); Sweeteners (Fructose, Coconut sugar);
 - » **Medium: 56-69:** Fruits (Pineapple); Vegetables (Sweet potatoes (boiled)) Grains (Popcorn; Brown Rice); Sweeteners (**Honey**, Table Sugar);
 - » **High: 70 or above:** White bread, Whole Wheat Bread, White Rice, Cereals, Starchy Vegetables (potatoes, French fries), Baked goods (cake, doughnuts), Snacks (Chocolate, crackers, microwave popcorn, Chips,); Sugar Sweetened Beverages (Soda, fruit juice, sports drinks) etc.
 - **Food high in refined carbs and sugar** are digested more quickly and often have **high GI**, while foods **high in protein, fat, or fiber** typically have a **low GI**.
 - **Food that contains no carbs** are **not assigned a GI** and include meat, fish, poultry, nuts, seeds, herbs, spices, and oils.
 - » Only food containing carbohydrates are assigned GI.
 - **Is food with High Glycemic Index bad?**
 - » As per the **Prospective Urban Rural Epidemiology (PURE) study**, **diets with high GI are associated with major cardiovascular events including deaths** across all ethnicities.
 - **Advantages of Low Glycemic Diet:**
 - » Improved **blood sugar regulation**.
 - » Increased **weight loss**: Some research have shown that **following a low GI diet may increase short-term weight loss**.
 - » Could **benefit people with fatty liver**: Low glycemic food could **reduce liver fat and liver enzyme levels** in people with on-alcoholic fatty liver disease.
- The **Glycemic Load (GL)**: It takes into account the **amount of food eaten**. So, **GL factors in the number of carbs in a serving of a food** to determine how it affect blood sugar levels.

2) ALL THE WAYS A HOTTER PLANET MAKES YOU SICKER

- **2023** was the **hottest planet on record**. It is going to **get worse in future**. Climate modelers are forecasting the year 2023 will be the **coolest year in the life of people born in 2023**.
- **Different ways** in which hot climate affect human health:
 - **Direct Effects** of **heat exposure on the body**.

- » Heat Wave will get worse with higher wet bulb temperature. As per IMD, “**moist heat**” stress has increased by 30% between 1980 and 2020.
- » Heat acts through dehydration, inability of skin to cool the body through perspiration, dilation of blood vessels, and thickening of blood with increased risk of clot formation (thrombosis).
- » Often **air pollution** colludes with the excess heat to assault the lungs and blood vessels.
- **Increased Air pollution:** Wildfires triggered by excessive heat release PM2.5 and toxic chemicals can cause extensive inflammation, increasing the risk of cardiovascular diseases, respiratory diseases, diabetes, and pre-diabetes.
- **Extreme weather events**
- **Water Scarcity**
- **Vector borne diseases.**
- **Water Borne diseases.**
- **Non-Communicable diseases** (strokes; heart attacks; diabetes; respiratory diseases; cancers)
 - » Heat increases the risk of brain strokes (paralytic attack) due to thrombosis in blood vessels of the brain.
 - » It can also precipitate heart failures and sudden death by triggering clot formation in the coronary arteries.
 - » Exercising vigorously in hot environment can be dangerous. Clots formed in the leg veins can travel to the lungs suddenly causing catastrophic “pulmonary embolism”.
 - » As our population ages and cardiovascular risk factors (like high BP, diabetes, and obesity) rise in our population, every 1-degree centigrade rise in ambient temperature will compound the risk of serious cardiovascular events.
- **Mental health disorders**
- **Food and nutritional insecurity** due to reduced food yield and nutrient quality of crops. Countries in South Asia and Sub-Saharan Africa grow rice and wheat at the highest levels of heat tolerance. A further increase of 1 degree centigrade will lower their yield by 10%. Protective foods like fruit, vegetables, and fish would also be depleted.

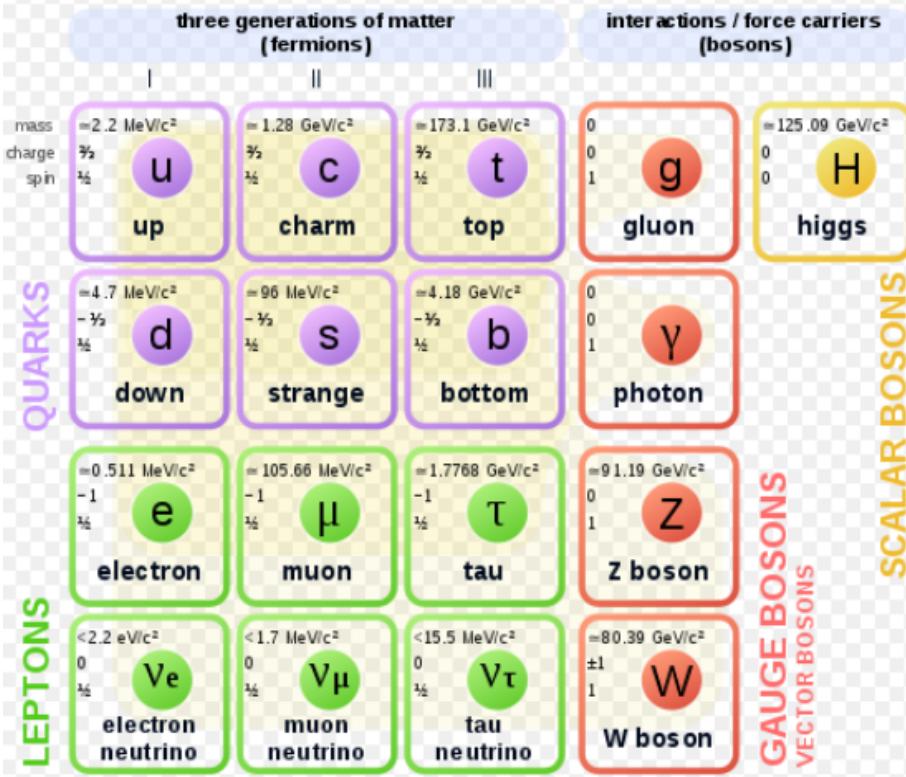
3. PHYSICS

1) ELEMENTARY PARTICLES: STANDARD MODEL OF PARTICLE PHYSICS

- Background

- » **Particle physics** is a branch of physics that studies the nature of particles that constitute matter and radiation. Currently, the dominant theory explaining these fundamental particles and fields, along with their dynamics, is called the Standard Model.
- » **The Standard Model** is a rigorous theory that predicts the behavior of the sub-atomic particles. It describes three of the four known fundamental forces (the electromagnetic, weak and strong interactions, and not including the gravitational force) in the universe. It also classifies all known elementary particles.

Standard Model of Elementary Particles



- Various particles and their roles under Standard Model

- » Everything in the universe is made up of atoms. Atoms are made up of subatomic particles - Protons, Neutrons and Electrons. Earlier it was believed that subatomic particles are not divisible.
- » But, experiments have confirmed that the subatomic particles can be further divided into 17 elementary or fundamental particles.

Elementary Particles				
Matter Particles			Force Particles	
Quarks	Leptons		Bosons	
Unitary	Charged	Neutral	Vector Bosons	
1. Up	7. Electrons	10. Electron Neutrino	13. Photon	17. Higgs Boson
2. Down	8. Muons	11. Muon Neutrino	14. W Boson	
3. Top	9. Taus	12. Tau Neutrino	15. Z Boson	
4. Bottom			16. Gluon	
5. Strange				
6. Charm				

- The 17 elementary particles can be further divided into **3 Categories** - Quarks, Leptons and Bosons
 - » **Quarks and Leptons** constitute **matter** and are called the **matter particles** whereas the **bosons** build up **force** and hence are termed **force particles**
 - » **Quarks** are the fundamental constituent of matter. They are of six types: Up quark, down quark, top quark, bottom quark, strange quark, and charm quark.
 - They combine to form composite particles called **Hadrons**.
 - Hadrons can further be divided into two types: **Baryons** and **Mesons**.

- Baryons are made up of 3 quarks and the mesons are made up of one quark and one antiquark. Most common example of Baryons are protons and neutrons.
 - The up quarks and down quarks form protons and neutrons.
- An Up Quark (UQ) carries a charge of +2/3 and a Down Quark (DQ) carries a charge of -1/3.
 - Proton is made up of two up quark and one down quark
 - Neutron is made up of one up quark and 2 down quark.
- » **Leptons** don't undergo any strong interaction with other particles but are observed during beta decay. They are of six types which can be grouped into two categories: **Charged and Neutral (Anti)**
 - **Charged leptons** include Electrons, muons and Taus. Electrons are the most stable type of leptons. Muons and Taus are very high energy and are not stable. Hence, they transform to their lower energy states, the electrons.
 - **Neutral Leptons** were theorized in 1930 when a difference in energy, momentum and angular momentum was observed between theorized and observed values of initial and final particles.
 - This was confirmed by Clyde Cowan and Frederich Reines in 1956.
 - Some people also theorize the existence of anti-neutrinos but nothing has been confirmed yet.
- » **Quarks and Leptons** both complete together the picture of atom. But it doesn't clarify about the interaction between them. This interaction is determined by particles called bosons. The man behind bosons was Sir Satyendra Nath Bose.
- » **Bosons** are called force particles as there is a boson causing every fundamental force. Bosons are of **two types**: Vector Bosons and Scalar Bosons
 - There are four vector bosons.
 - **Photons** are responsible for electromagnetic interaction.
 - **W and Z Bosons** are responsible for weak nuclear interaction, or the force which binds the nucleus and the electrons.
 - **Gluons** are responsible for the Strong nuclear interaction or the force that binds protons and neutrons.
 - **Scalar Boson** called **Higgs Boson** was discovered in July 2012. CERN - the European Organization of Nuclear Research - was responsible for this discovery.
 - These particles are **responsible for imparting mass to other particles**.
- » **Graviton**: Scientists are still not clear about how to accommodate the gravitational force in standard model. They have conceptualized a particle called 'graviton' which they say is responsible for gravity but they are not quite sure.
- These 17 elementary particles and graviton together complete the picture of the atom and its interactions as per the standard model of the particle physics.
- **Useful Videos:**
 - [What's the smallest thing in the universe? - Jonathan Butterworth](#)